



September 17, 2024

New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Deferral Request Report Addendum  
Charlie Sweeney Fed TB  
Incident Number nAPP2332849245  
Eddy County, New Mexico**

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Matador Production Company (Matador), has prepared this *Deferral Request Report Addendum (DRRA)* to document excavation and soil sampling activities at the Charlie Sweeney Fed Tank Battery (TB; Site). The purpose of the Site assessment and soil sampling activities was to address impacts to soil following a release of produced water at the Site. Based on the excavation activities and analytical results from the soil sampling events, Matador is submitting this *DRRA*, describing remediation and confirmation sampling activities that have been completed and requesting deferral for Incident Number nAPP2332849245 until the pad is well is plugged and abandoned or the Site is reclaimed.

Ensolum submitted a *Closure Request Report (CRR)* on February 22, 2024, to the New Mexico Oil Conservation Division (NMOCD); however, the CRR was denied for the following reasons:

- ***Remediation closure denied. OCD will accept the background chloride limit of 1,328 mg/kg. Continue remediating the open excavation to these standards and submit updated remediation closure report to the OCD by 7/16/24.***

Ensolum submitted a Deferral Request Report (DRR) to the NMOCD on July 16, 2024, that addressed concerns regarding excavation floor samples with chloride concentrations exceeding 1,328 milligrams per kilogram (mg/kg); however, the DRR was denied for the following reasons:

- ***Deferral denied. Matador still needs to collect sidewall samples from the excavations at FS03, FS04, FS06, FS07. Sidewall samples should be collected during every excavation to ensure the boundaries of the release are defined. Remediation on an active site can be deferred in areas immediately under or around production equipment such as production tanks, wellheads, and pipelines where remediation could cause a major facility deconstruction so long as the contamination is fully delineated and does not cause an imminent risk to human health, the environment, or ground water. The area of requested deferral has not been horizontally delineated to the east or west of it. All requested samples may be tested for Chloride only. Resubmit deferral request to the OCD by 8/19/2024.***

This *DRRA* addresses NMOCD's concerns regarding excavation floor samples with chloride concentrations exceeding 1,328 milligrams per kilogram (mg/kg) and addresses additional sidewall soil sampling in confirmation sample areas FS03, FS04, FS06, and FS07.

## SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in in Unit P, Section 31, Township 23 South, Range 28 East, in Eddy County, New Mexico (32.254637°, -104.119618°) and is associated with oil and gas exploration and production operations on private land.

On November 24, 2023, a seal on a saltwater disposal well (SWD) pump broke, resulting in the release of approximately 67 barrels (bbls) of produced water on pad. A vacuum truck was dispatched to the Site upon discovery of the release, and 35 bbls of produced water were recovered. Matador submitted a Release Notification Form C-141 (Form C-141) to the NMOCD on September 20, 2023. The release was assigned Incident Number nAPP2332849245. The Form C-141 for this incident can be referenced using the NMOCD Portal.

## SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization.

The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C 04037 POD 1, with a depth to water measurement of 60 feet below ground surface (bgs); the groundwater well is located approximately 0.54 miles northwest of the Site. All wells used for depth to groundwater determination are depicted on Figure 1 and the referenced well log and record is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent dry wash, located approximately 833 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is in a designated high potential karst zone. Potential Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 mg/kg
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

NMOCD had approved a background chloride concentration limit of 1,328 mg/kg for excavation floor samples collected at the Site.

## SITE ASSESSMENT ACTIVITIES

On November 27, 2023, Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Five preliminary assessment soil samples (SS01 through SS05) were collected at ground surface around the release extent to assess the lateral extent of the spill area. On December 6, 2023, two potholes (PH01 and PH02) were advanced via backhoe within the release extent to assess the vertical extent of soil. Potholes PH01 and PH02



were advanced to a depth of 2 feet bgs. On January 25, 2024, one additional pothole (PH03) was advanced via backhoe to a depth of 10 feet bgs, and on January 30, 2024, two boreholes (BH01 and BH02) were advanced via hand auger to depths of 9 feet and 6 feet bgs, respectively, within the release extent. The purpose of the vertical potholes and borings was to assess naturally occurring chloride concentrations in the vicinity of the release area. The preliminary assessment soil samples were field screened for TPH using a PetroFLAG<sup>®</sup> soil analyzer system and chloride using Mohr method titration. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was collected, and a photographic log is included in Appendix B.

All soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Envirotech Analytical Laboratory (Envirotech) in Farmington, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. In addition, soil samples from BH01, BH02, and PH03 were analyzed for sulfate concentration.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for preliminary assessment soil samples (SS01 through SS05) indicated all COC concentrations were in compliance with the Site Closure Criteria at ground surface. Laboratory analytical results from potholes PH01 and PH02 indicated the presence of elevated chloride concentrations at the ground surface. Samples collected from 1 foot and 2 feet bgs in those locations did not contain elevated chloride.

Chloride concentrations detected in soil samples collected at depths of 3 feet bgs and greater from BH01, BH02, and PH03 exceeded the Site Closure Criteria. Laboratory analytical results for preliminary assessment soil samples are summarized in Table 1. Based on the vertical distribution of chloride concentrations observed, it was determined that additional delineation sampling to investigate naturally occurring chloride concentrations was warranted.

## BACKGROUND SOIL SAMPLING

On January 31, 2024, Ensolum personnel returned to the Site to conduct additional soil sampling around the Site to assess for the presence or absence of naturally occurring chloride in undisturbed soil horizons. A total of six background samples (BG01 through BG06) were collected in areas that did not appear to be disturbed by oil and gas operations and at depths ranging from ground surface to 10 feet bgs (see Figure 3). The soil samples were handled and analyzed as previously described. Field screening results and lithologic observations were logged on lithologic soil sampling logs, which are included in Appendix C.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results indicated the presence of naturally occurring chloride concentrations in soil exceeding 600 parts per million (ppm) (also measured as mg/kg) in four out of the six undisturbed areas, with a maximum chloride concentration of 11,800 mg/kg detected at BG03. When detected, the elevated concentrations generally occurred between ground surface and approximately 3 feet bgs.

Sulfate concentrations in all samples were generally elevated. Concentrations ranged from 275 mg/kg in BG02 to 26,100 mg/kg in BG06.

Laboratory analytical results are summarized in Table 2 and the laboratory analytical reports and chain-of-custody documentation are presented in Appendix D. Notifications of sampling events are presented in Appendix E.

## REGIONAL AND SITE-SPECIFIC NATURALLY OCCURRING CHLORIDE

According to the Geologic Map of the Otis 7.5-minute Quadrangle (Pederson and Dehler, October 2004), the Site is within the following formations/alluvium:

**Prlu-Permian Rustler Formation, lower, undifferentiated (Ochoan)** – Described as irregular masses of gypsum, dolomite, and salt in large blocks scattered on surface and outcrops with chaotic bedding orientations. Unit may include blocks of strata from the underlying Salado Formation. Thickness unknown.

**Qaes-alluvial and eolian deposits (Pleistocene (?) to Holocene)** – Described as brown silty clay to silt to sand, well-sorted, subangular to subrounded, grains composed of 70 percent (%) quartz and 30% carbonate and chert. Weak soil development in upper 1.25 meters: upper 15 centimeters of soil is massive silty clay to clayey silt, brown, slightly plastic, bioturbated, effervesces strongly, local organic film with granular soil structure; gypsiferous and calcareous concretions decrease in abundance downward to 40 centimeters; and prismatic structure extends down to 1.25 meters. Unit locally weathers into badlands and exhibits piping. Common veneer on nearly all Quaternary deposits. Thickness  $\leq 10$  m.

Regionally, this area consists of gypsum and salt deposits at or near ground surface. Gypsum (hydrated calcium sulfate ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ )) and salt (sodium chloride ( $\text{NaCl}$ ) and others) are prone to dissolve with precipitation events and naturally settle through pore spaces into clay with the electron affinity or areas where the pore spaces do not allow for gravity movement. The variability of the salt throughout the area is correlated with the heterogeneity of the surface make-up, limiting correlation of salt by depth and/or specific lithology.

In addition to the regional geology, this area has been documented to have elevated chloride concentrations predating this release. Previous background sampling activities conducted by Souder, Miller & Associates (SMA) on behalf of Matador were completed at seven locations prior to the assembly of production equipment at Sites in the vicinity. These locations are located around the Loving/Malaga area and indicate chloride concentrations exceed 600 ppm. Two of the background sites tested, Warren #203H and B Banker #221H, are near the Site and identify chloride concentrations comparable to those found in the soil samples presented in this report. Appendix F includes the NMOCD-approved reports that document the elevated chloride concentrations common in the area.

Through the advancement of boreholes BH01 and BH02, potholes PH01 through PH03, and background borings BG01 through BG06, Ensolum observed surface and subsurface soil/rock consistent with the regional geology. Within the well pad itself, the lithology appears to consist of imported caliche at the ground surface to approximately 2.5 feet bgs (likely based on the natural topographic terrain prior to well pad construction) with a poorly graded silty sand, poorly graded sand, or gypsum present beneath the caliche. Inconsistency with lithology based on depth is consistent with the regional geology. Outside of the well pad, Ensolum observed gypsum at the ground surface in background samples BG01 and BG03 through BG06. Background sample BG02 consisted of a poorly graded silty sand from the ground surface and transitioned into gypsum at 3.5 feet bgs.

The presence of elevated sulfate in background samples BG01 through BG06, as well as boreholes BH01 and BH02 and pothole PH01, supports the presence of gypsum. At the concentrations observed,

it is likely that naturally occurring chloride is present at varying concentrations, including at concentrations greater than 600 ppm, as observed in laboratory analytical results.

When completing delineation activities related to the release, observations by Ensolum appeared to indicate the release was contained within the caliche pad. Beneath the constructed pad, the heterogeneous lithology similar to the lithology already documented in the region was observed. As such, Ensolum proposes a site-specific background concentration for chloride. Using background sample results, chloride concentrations ranged from non-detect to 11,800 mg/kg, with an average concentration detected of 1,251 mg/kg. For samples collected within the observed gypsum layer, the average concentration of chloride was 2,902 mg/kg. Ensolum proposed the use of this value as a site-specific remediation standard at approximately 1-foot to 3 feet bgs on Site.

## EXCAVATION SOIL SAMPLING ACTIVITIES

Beginning on January 23, 2024, Ensolum personnel were onsite to oversee the excavation and removal of impacted soil at the Site. Excavation activities were performed using a hydro-vacuum, backhoe, hand tools, and transport vehicles. The excavation occurred on-pad within the mapped release extent. To direct excavation activities, soil was screened for chloride using the Mohr Method titration.

The Site excavation area measured approximately 6,647 square feet. A total of approximately 680 cubic yards of soil was removed. The soil was transported and properly disposed of at the R360 Hobbs Facility in New Mexico.

Following removal of impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the floor of the excavation and every 200 feet from the sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Excavation floor soil samples (FS01 through FS33) were collected at depths ranging from 1-foot to 3 feet bgs and excavation sidewall soil samples (SW01 through SW04) were collected at depths ranging from the ground surface to 2 feet bgs. The excavation extent and excavation soil sample locations are presented on Figure 4.

Ensolum personnel returned to the Site on June 20, 2024, to advance composite floor samples that exceeded the approved background chloride limit. Excavation floor soil samples FS03 and FS04 were advanced via hand tools to a depth of 4 feet bgs and excavation floor samples FS06 through FS07 were advanced to a depth of 14 feet and 12 feet bgs, respectively, via trackhoe. Excavation floor sample locations FS03 and FS04 could not be advanced deeper than 4 feet bgs due to the proximity of the tank containment and associated pipping and equipment. Approximately 120 cubic yards of additional soil were removed from the release area. The soil was transported and properly disposed of at the R360 Hobbs Facility in New Mexico.

Ensolum personnel returned to the Site on September 3, 2024, to collect sidewalls on the west, east, and south sides of confirmation sample areas FS03 and FS04. Sidewall soil sample SW05 collected at depths ranging from ground surface to 4 feet bgs laterally and vertically defines the west side of the Area of Requested Deferral (FS03 and FS04) and sidewall soil sample SW06 collected at depths ranging from ground surface to 4 feet bgs laterally defines the east side. The north side of the Area of Requested Deferral (FS03 and FS04) is laterally and vertically defined by confirmation floor soil sample FS02@2 ft bgs. Sidewall sample SW07, collected at depths ranging from 4 feet bgs to 14 feet bgs, is located directly beneath the catwalk stairs and north of confirmation sample area's FS05@ 2 ft bgs and FS06@14 ft bgs. The catwalk stairs and associated production equipment are preventing the removal of chloride containing soil and therefore SW07 is included in the Area of Requested Deferral.

Charlie Sweeney Fed TB



Confirmation sidewall soil samples SW08 and SW09 collected at depths ranging from ground surface to 14 feet and 12 feet bgs, respectively, laterally and vertically define confirmation soil sample areas FS06@2 ft bgs and FS07@2 ft bgs on the west and east sides of the excavation extent. Confirmation sidewall soil samples SW10 through SW12 laterally and vertically define confirmation sample areas FS05@2 ft bgs, FS06@2 ft bgs, FS07@2 ft bgs, and FS08@2 ft bgs on the south side of the excavation extent.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for excavation floor samples and excavation sidewall samples were all in compliance with the Site Closure Criteria and reclamation requirement and/or the proposed Site-specific background concentration with the exception of confirmation floor samples FS03 and FS04 collected at a depth of 4 feet bgs. Laboratory analytical results for confirmation sidewall soil samples (SW05 through SW12) were all in compliance with the proposed Site-specific background concentration with the exception of confirmation sidewall soil sample SW07 collected at a depth ranging from 4 feet bgs to 14 feet bgs. Laboratory analytical results are summarized in Tables 3 and 4 and laboratory analytical reports are included as Appendix D.

## DEFERRAL REQUEST

Matador is requesting deferral of final remediation due to the presence of active production equipment (tank containment, transfer pumps, process piping, and the stairs to the catwalk), which prevent the full excavation of impacted soil in confirmation sample locations FS03, FS04, and SW07. The estimated area of remaining impacted soil measures approximately 483 square feet, and assuming a depth of up to 14 feet bgs based on confirmation floor sample FS06@14 ft bgs, a total of approximately 250 cubic yards of impacted soil remains in place. The deferral area and delineation soil samples are depicted on Figure 5.

Impacted soil is limited to the area around active production equipment, where remediation would require a major facility deconstruction. The release extent has been laterally defined by delineation soil samples (SS01 through SS05) at ground surface and vertically defined by delineation pothole samples (PH01 and PH02 at 2 feet bgs, PH03 at 10 feet bgs, BH01 at 9 feet bgs, BH02 at 6 feet bgs, and borehole sample BH03 at 11 feet bgs) and by confirmation floor sample FS06@14 ft bgs.

Matador does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be 60 feet bgs, and all accessible impacted soil was removed to the Maximum Extent Possible (MEP) during excavation activities. Matador requests deferral of final remediation for Incident Number nAPP2332849245 until final reclamation of the well pad or major construction, whichever comes first.

If you have any questions or comments, please contact Ms. Ashley Giovengo at (575) 988-0055 or [agiovengo@ensolum.com](mailto:agiovengo@ensolum.com).

Sincerely,  
**Ensolum, LLC**

A handwritten signature in black ink, appearing to read "Ashley Giovengo".

Ashley Giovengo  
Senior Scientist

A handwritten signature in black ink, appearing to read "Daniel R. Moir".

Daniel R. Moir, PG (licensed in WY & TX)  
Senior Managing Geologist

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Background Soil Sample Locations
Figure 4	Confirmation Soil Sample Locations
Figure 5	Area of Requested Deferral
Table 1	Soil Sample Analytical Results (Delineation Soil Samples)
Table 2	Soil Sample Analytical Results (Background Soil Samples)
Table 3	Soil Sample Analytical Results (Confirmation Floor Soil Samples)
Table 4	Soil Sample Analytical Results (Confirmation Sidewall Soil Samples)
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Correspondence
Appendix F	Referenced Reports





FIGURES



## Site Receptor Map

Matador Production Company  
Charlie Sweeney Fed TB  
Incident Number: nAPP2332849245  
Unit P, Section 31, Township 23S, Range 28E  
Eddy Co., New Mexico

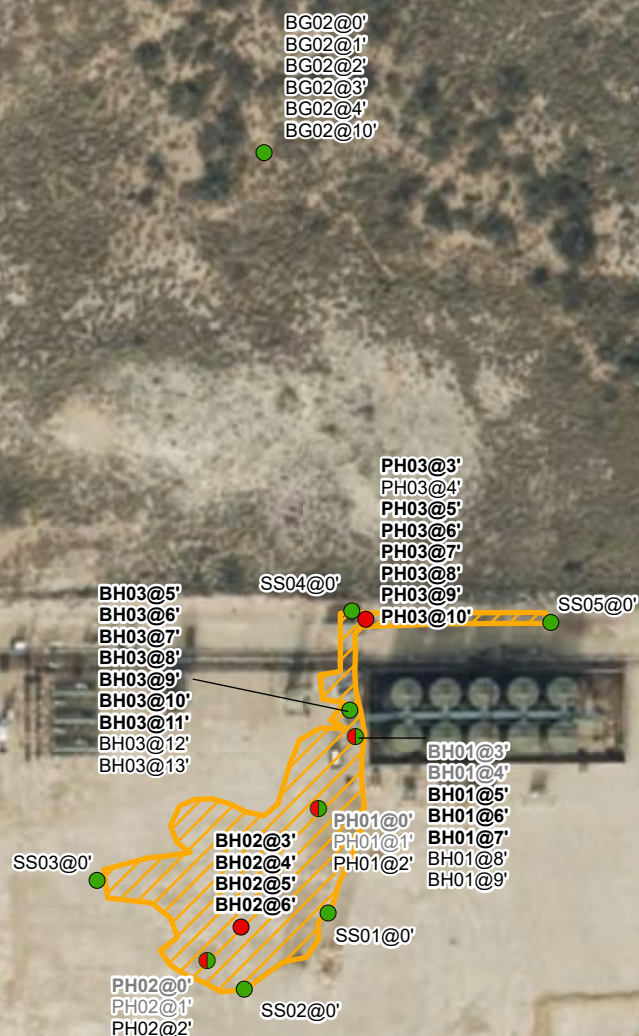
## FIGURE

1



## Legend

- Preliminary Soil Sample in Compliance with Closure Criteria
- Preliminary Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Preliminary Soil Sample in Compliance with Closure Criteria
- Release Extent



Notes:  
 Sample ID @ Depth Below Ground Surface.  
 Samples in bold indicate sample exceeded applicable closure criteria.  
 Grey text indicate soil sample was removed during excavation activities.

0 15 30 60 90 120  
 Feet

Sources: Environmental Systems Research Institute (ESRI)

## Delineation Soil Sample Locations

Matador Production Company  
 Charlie Sweeney Fed TB  
 Incident Number: nAPP2332849245  
 Unit P, Section 31, Township 23S, Range 28E  
 Eddy Co., New Mexico

FIGURE

2





**Legend**

- Background Soil Sample  
in Compliance with  
Closure Criteria
- ▨ Release Extent



BG02@0'  
 BG02@1'  
 BG02@2'  
 BG02@3'  
 BG02@4'  
 BG02@10'

BG03@0'  
 BG03@1'  
 BG03@2'  
 BG03@3'  
 BG03@10'

BG01@0'  
 BG01@1'  
 BG01@2'  
 BG01@4'  
 BG01@10'

BG04@0'  
 BG04@1'  
 BG04@2'  
 BG04@4'  
 BG04@8'

BG05@0'  
 BG05@1'  
 BG05@2'  
 BG05@6'

BG06@0'  
 BG06@1'  
 BG06@1.5'

Notes:  
 Sample ID @ Depth Below Ground Surface.  
 Samples in bold indicate sample exceeded applicable  
 closure criteria.

0 37.5 75 150 225 300  
Feet

Sources: Environmental Systems Research Institute (ESRI)



## Background Soil Sample Locations

Matador Production Company  
 Charlie Sweeney Fed TB  
 Incident Number: nAPP2332849245  
 Unit P, Section 31, Township 23S, Range 28E  
 Eddy Co., New Mexico

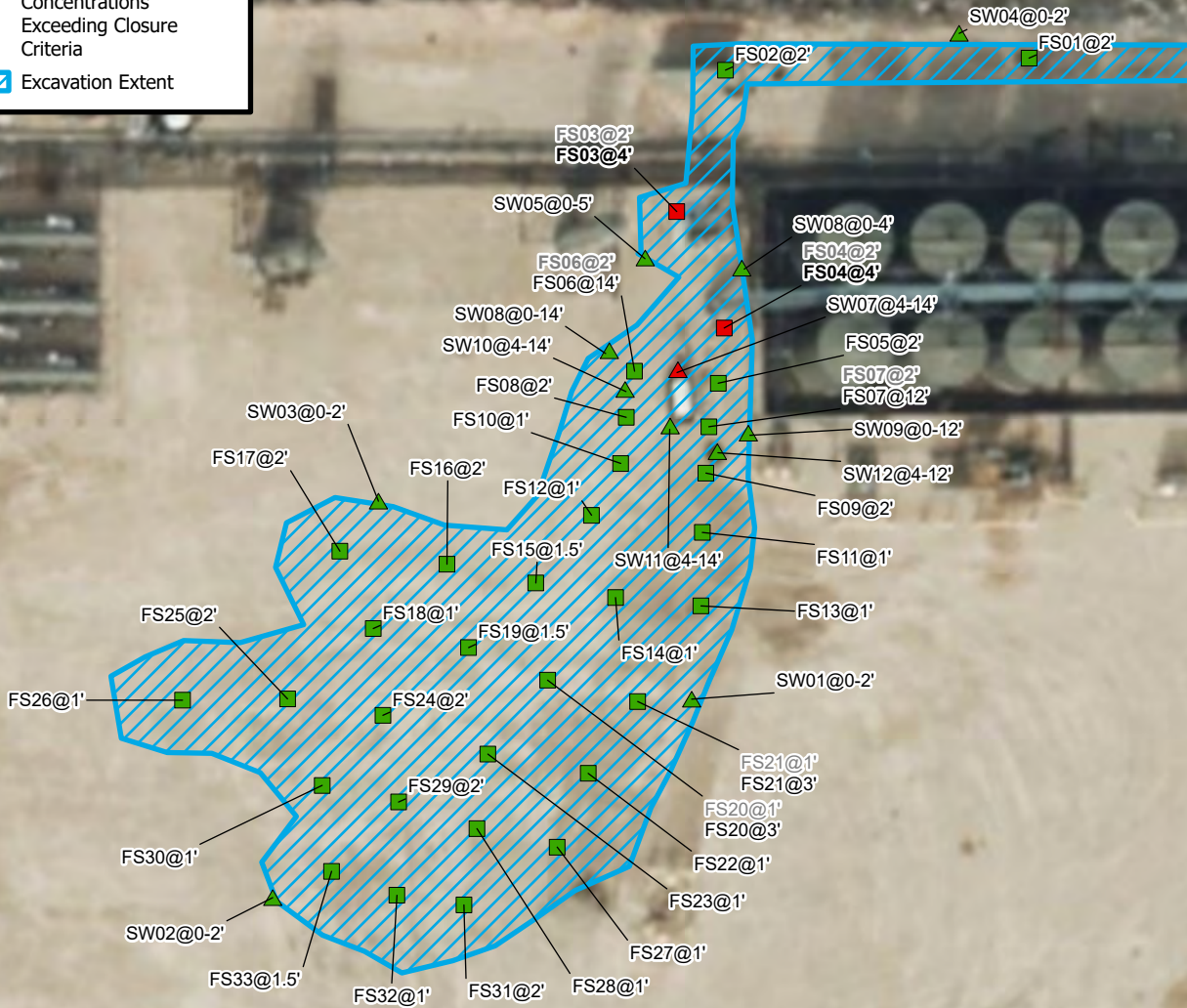
**FIGURE**

**3**



**Legend**

- Confirmation Floor Sample in Compliance with Closure Criteria
- ▲ Confirmation Sidewall Sample in Compliance with Closure Criteria
- Confirmation Floor Sample with Concentrations Exceeding Closure Criteria
- ▲ Confirmation Sidewall Sample with Concentrations Exceeding Closure Criteria
- ▨ Excavation Extent



Notes:  
 Sample ID @ Depth Below Ground Surface.  
 Samples in bold indicate sample exceeded applicable closure criteria.  
 Grey text indicate soil sample was removed during excavation activities.

0 5 10 20 30 40  
 Feet

Sources: Environmental Systems Research Institute (ESRI)

## Confirmation Soil Sample Locations

Matador Production Company  
 Charlie Sweeney Fed TB  
 Incident Number: nAPP2332849245  
 Unit P, Section 31, Township 23S, Range 28E  
 Eddy Co., New Mexico

FIGURE

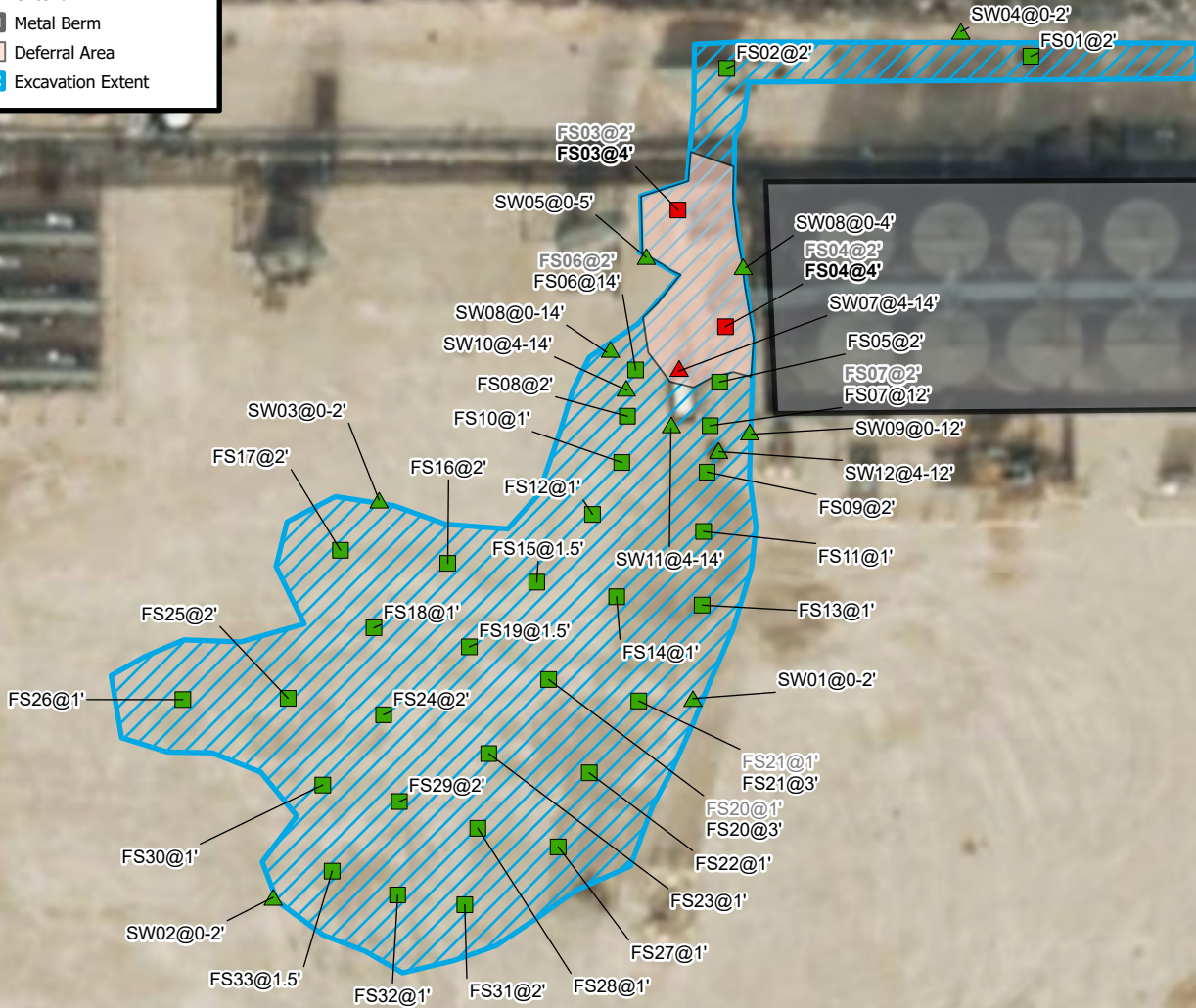
4





**Legend**

- Confirmation Floor  
Sample in Compliance  
with Closure Criteria
- ▲ Confirmation Sidewall  
Sample in Compliance  
with Closure Criteria
- Confirmation Floor  
Sample with  
Concentrations  
Exceeding Closure  
Criteria
- ▲ Confirmation Sidewall  
Sample with  
Concentrations  
Exceeding Closure  
Criteria
- Metal Berm
- Deferral Area
- Excavation Extent



Notes:  
 Sample ID @ Depth Below Ground Surface.  
 Samples in bold indicate sample exceeded applicable  
 closure criteria.  
 Grey text indicate soil sample was removed during  
 excavation activities.

0 5 10 20 30 40  
 Feet

Sources: Environmental Systems Research Institute (ESRI)



## Area of Requested Deferral

Matador Production Company  
 Charlie Sweeney Fed TB  
 Incident Number: nAPP2332849245  
 Unit P, Section 31, Township 23S, Range 28E  
 Eddy Co., New Mexico

**FIGURE**

**5**



TABLES



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Charlie Sweeney Fed TB  
 Matador Production Company  
 Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	Sulfate (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>1,328*</b>	<b>NE</b>
<b>Delineation Soil Samples</b>											
SS01	11/27/2023	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<200	NA
SS02	11/27/2023	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	445	NA
SS03	11/27/2023	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	317	NA
SS04	11/27/2023	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<200	NA
SS05	11/27/2023	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<200	NA
PH01	12/6/2023	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	6,670	NA
PH01	12/6/2023	1	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<200	NA
PH01	12/6/2023	2	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<200	NA
PH02	12/6/2023	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	4,320	NA
PH02	12/6/2023	1	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	333	NA
PH02	12/6/2023	2	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	378	NA
PH03	1/25/2024	3	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	1,550	19,700
PH03	1/25/2024	4	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	1,150	19,900
PH03	1/25/2024	5	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	2,630	23,000
PH03	1/25/2024	6	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	2,650	22,100
PH03	1/25/2024	7	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	2,420	21,200
PH03	1/25/2024	8	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	2,440	21,500
PH03	1/25/2024	9	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	2,220	20,600
PH03	1/25/2024	10	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	1,610	19,200
BH01	1/30/2024	3	NA	NA	NA	NA	NA	NA	NA	4,320	18,500
BH01	1/30/2024	4	NA	NA	NA	NA	NA	NA	NA	2,270	15,500
BH01	1/30/2024	5	NA	NA	NA	NA	NA	NA	NA	2,850	17,900
BH01	1/30/2024	6	NA	NA	NA	NA	NA	NA	NA	2,760	25,000
BH01	1/30/2024	7	NA	NA	NA	NA	NA	NA	NA	1,710	22,000
BH01	1/30/2024	8	NA	NA	NA	NA	NA	NA	NA	1,090	20,700
BH01	1/30/2024	9	NA	NA	NA	NA	NA	NA	NA	957	20,100



**TABLE 1 - CONT'D**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Charlie Sweeney Fed TB  
 Matador Production Company  
 Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	Sulfate (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>1,328*</b>	<b>NE</b>
<b>Delineation Soil Samples</b>											
BH02	1/30/2024	3	NA	NA	NA	NA	NA	NA	NA	<b>1,700</b>	21,400
BH02	1/30/2024	4	NA	NA	NA	NA	NA	NA	NA	<b>1,490</b>	22,000
BH02	1/30/2024	5	NA	NA	NA	NA	NA	NA	NA	<b>1,540</b>	22,100
BH02	1/30/2024	6	NA	NA	NA	NA	NA	NA	NA	<b>1,430</b>	20,800
BH03	7/12/2024	5	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>4,370</b>	12,200
BH03	7/12/2024	6	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>3,080</b>	20,200
BH03	7/12/2024	7	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>2,400</b>	19,400
BH03	7/12/2024	8	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>1,710</b>	18,800
BH03	7/12/2024	9	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>1,560</b>	18,600
BH03	7/12/2024	10	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>1,440</b>	16,900
BH03	7/12/2024	11	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>1,380</b>	16,800
BH03	7/12/2024	12	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	1,110	16,300
BH03	7/12/2024	13	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	1,230	20,000

**Notes:**

bgs: below ground surface

mg/kg: milligrams per kilogram

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Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.

\* Naturally occurring chloride level approved by NMOCD

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DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

NA: Not Analyzed



**TABLE 2**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Charlie Sweeney Fed TB  
 Matador Production Company  
 Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	Sulfate (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>1,328*</b>	<b>NE</b>
<b>Background Soil Samples</b>											
BG01	1/31/2024	0	NA	NA	NA	NA	NA	NA	NA	<200	16,900
BG01	1/31/2024	1	NA	NA	NA	NA	NA	NA	NA	<200	17,500
BG01	1/31/2024	2	NA	NA	NA	NA	NA	NA	NA	<200	17,300
BG01	1/31/2024	4	NA	NA	NA	NA	NA	NA	NA	<200	17,200
BG01	1/31/2024	10	NA	NA	NA	NA	NA	NA	NA	<200	17,200
BG02	1/31/2024	0	NA	NA	NA	NA	NA	NA	NA	60.3	275
BG02	1/31/2024	1	NA	NA	NA	NA	NA	NA	NA	<b>3,920</b>	15,000
BG02	1/31/2024	2	NA	NA	NA	NA	NA	NA	NA	<b>4,260</b>	12,600
BG02	1/31/2024	3	NA	NA	NA	NA	NA	NA	NA	<b>4,050</b>	24,300
BG02	1/31/2024	4	NA	NA	NA	NA	NA	NA	NA	<1000	19,200
BG02	1/31/2024	10	NA	NA	NA	NA	NA	NA	NA	<1000	20,700
BG03	1/31/2024	0	NA	NA	NA	NA	NA	NA	NA	<b>11,800</b>	20,500
BG03	1/31/2024	1	NA	NA	NA	NA	NA	NA	NA	<400	1,770
BG03	1/31/2024	2	NA	NA	NA	NA	NA	NA	NA	<400	2,460
BG03	1/31/2024	3	NA	NA	NA	NA	NA	NA	NA	<400	1,790
BG03	1/31/2024	10	NA	NA	NA	NA	NA	NA	NA	<400	2,160
BG04	1/31/2024	0	NA	NA	NA	NA	NA	NA	NA	<200	16,900
BG04	1/31/2024	1	NA	NA	NA	NA	NA	NA	NA	<400	2,400
BG04	1/31/2024	2	NA	NA	NA	NA	NA	NA	NA	<400	2,270
BG04	1/31/2024	4	NA	NA	NA	NA	NA	NA	NA	<400	2,370
BG04	1/31/2024	8	NA	NA	NA	NA	NA	NA	NA	<100	17,600
BG05	1/31/2024	0	NA	NA	NA	NA	NA	NA	NA	395	18,100
BG05	1/31/2024	1	NA	NA	NA	NA	NA	NA	NA	592	19,800
BG05	1/31/2024	2	NA	NA	NA	NA	NA	NA	NA	244	20,000
BG05	1/31/2024	6	NA	NA	NA	NA	NA	NA	NA	<200	18,400





**TABLE 2 - CONT'D**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Charlie Sweeney Fed TB  
 Matador Production Company  
 Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	Sulfate (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	1,328*	NE
Background Soil Samples											
BG06	1/31/2024	0	NA	NA	NA	NA	NA	NA	NA	5,470	26,100
BG06	1/31/2024	1	NA	NA	NA	NA	NA	NA	NA	739	19,000
BG06	1/31/2024	1.5	NA	NA	NA	NA	NA	NA	NA	356	18,200

**Notes:**

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Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.

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GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

NA: Not Analyzed



**TABLE 3**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Charlie Sweeney Fed TB  
 Matador Production Company  
 Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>1,328*</b>
<b>Confirmation Floor Soil Samples</b>										
FS01	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	835
FS02	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,170
FS03	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,090
FS03	6/21/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	3,080
FS04	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,430
FS04	6/21/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	2,840
FS05	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	996
FS06	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,880
FS06	6/24/2024	14	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<200
FS07	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,960
FS07	6/24/2024	12	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<200
FS08	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,050
FS09	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	437
FS10	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	394
FS11	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	348
FS12	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	381
FS13	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	328
FS14	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	219
FS15	1/29/2024	1.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	533
FS16	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,210
FS17	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	890
FS18	1/24/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	339
FS19	1/29/2024	1.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	515
FS20	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	582
FS20	1/30/2024	3	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	281
FS21	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	285
FS21	1/30/2024	3	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<200



**TABLE 3 - CONT'D**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Charlie Sweeney Fed TB  
 Matador Production Company  
 Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	1,328*
Confirmation Floor Soil Samples										
FS22	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	227
FS23	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	272
FS24	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,000
FS25	1/29/2024	2	<0.0250	<0.0500	<20.0	26.4	<50.0	26.4	26.4	783
FS26	1/24/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	344
FS27	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	349
FS28	1/29/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	555
FS29	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	1,320
FS30	1/24/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	403
FS31	1/29/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	901
FS32	1/24/2024	1	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	418
FS33	1/29/2024	1.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	200

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TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



**TABLE 4**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Charlie Sweeney Fed TB  
 Matador Production Company  
 Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	1,328*
Confirmation Sidewall Soil Samples										
SW01	1/29/2024	0-2	<0.0250	<0.0250	<20.0	<25.0	<50.0	<25.0	<25.0	175
SW02	1/29/2024	0-2	<0.0250	<0.0250	<20.0	<25.0	<50.0	<25.0	<25.0	283
SW03	1/29/2024	0-2	<0.0250	<0.0250	<20.0	<25.0	<50.0	<25.0	<25.0	494
SW04	1/29/2024	0-2	<0.0250	<0.0250	<20.0	<25.0	<50.0	<25.0	<25.0	311
SW05	9/3/2024	0-5	-	-	-	-	-	-	-	<200
SW06	9/3/2024	0-4	-	-	-	-	-	-	-	723
SW07	9/3/2024	4-14	-	-	-	-	-	-	-	<b>3,720</b>
SW08	9/3/2024	0-14	-	-	-	-	-	-	-	651
SW09	9/3/2024	0-12	-	-	-	-	-	-	-	132
SW10	9/3/2024	4-14	-	-	-	-	-	-	-	448
SW11	9/3/2024	4-14	-	-	-	-	-	-	-	184
SW12	9/3/2024	4-12	-	-	-	-	-	-	-	674

**Notes:**

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DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes



## APPENDIX A

### Well Log and Record

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# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

STATE OF NEW MEXICO  
BOSWELL, NEW MEXICO

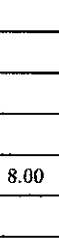
2017 AUG 28 AM 10:47

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) C-4037		WELL TAG ID NO.		OSE FILE NO(S).			
	WELL OWNER NAME(S) Sendero Calrsbad Midstream LLC				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 16430 Park Ten Place Suite 675				CITY Houston	STATE TX	ZIP 77084	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 15	SECONDS 45.1 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
LONGITUDE 104 07 23.8 W DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Well is off of Bounds Rd. at Sendero refinery. Location is close to the northern fence line.								
2. DRILLING & CASING INFORMATION	LICENSE NO. WD-1348		NAME OF LICENSED DRILLER Clinton E. Taylor			NAME OF WELL DRILLING COMPANY Taylor Water Well Service		
	DRILLING STARTED 7/17/2017	DRILLING ENDED 7/18/2017	DEPTH OF COMPLETED WELL (FT) 98.5	BORE HOLE DEPTH (FT) 100	DEPTH WATER FIRST ENCOUNTERED (FT) 60			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 34			
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	+1.5	58.5	8 1/2	PVC	Spline	4 1/2	SDR 17	
	58.5	98.5	8 1/2	PVC	Spline	4 1/2	SDR 17	.032
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	20	8 1/2	20% Bentonite Grout	3 Sacks	Tremie		
	20	98.5	8 1/2	3/8" Pea Gravel	2 Yards	Dump		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	C-4037	POD NO.	1	TRN NO.	604774
LOCATION	Drink/Sanit	235.28E.31.234	WELL TAG ID NO.		PAGE 1 OF 2

	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)		ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)	
	FROM	TO						
<b>4. HYDROGEOLOGIC LOG OF WELL</b>	0	5	5	Clay: rd,sme stringers of wht anhydrite	Y	✓ N		
	5	32	27	Anhydrite: frstd,rd,clr,swht,fn xln-dns,sme rd silt stone	Y	✓ N		
	32	52	20	Clay:rd,smth,stky in prt	Y	✓ N		
	52	60	8	Clay:rd brn,sndy,slty	Y	✓ N		
	60	82	22	Clay:rd,brn,slty,thin layers of frstd wht anhydrite,sme water	✓ Y	N		
	82	100	18	Clay:rd brn,sme rd siltstone,sme thin layers of wht anhydrite	✓ Y	N	8.00	
					Y	N		
					Y	N		
					Y	N		
					Y	N		
					Y	N		
					Y	N		
					Y	N		
					Y	N		
					Y	N		
					Y	N		
	METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:					TOTAL ESTIMATED WELL YIELD (gpm):		
	<input checked="" type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER – SPECIFY:					8.00		
<b>5. TEST; RIG SUPERVISION</b>	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.						
	MISCELLANEOUS INFORMATION: Water quality is about 3000 parts per million of total dissolved solids.							
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:							
<b>6. SIGNATURE</b>	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:							
	 _____ SIGNATURE OF DRILLER / PRINT SIGNEE NAME			CE Taylor  8/23/2017  DATE				

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/30/2017)	
FILE NO.	POD NO.	TRN NO.	
LOCATION	WELL TAG ID NO.		PAGE 2 OF 2

Tom Blaine, P.E.  
State Engineer



Roswell Office  
1900 WEST SECOND STREET  
ROSWELL, NM 88201

**STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 604776  
File Nbr: C 04037  
Well File Nbr: C 04037 POD1

Sep. 01, 2017

SAM HEFFINGTON  
TRAILHEAD ENGINEERING  
16430 PARK TEN PLACE  
SUITE 675  
HOUSTON, TX 77084

Greetings:

The well driller's record for the above numbered well has been received in this office indicating your well has been completed.

Your permit was granted with the condition that a meter(s) be installed and meter readings submitted to this office.

Per Condition 5B, please advise this office within 30 days, on the attached form, of the make, model, serial number, date of installation, and initial reading of the meter(s) prior to appropriation of the water.

If you have any questions, please feel free to contact us.

Sincerely,

A handwritten signature in cursive script, appearing to read "Yolanda Mendiola".

Yolanda Mendiola  
(575) 622-6521

Enclosure

wellcon5



## APPENDIX B

### Photographic Log

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# Photographic Log

Matador Production Company

Charlie Sweeney Fed TB

Incident Number nAPP2332849245



Photograph 1

Date: 11/27/23

Description: Spill Area

View: West



Photograph 2

Date: 11/27/23

Description: Spill Area

View: Northeast



Photograph 3

Date: 11/27/23

Description: Spill Area

View: Northeast



Photograph 4

Date: 11/27/23

Description: Spill Area

View: East





# Photographic Log

Matador Production Company

Charlie Sweeney Fed TB

Incident Number nAPP2332849245



Photograph 5

Date: 12/6/23

Description: Delineation

View: West



Photograph 6

Date: 1/23/24

Description: Hydro-vac lines

View: North



Photograph 7

Date: 1/23/24

Description: Excavation

View: East



Photograph 8

Date: 1/24/24

Description: Excavation

View: East





# Photographic Log

Matador Production Company

Charlie Sweeney Fed TB

Incident Number nAPP2332849245



Photograph 9

Date: 1/24/24

Description: Hydro-vac around lines

View: East



Photograph 10

Date: 1/25/24

Description: Excavation

View: East

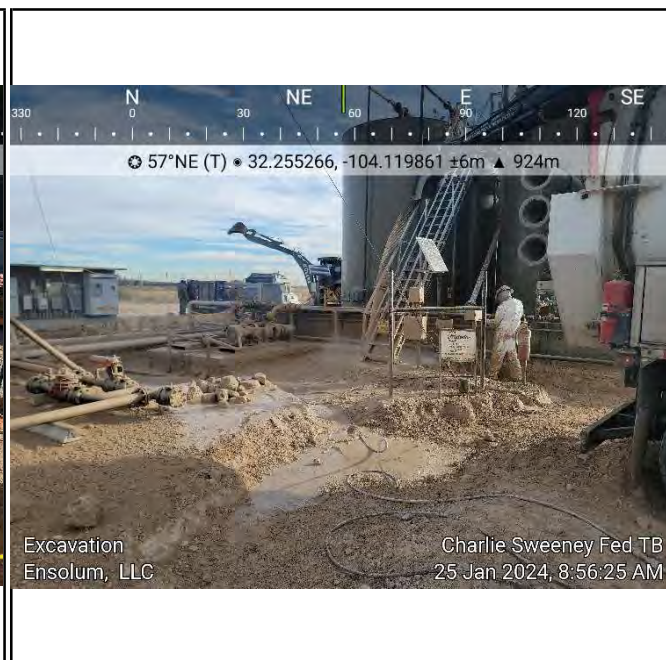


Photograph 11

Date: 1/25/24

Description: PH03 delineation

View: East



Photograph 12

Date: 1/25/24

Description: Hydro-vac around pipelines

View: East



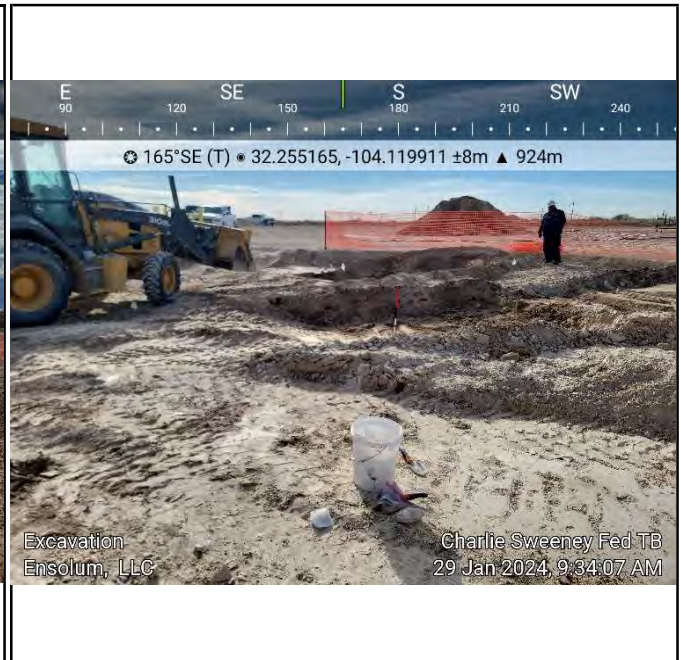
**Photographic Log**

Matador Production Company  
Charlie Sweeney Fed TB  
Incident Number nAPP2332849245



Photograph 13  
Description: Excavation  
View: South

Date: 1/26/24



Photograph 14  
Description: Excavation  
View:

Date: 1/29/24



Photograph 15  
Description: Hand digging  
View: North

Date: 1/29/24



Photograph 16  
Description: Excavation  
View: East

Date: 1/29/24





# Photographic Log

Matador Production Company

Charlie Sweeney Fed TB

Incident Number nAPP2332849245



Photograph 17  
Description: Excavation  
View: Northwest

Date: 1/30/24



Photograph 18  
Description: BH02  
View: South

Date: 1/30/24



Photograph 19  
Description: BG01  
View: Northeast

Date: 1/31/24



Photograph 20  
Description: BG02  
View: East

Date: 1/31/24



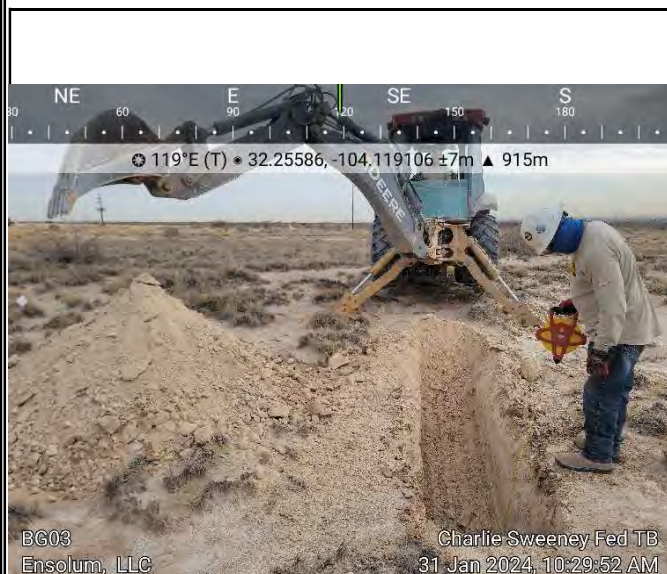


# Photographic Log

Matador Production Company

Charlie Sweeney Fed TB

Incident Number nAPP2332849245



Photograph 21  
Description: BG03  
View: East

Date: 1/31/24



Photograph 22  
Description: BG04  
View: Northwest

Date: 1/31/24



Photograph 23  
Description: BG05  
View: Northeast

Date: 1/31/24



Photograph 24  
Description: BG06  
View: Northwest

Date: 1/31/24



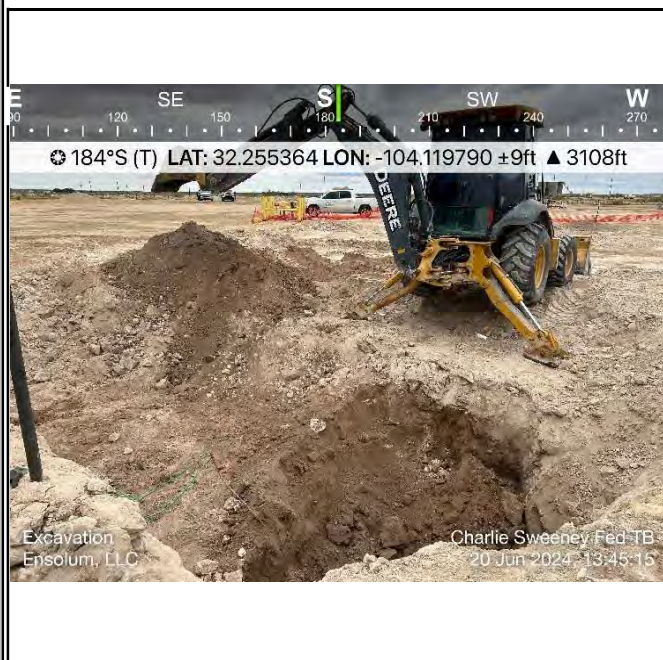


# Photographic Log

Matador Production Company

Charlie Sweeney Fed TB

Incident Number nAPP2332849245



Photograph 25

Date: 6/20/24

Description: Excavation

View: South



Photograph 26

Date: 6/24/24

Description: Excavation

View: Northeast

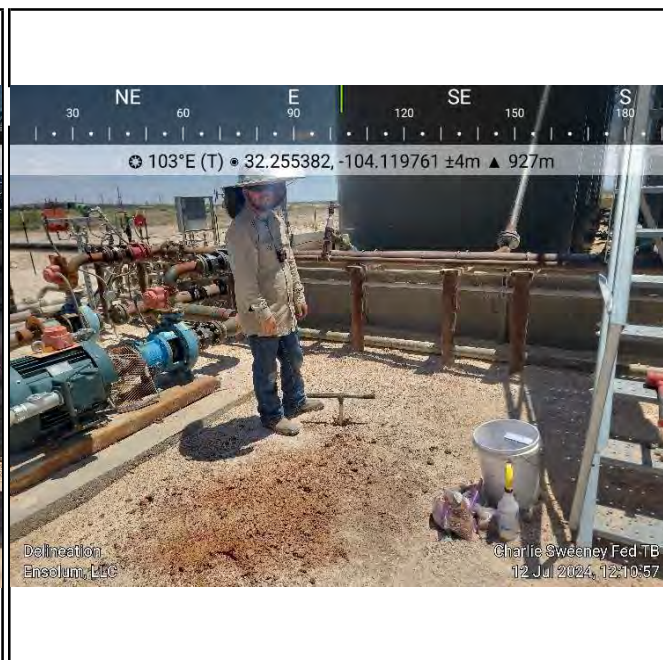


Photograph 27

Date: 06/24/24

Description: Excavation

View: Northwest



Photograph 28

Date: 07/12/24

Description: BH03

View: East



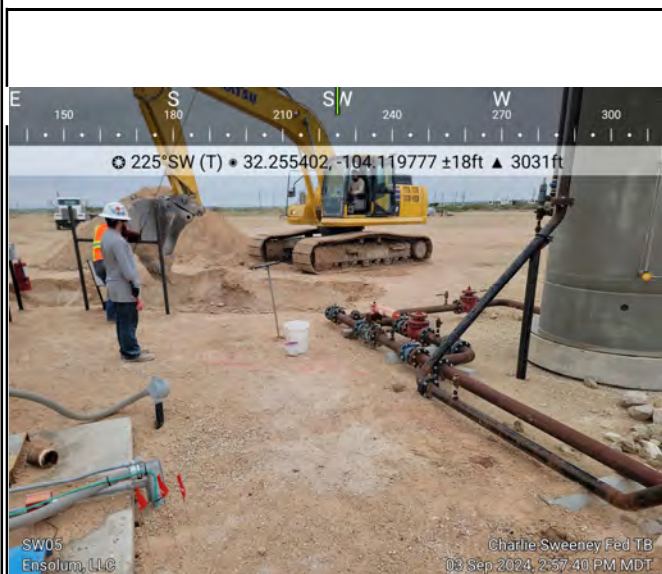


# Photographic Log

Matador Production Company

Charlie Sweeney Fed TB

Incident Number nAPP2332849245



Photograph 29

Date: 09/03/2024

Description: Sidewall Sampling

View: Southwest

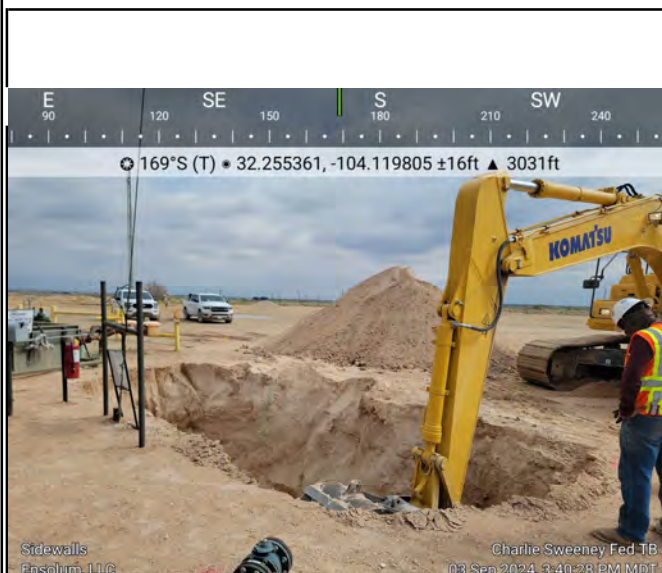


Photograph 30

Date: 09/03/2024

Description: Sidewall Sampling

View: Northwest

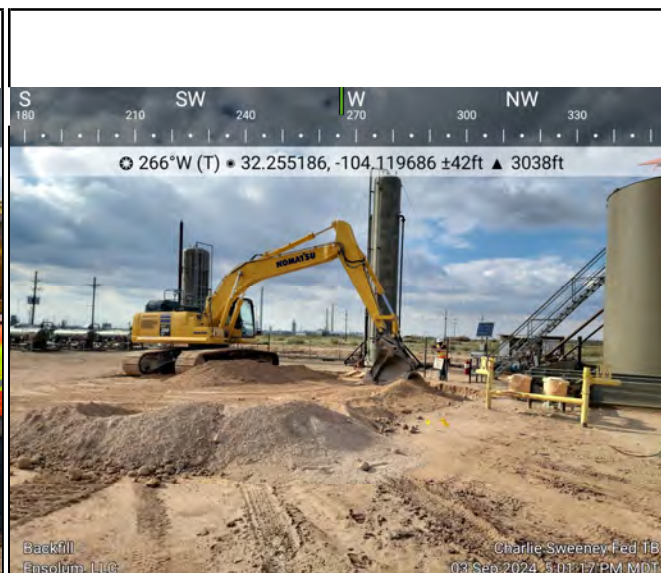


Photograph 31

Date: 09/03/2024

Description: Sidewall Sampling

View: South



Photograph 32

Date: 09/03/2024

Description: Sidewall Sampling


View: West




## APPENDIX C


### Lithologic Soil Sampling Logs


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								Sample Name: PH01		Date: 12/6/23	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Backhoe	
Coordinates: 32.25522, -104.11978								Hole Diameter: 3'		Total Depth: 4'	
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	5,900		Y	PH01	0	0	CCHE	CALICHE - Staining, slight odor			
M	200		N	PH01	1	1	CCHE	CALICHE - no staining			
M	250		N	PH01	2	2	SM	SILT/SAND - Light brown, med plasticity			
M	350		N	PH01	3	3					
M	300		N	PH01	4	4					
Total Depth = 4'											





								Sample Name: PH02		Date: 12/6/23	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Backhoe	
Coordinates: 32.2550618, -104.1199284								Hole Diameter: 3'		Total Depth: 3'	
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M			Y	PH02	0	0	CCHE	CALICHE - Staining, slight odor			
M	500		N	PH02	1	1	CCHE	CALICHE - no staining			
M	450		N	PH02	2	2	SM	SILT/SAND - Light brown, med plasticity			
M	550		N	PH02	3	3					
Total Depth 3'											


								Sample Name: PH03		Date: 1/25/24			
								Site Name: Charlie Sweeney Fed TB					
								Incident Number: nAPP2332849245					
								Job Number: 03A2270020					
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Backhoe			
Coordinates: 32.2554268, -104.1197237								Hole Diameter: 3'		Total Depth: 10.2'			
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.													
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions					
M			Y	PH03	0	0	CCHE	CALICHE - Staining, slight odor					
M			N	PH03	1	1	CCHE	CALICHE - no staining					
M			N	PH03	2	2	GYP	GYPSUM - pale white, micro crystalline, No HC stain or odor.					
M	1,150		N	PH03	3	3							
M	1,000		N	PH03	4	4							
D	2,500		N	PH03	5	5	GYP	GYPSUM - pale white/tan, micro crystalline, trace very fine tan sand and silt. No HC stain or odor.					
D	2,250		N	PH03	6	6							
D	2,000		N	PH03	7	7							
D	2,200		N	PH03	8	8							
D	1,800		N	PH03	9	9							
D	1,400		N	PH03	10	10	GYP	GYPSUM, pale white/red, micro crystalline					
D			N	PH03	10.2	10.2	GYP	GYPSUM - solid rock					
Total Depth = 10.2'													

								Sample Name: BH01		Date: 1/30/24	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Hand Auger	
Coordinates: 32.2553009, -104.1197376								Hole Diameter: 3"		Total Depth: 9.1'	
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M			Y	BH01	0	0	CCHE	CALICHE - Staining, slight odor			
M			N	BH01	1	1	CCHE	CALICHE - no staining			
M			N	BH01	2	2	SP	SAND - brown, veryfine, with silt, some gypsum, No HC stain or odor.			
M	3,800		N	BH01	3	3	SP				
M	2,300		N	BH01	4	4	SP				
M	2,700		N	BH01	5	5	SP-SC	SAND/SILT - Light brown, medium grained, some inclusions of clay, red ~1-3 cm, low plasticity, low cohesion			
M	2,600		N	BH01	6	6	SP-SC				
M	1,800		N	BH01	7	7	SP-SC				
M	1,150		N	BH01	8	8	SP-SC				
M	1,200		N	BH01	9	9	SP-SC				
				BH01	9.1	9.1	GYP	GYPSUM - Solid rock			
Total Depth = 9.1'											


								Sample Name: BH02		Date: 1/30/24	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Hand Auger	
Coordinates: 32.2550978, -104.1198847								Hole Diameter: 3"		Total Depth: 6'	
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M			Y	BH02	0	0	CCHE	CALICHE - Staining, slight odor			
M			N	BH02	1	1		CALICHE - no staining			
M			N	BH02	2	2					
M	1,550		N	BH02	3	3	SP	SAND - brown, veryfine, with silt, some gypsum, No HC stain or odor.			
M	1,500		N	BH02	4	4	SP				
M	1,600		N	BH02	5	5	SP				
M	1,500		N	BH02	6	6	SP				
Total Depth = 6'											


								Sample Name: BH03		Date: 7/12/2024	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Hand Auger	
Coordinates: 32.25533, -104.11975								Hole Diameter: 3"		Total Depth: 13'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D			N	BH03		0	CCHE	Caliche - No staining, No odor			
D			N	BH03		1					
D			N	BH03		2					
D			N	BH03		3					
M			N	BH03		4					
M			N	BH03	5	5	SP-SC	SAND/SILT - Light brown, medium grained, some inclusions of clay, red ~1-3 cm, low plasticity, low cohesion			
M			N	BH03	6	6					
M			N	BH03	7	7					
M	1,825		N	BH03	8	8					
M	1,702		N	BH03	9	9					
M	1,825		N	BH03	10	10					
M	1,702		N	BH03	11	11					
M	1,181		N	BH03	12	12					
M	1,584		N	BH03	13	13					
						14	GYP				


								Sample Name: BG01		Date: 1/30/24	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Backhoe	
Coordinates: 32.255284, -103.120983								Hole Diameter: 3'		Total Depth: 10'	
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	100		N	BG01	0	0	GYP	GYPSUM - pale white, micro crystalline, No HC stain or odor.			
M	200		N	BG01	1	1	GYP				
M	100		N	BG01	2	2	GYP				
M	100		N	BG01	3	3	GYP				
D	100		N	BG01	4	4	GYP				
D	100		N	BG01	5	5	GYP	SILT/SAND - Dark brown, med plasticity			
D	100		N	BG01	6	6	SP-SM				
D	100		N	BG01	7	7	SP-SM	SAND - Red, veryfine, with silt, No HC stain or odor.			
D	100		N	BG01	8	8	SP				
D	100		N	BG01	9	9	SP	SAND - Red, veryfine, with silt, some gypsum No HC stain or odor.			
D	100		N	BG01	10	10	SP				
Total Depth = 10'											


								Sample Name: BG02		Date: 1/30/24	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Backhoe	
Coordinates: 32.255930, -104.119846								Hole Diameter: 3'		Total Depth: 10'	
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	100		N	BG02	0	0	SP-SM	SAND/SILT - Dark brown, medium grained, No HC stain or odor.			
M	4,500		N	BG02	1	1	SP-SM				
M	4,000		N	BG02	2	2	SP-SM				
M	2,800		N	BG02	3	3	SP-SM	Some gypsum inclusions			
D	800		N	BG02	4	4	GYP	GYPSUM - with red sand, micro crystalline, No HC stain or odor.			
D	500		N	BG02	5	5	GYP				
D	450		N	BG02	6	6	GYP				
D	500		N	BG02	7	7	GYP				
D	500		N	BG02	8	8	GYP				
D	500		N	BG02	9	9	GYP				
D	500		N	BG02	10	10	GYP				
Total Depth = 10'											



								Sample Name: BG03		Date: 1/30/24	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Backhoe	
Coordinates: 32.2559399, -104.1190451								Hole Diameter: 3'		Total Depth: 10'	
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	9,300		N	BG03	0	0	GYP	GYPSUM - pale white, micro crystalline, No HC stain or odor.			
M	2,400		N	BG03	1	1	GYP				
M	1,500		N	BG03	2	2	GYP				
M	500		N	BG03	3	3	GYP				
D	200		N	BG03	4	4	GYP				
D	100		N	BG03	5	5	GYP				
D	100		N	BG03	6	6	GYP	GYPSUM - with red sand, micro crystalline, No HC stain or odor.  some inclusions of clay, red ~1-3 cm,			
D	100		N	BG03	7	7	GYP				
D	100		N	BG03	8	8	GYP				
D	150		N	BG03	9	9	GYP				
D	150		N	BG03	10	10	GYP				
Total Depth = 10'											

								Sample Name: BG04		Date: 1/30/24	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Backhoe	
Coordinates: 32.2551309, -104.1177969								Hole Diameter: 3'		Total Depth: 8'	
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	100		N	BG04	0	0	GYP	GYPSUM - pale white, micro crystalline, No HC stain or odor.			
M	800		N	BG04	1	1	GYP				
M	400		N	BG04	2	2	GYP				
M	200		N	BG04	3	3	GYP				
D	300		N	BG04	4	4	GYP	GYPSUM - with red sand, micro crystalline, No HC stain or odor.			
D	200		N	BG04	5	5	GYP				
D	100		N	BG04	6	6	GYP				
D	200		N	BG04	7	7	GYP				
D	100		N	BG04	8	8	GYP	GYPSUM - Solid Rock			
Ttotal Depth = 8'											

								Sample Name: BG05		Date: 1/30/24	
								Site Name: Charlie Sweeney Fed TB			
								Incident Number: nAPP2332849245			
								Job Number: 03A2270020			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Cole Burton		Method: Backhoe	
Coordinates: 32.254126, -104.119721								Hole Diameter: 3'		Total Depth: 6'	
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	550		N	BG05	0	0	GYP	GYPSUM - pale white, micro crystalline, No HC stain or odor.			
M	700		N	BG05	1	1	GYP				
M	300		N	BG05	2	2	GYP				
M	300		N	BG05	3	3	GYP				
D	300		N	BG05	4	4	GYP				
D	300		N	BG05	5	5	GYP				
D	250		N	BG05	6	6	GYP				
Total Depth = 6'											

		Sample Name: BG06		Date: 1/30/24				
		Site Name: Charlie Sweeney Fed TB						
		Incident Number: nAPP2332849245						
		Job Number: 03A2270020						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>				Logged By: Cole Burton		Method: Shovel		
Coordinates: 32.1191281, -104.2541042				Hole Diameter: 1'		Total Depth: 1.5'		
Comments: Field screening conducted with Mohr Titration method for chloride. Chloride test performed with 1:1 dilution factor of soil to distilled water. No correction factors included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	3,300		N	BG06	0	0	GYP	GYPSUM - pale white, micro crystalline, No HC stain or odor.
M	1,000		N	BG06	1	1	GYP	
M	500		N	BG06	1.5	1.5	GYP	
Total Depth = 1.5'								



## APPENDIX D

### Laboratory Analytical Reports & Chain-of-Custody Documentation

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Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Federal Tank Battery

Work Order: E311218

Job Number: 23052-0001

Received: 11/29/2023

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
12/5/23

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 12/5/23

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Federal Tank Battery  
Workorder: E311218  
Date Received: 11/29/2023 8:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 11/29/2023 8:30:00AM, under the Project Name: Charlie Sweeney Federal Tank Battery.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Federal Tank Battery apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
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Cell: 775-287-1762  
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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/05/23 16:18
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS01-0'	E311218-01A	Soil	11/27/23	11/29/23	Glass Jar, 2 oz.
SS02-0'	E311218-02A	Soil	11/27/23	11/29/23	Glass Jar, 2 oz.
SS03-0'	E311218-03A	Soil	11/27/23	11/29/23	Glass Jar, 2 oz.
SS04-0'	E311218-04A	Soil	11/27/23	11/29/23	Glass Jar, 2 oz.
SS05-0'	E311218-05A	Soil	11/27/23	11/29/23	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/5/2023 4:18:14PM
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SS01-0'  
E311218-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2348052	
Benzene	ND	0.0250	1	11/29/23	11/30/23	
Ethylbenzene	ND	0.0250	1	11/29/23	11/30/23	
Toluene	ND	0.0250	1	11/29/23	11/30/23	
o-Xylene	ND	0.0250	1	11/29/23	11/30/23	
p,m-Xylene	ND	0.0500	1	11/29/23	11/30/23	
Total Xylenes	ND	0.0250	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene	114 %	70-130		11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4	92.6 %	70-130		11/29/23	11/30/23	
Surrogate: Toluene-d8	107 %	70-130		11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2348052	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene	114 %	70-130		11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4	92.6 %	70-130		11/29/23	11/30/23	
Surrogate: Toluene-d8	107 %	70-130		11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2348073	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/30/23	12/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	11/30/23	12/01/23	
Surrogate: n-Nonane	91.9 %	50-200		11/30/23	12/01/23	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2349009	
Chloride	ND	200	10	12/04/23	12/04/23	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/5/2023 4:18:14PM
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SS02-0'

E311218-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2348052
Benzene	ND	0.0250	1	11/29/23	11/30/23	
Ethylbenzene	ND	0.0250	1	11/29/23	11/30/23	
Toluene	ND	0.0250	1	11/29/23	11/30/23	
o-Xylene	ND	0.0250	1	11/29/23	11/30/23	
p,m-Xylene	ND	0.0500	1	11/29/23	11/30/23	
Total Xylenes	ND	0.0250	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene		117 %	70-130	11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4		95.6 %	70-130	11/29/23	11/30/23	
Surrogate: Toluene-d8		109 %	70-130	11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2348052
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene		117 %	70-130	11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4		95.6 %	70-130	11/29/23	11/30/23	
Surrogate: Toluene-d8		109 %	70-130	11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2348073
Diesel Range Organics (C10-C28)	ND	25.0	1	11/30/23	12/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	11/30/23	12/01/23	
Surrogate: n-Nonane		93.5 %	50-200	11/30/23	12/01/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2349009
Chloride	445	200	10	12/04/23	12/04/23	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/5/2023 4:18:14PM
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SS03-0'

E311218-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2348052
Benzene	ND	0.0250	1	11/29/23	11/30/23	
Ethylbenzene	ND	0.0250	1	11/29/23	11/30/23	
Toluene	ND	0.0250	1	11/29/23	11/30/23	
o-Xylene	ND	0.0250	1	11/29/23	11/30/23	
p,m-Xylene	ND	0.0500	1	11/29/23	11/30/23	
Total Xylenes	ND	0.0250	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene		117 %	70-130	11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4		92.7 %	70-130	11/29/23	11/30/23	
Surrogate: Toluene-d8		108 %	70-130	11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2348052
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene		117 %	70-130	11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4		92.7 %	70-130	11/29/23	11/30/23	
Surrogate: Toluene-d8		108 %	70-130	11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2348073
Diesel Range Organics (C10-C28)	ND	25.0	1	11/30/23	12/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	11/30/23	12/01/23	
Surrogate: n-Nonane		91.6 %	50-200	11/30/23	12/01/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2349009
Chloride	317	200	10	12/04/23	12/04/23	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/5/2023 4:18:14PM
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SS04-0'

E311218-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2348052
Benzene	ND	0.0250	1	11/29/23	11/30/23	
Ethylbenzene	ND	0.0250	1	11/29/23	11/30/23	
Toluene	ND	0.0250	1	11/29/23	11/30/23	
o-Xylene	ND	0.0250	1	11/29/23	11/30/23	
p,m-Xylene	ND	0.0500	1	11/29/23	11/30/23	
Total Xylenes	ND	0.0250	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene		116 %	70-130	11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4		94.3 %	70-130	11/29/23	11/30/23	
Surrogate: Toluene-d8		109 %	70-130	11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2348052
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene		116 %	70-130	11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4		94.3 %	70-130	11/29/23	11/30/23	
Surrogate: Toluene-d8		109 %	70-130	11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2348073
Diesel Range Organics (C10-C28)	ND	25.0	1	11/30/23	12/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	11/30/23	12/01/23	
Surrogate: n-Nonane		90.1 %	50-200	11/30/23	12/01/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2349009
Chloride	ND	200	10	12/04/23	12/04/23	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/5/2023 4:18:14PM
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SS05-0'

E311218-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2348052
Benzene	ND	0.0250	1	11/29/23	11/30/23	
Ethylbenzene	ND	0.0250	1	11/29/23	11/30/23	
Toluene	ND	0.0250	1	11/29/23	11/30/23	
o-Xylene	ND	0.0250	1	11/29/23	11/30/23	
p,m-Xylene	ND	0.0500	1	11/29/23	11/30/23	
Total Xylenes	ND	0.0250	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene		117 %	70-130	11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4		88.8 %	70-130	11/29/23	11/30/23	
Surrogate: Toluene-d8		110 %	70-130	11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2348052
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/29/23	11/30/23	
Surrogate: Bromofluorobenzene		117 %	70-130	11/29/23	11/30/23	
Surrogate: 1,2-Dichloroethane-d4		88.8 %	70-130	11/29/23	11/30/23	
Surrogate: Toluene-d8		110 %	70-130	11/29/23	11/30/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2348073
Diesel Range Organics (C10-C28)	ND	25.0	1	11/30/23	12/01/23	
Oil Range Organics (C28-C36)	ND	50.0	1	11/30/23	12/01/23	
Surrogate: n-Nonane		90.3 %	50-200	11/30/23	12/01/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2349009
Chloride	ND	200	10	12/04/23	12/04/23	



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Federal Tank Battery	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	12/5/2023 4:18:14PM

Volatile Organic Compounds by EPA 8260B

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2348052-BLK1) Prepared: 11/29/23 Analyzed: 11/29/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.585		0.500		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.470		0.500		93.9	70-130			
Surrogate: Toluene-d8	0.548		0.500		110	70-130			

LCS (2348052-BS1) Prepared: 11/29/23 Analyzed: 11/29/23

Benzene	2.74	0.0250	2.50		110	70-130			
Ethylbenzene	2.79	0.0250	2.50		112	70-130			
Toluene	2.71	0.0250	2.50		108	70-130			
o-Xylene	2.73	0.0250	2.50		109	70-130			
p,m-Xylene	5.50	0.0500	5.00		110	70-130			
Total Xylenes	8.23	0.0250	7.50		110	70-130			
Surrogate: Bromofluorobenzene	0.608		0.500		122	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.482		0.500		96.4	70-130			
Surrogate: Toluene-d8	0.549		0.500		110	70-130			

Matrix Spike (2348052-MS1) Source: E311220-22 Prepared: 11/29/23 Analyzed: 11/30/23

Benzene	2.73	0.0250	2.50	ND	109	48-131			
Ethylbenzene	2.84	0.0250	2.50	ND	114	45-135			
Toluene	2.75	0.0250	2.50	ND	110	48-130			
o-Xylene	2.74	0.0250	2.50	ND	110	43-135			
p,m-Xylene	5.52	0.0500	5.00	ND	110	43-135			
Total Xylenes	8.26	0.0250	7.50	ND	110	43-135			
Surrogate: Bromofluorobenzene	0.589		0.500		118	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.470		0.500		94.0	70-130			
Surrogate: Toluene-d8	0.552		0.500		110	70-130			

Matrix Spike Dup (2348052-MSD1) Source: E311220-22 Prepared: 11/29/23 Analyzed: 11/30/23

Benzene	2.64	0.0250	2.50	ND	106	48-131	3.37	23	
Ethylbenzene	2.75	0.0250	2.50	ND	110	45-135	3.25	27	
Toluene	2.64	0.0250	2.50	ND	105	48-130	4.20	24	
o-Xylene	2.71	0.0250	2.50	ND	108	43-135	1.14	27	
p,m-Xylene	5.43	0.0500	5.00	ND	109	43-135	1.65	27	
Total Xylenes	8.14	0.0250	7.50	ND	108	43-135	1.48	27	
Surrogate: Bromofluorobenzene	0.598		0.500		120	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.498		0.500		99.5	70-130			
Surrogate: Toluene-d8	0.547		0.500		109	70-130			





QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported:  12/5/2023 4:18:14PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2348052-BLK1) Prepared: 11/29/23 Analyzed: 11/29/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.585		0.500		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.470		0.500		93.9	70-130			
Surrogate: Toluene-d8	0.548		0.500		110	70-130			

LCS (2348052-BS2) Prepared: 11/29/23 Analyzed: 11/29/23

Gasoline Range Organics (C6-C10)	55.8	20.0	50.0		112	70-130			
Surrogate: Bromofluorobenzene	0.604		0.500		121	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.462		0.500		92.4	70-130			
Surrogate: Toluene-d8	0.551		0.500		110	70-130			

Matrix Spike (2348052-MS2) Source: E311220-22 Prepared: 11/29/23 Analyzed: 11/30/23

Gasoline Range Organics (C6-C10)	58.8	20.0	50.0	ND	118	70-130			
Surrogate: Bromofluorobenzene	0.594		0.500		119	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.483		0.500		96.5	70-130			
Surrogate: Toluene-d8	0.558		0.500		112	70-130			

Matrix Spike Dup (2348052-MSD2) Source: E311220-22 Prepared: 11/29/23 Analyzed: 11/30/23

Gasoline Range Organics (C6-C10)	58.2	20.0	50.0	ND	116	70-130	0.968	20	
Surrogate: Bromofluorobenzene	0.603		0.500		121	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.473		0.500		94.5	70-130			
Surrogate: Toluene-d8	0.551		0.500		110	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Federal Tank Battery	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	12/5/2023 4:18:14PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2348073-BLK1)					Prepared: 11/30/23 Analyzed: 11/30/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	49.7		50.0		99.4	50-200			

LCS (2348073-BS1)					Prepared: 11/30/23 Analyzed: 11/30/23				
Diesel Range Organics (C10-C28)	257	25.0	250		103	38-132			
Surrogate: n-Nonane	50.0		50.0		100	50-200			

Matrix Spike (2348073-MS1)					Source: E311200-04		Prepared: 11/30/23 Analyzed: 11/30/23		
Diesel Range Organics (C10-C28)	266	25.0	250	ND	106	38-132			
Surrogate: n-Nonane	49.0		50.0		98.1	50-200			

Matrix Spike Dup (2348073-MSD1)					Source: E311200-04		Prepared: 11/30/23 Analyzed: 11/30/23		
Diesel Range Organics (C10-C28)	256	25.0	250	ND	102	38-132	3.97	20	
Surrogate: n-Nonane	48.5		50.0		97.0	50-200			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported:  12/5/2023 4:18:14PM
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Anions by EPA 300.0/9056A

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2349009-BLK1)					Prepared: 12/04/23 Analyzed: 12/04/23				
Chloride	ND	20.0							
LCS (2349009-BS1)					Prepared: 12/04/23 Analyzed: 12/04/23				
Chloride	250	20.0	250		99.9	90-110			
Matrix Spike (2349009-MS1)					Source: E311218-02		Prepared: 12/04/23 Analyzed: 12/04/23		
Chloride	715	200	250	445	108	80-120			
Matrix Spike Dup (2349009-MSD1)					Source: E311218-02		Prepared: 12/04/23 Analyzed: 12/04/23		
Chloride	656	200	250	445	84.6	80-120	8.56	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Federal Tank Battery	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	12/05/23 16:18

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: Matador Production Company.					Bill To					Lab Use Only					TAT				EPA Program					
Project: <i>Charlie Sweeney Federal Tank Battery</i>					Attention: Matador Production Company					Lab WO#		Job Number			1D	2D	3D	Standard	CWA	SDWA				
Project Manager: Ashley Gioveno					Address: on file					<i>E311218</i>		<i>23052-0001</i>						<i>X</i>						
Address: 3122 National Parks Hwy					City, State, Zip:					Analysis and Method												RCRA		
City, State, Zip: Carlsbad NM, 88220					Phone: (337)319-8398					TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0			BGDOC NM	GDOC TX	State					
Phone: 575-988-0055					Email: clinton.talley@matadorresources.com														NM	CO	UT	AZ	TX	
Email: agioveno@ensolum.com																			<i>X</i>					
Report due by:																				Remarks				
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number																			
<i>1036</i>	<i>11/27/23</i>	<i>S</i>	<i>1</i>	<i>SS01-0'</i>	<i>1</i>											<i>X</i>								
<i>0949</i>	<i>11/27/23</i>	<i>S</i>	<i>1</i>	<i>SS02-0'</i>	<i>2</i>											<i>X</i>								
<i>1207</i>	<i>11/27/23</i>	<i>S</i>	<i>1</i>	<i>SS03-0'</i>	<i>3</i>											<i>X</i>								
<i>1224</i>	<i>11/27/23</i>	<i>S</i>	<i>1</i>	<i>SS04-0'</i>	<i>4</i>											<i>X</i>								
<i>0959</i>	<i>11/27/23</i>	<i>S</i>	<i>1</i>	<i>SS05-0'</i>	<i>5</i>											<i>X</i>								
Additional Instructions: Please CC: cburton@ensolum.com, agioveno@ensolum.com, chadhmilton@ensolum.com, ehaf@ensolum.com																								
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.															Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.									
Relinquished by: (Signature)					Date	Time	Received by: (Signature)					Date	Time	Lab Use Only										
<i>[Signature]</i>					<i>11/28/23</i>		<i>Michelle Gungor</i>					<i>11-28-23</i>	<i>1145</i>	Received on ice: <i>(Y)</i> N										
Relinquished by: (Signature)					Date	Time	Received by: (Signature)					Date	Time											
<i>Michelle Gungor</i>					<i>11-28-23</i>	<i>1700</i>	<i>Allen M. 880</i>					<i>11-28-23</i>	<i>1730</i>	T1 T2 T3										
Relinquished by: (Signature)					Date	Time	Received by: (Signature)					Date	Time	AVG Temp °C										
<i>Allen M. 880</i>					<i>11-28-23</i>	<i>2345</i>	<i>[Signature]</i>					<i>11-29-23</i>	<i>830</i>	<i>4</i>										
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other															Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA									
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																								



envirotech



## Envirotech Analytical Laboratory

Printed: 11/29/2023 1:21:49PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	11/29/23 08:30	Work Order ID:	E311218
Phone:	(972) 371-5200	Date Logged In:	11/28/23 16:07	Logged In By:	Alexa Michaels
Email:	agiovngo@ensolum.com	Due Date:	12/06/23 17:00 (5 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Federal Tank  
Battery

Work Order: E312054

Job Number: 23052-0001

Received: 12/8/2023

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
12/15/23

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 12/15/23

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Federal Tank Battery  
Workorder: E312054  
Date Received: 12/8/2023 1:00:00PM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 12/8/2023 1:00:00PM, under the Project Name: Charlie Sweeney Federal Tank Battery.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Federal Tank Battery apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

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**Southern New Mexico Area**

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Office: 505-421-LABS(5227)  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/15/23 16:27
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
PH01-0'	E312054-01A	Soil	12/06/23	12/08/23	Glass Jar, 2 oz.
PH01-1'	E312054-02A	Soil	12/06/23	12/08/23	Glass Jar, 2 oz.
PH01-2'	E312054-03A	Soil	12/06/23	12/08/23	Glass Jar, 2 oz.
PH02-0'	E312054-04A	Soil	12/06/23	12/08/23	Glass Jar, 2 oz.
PH02-1'	E312054-05A	Soil	12/06/23	12/08/23	Glass Jar, 2 oz.
PH02-2'	E312054-06A	Soil	12/06/23	12/08/23	Glass Jar, 2 oz.





## Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/15/2023 4:27:35PM
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PH01-0'

E312054-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Benzene	ND	0.0250	1	12/11/23	12/14/23	
Ethylbenzene	ND	0.0250	1	12/11/23	12/14/23	
Toluene	ND	0.0250	1	12/11/23	12/14/23	
o-Xylene	ND	0.0250	1	12/11/23	12/14/23	
p,m-Xylene	ND	0.0500	1	12/11/23	12/14/23	
Total Xylenes	ND	0.0250	1	12/11/23	12/14/23	
Surrogate: 4-Bromochlorobenzene-PID	93.5 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/11/23	12/14/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.2 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2350045	
Diesel Range Organics (C10-C28)	ND	25.0	1	12/13/23	12/15/23	
Oil Range Organics (C28-C36)	ND	50.0	1	12/13/23	12/15/23	
Surrogate: n-Nonane	75.7 %	50-200		12/13/23	12/15/23	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2350035	
Chloride	6670	200	10	12/12/23	12/15/23	



## Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/15/2023 4:27:35PM
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PH01-1'

E312054-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Benzene	ND	0.0250	1	12/11/23	12/14/23	
Ethylbenzene	ND	0.0250	1	12/11/23	12/14/23	
Toluene	ND	0.0250	1	12/11/23	12/14/23	
o-Xylene	ND	0.0250	1	12/11/23	12/14/23	
p,m-Xylene	ND	0.0500	1	12/11/23	12/14/23	
Total Xylenes	ND	0.0250	1	12/11/23	12/14/23	
Surrogate: 4-Bromochlorobenzene-PID	92.8 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/11/23	12/14/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	89.4 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2350045	
Diesel Range Organics (C10-C28)	ND	25.0	1	12/13/23	12/15/23	
Oil Range Organics (C28-C36)	ND	50.0	1	12/13/23	12/15/23	
Surrogate: n-Nonane	72.9 %	50-200		12/13/23	12/15/23	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2350035	
Chloride	ND	200	10	12/12/23	12/14/23	



## Sample Data

Matador Resources, LLC.  
5400 LBJ Freeway, Suite 1500  
Dallas TX, 75240

Project Name: Charlie Sweeney Federal Tank Battery  
Project Number: 23052-0001  
Project Manager: Ashley Giovengo

**Reported:**  
12/15/2023 4:27:35PM

PH01-2'

E312054-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Benzene	ND	0.0250	1	12/11/23	12/14/23	
Ethylbenzene	ND	0.0250	1	12/11/23	12/14/23	
Toluene	ND	0.0250	1	12/11/23	12/14/23	
o-Xylene	ND	0.0250	1	12/11/23	12/14/23	
p,m-Xylene	ND	0.0500	1	12/11/23	12/14/23	
Total Xylenes	ND	0.0250	1	12/11/23	12/14/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	92.6 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/11/23	12/14/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	88.0 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2350045	
Diesel Range Organics (C10-C28)	ND	25.0	1	12/13/23	12/15/23	
Oil Range Organics (C28-C36)	ND	50.0	1	12/13/23	12/15/23	
<i>Surrogate: n-Nonane</i>						
	79.3 %	50-200		12/13/23	12/15/23	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2350035	
Chloride	ND	200	10	12/12/23	12/14/23	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/15/2023 4:27:35PM
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PH02-0'

E312054-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Benzene	ND	0.0250	1	12/11/23	12/14/23	
Ethylbenzene	ND	0.0250	1	12/11/23	12/14/23	
Toluene	ND	0.0250	1	12/11/23	12/14/23	
o-Xylene	ND	0.0250	1	12/11/23	12/14/23	
p,m-Xylene	ND	0.0500	1	12/11/23	12/14/23	
Total Xylenes	ND	0.0250	1	12/11/23	12/14/23	
Surrogate: 4-Bromochlorobenzene-PID	92.3 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/11/23	12/14/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.2 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2350045	
Diesel Range Organics (C10-C28)	ND	25.0	1	12/13/23	12/15/23	
Oil Range Organics (C28-C36)	ND	50.0	1	12/13/23	12/15/23	
Surrogate: n-Nonane	74.7 %	50-200		12/13/23	12/15/23	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2350035	
Chloride	4320	200	10	12/12/23	12/15/23	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/15/2023 4:27:35PM
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PH02-1'

E312054-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Benzene	ND	0.0250	1	12/11/23	12/14/23	
Ethylbenzene	ND	0.0250	1	12/11/23	12/14/23	
Toluene	ND	0.0250	1	12/11/23	12/14/23	
o-Xylene	ND	0.0250	1	12/11/23	12/14/23	
p,m-Xylene	ND	0.0500	1	12/11/23	12/14/23	
Total Xylenes	ND	0.0250	1	12/11/23	12/14/23	
Surrogate: 4-Bromochlorobenzene-PID	91.9 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/11/23	12/14/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	87.9 %	70-130		12/11/23	12/14/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2350045	
Diesel Range Organics (C10-C28)	ND	25.0	1	12/13/23	12/15/23	
Oil Range Organics (C28-C36)	ND	50.0	1	12/13/23	12/15/23	
Surrogate: n-Nonane	75.1 %	50-200		12/13/23	12/15/23	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2350035	
Chloride	333	200	10	12/12/23	12/15/23	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 12/15/2023 4:27:35PM
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PH02-2'

E312054-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Benzene	ND	0.0250	1	12/11/23	12/15/23	
Ethylbenzene	ND	0.0250	1	12/11/23	12/15/23	
Toluene	ND	0.0250	1	12/11/23	12/15/23	
o-Xylene	ND	0.0250	1	12/11/23	12/15/23	
p,m-Xylene	ND	0.0500	1	12/11/23	12/15/23	
Total Xylenes	ND	0.0250	1	12/11/23	12/15/23	
Surrogate: 4-Bromochlorobenzene-PID	91.8 %	70-130		12/11/23	12/15/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2350004	
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/11/23	12/15/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.3 %	70-130		12/11/23	12/15/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2350045	
Diesel Range Organics (C10-C28)	ND	25.0	1	12/13/23	12/15/23	
Oil Range Organics (C28-C36)	ND	50.0	1	12/13/23	12/15/23	
Surrogate: n-Nonane	70.3 %	50-200		12/13/23	12/15/23	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2350035	
Chloride	378	200	10	12/12/23	12/15/23	



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Federal Tank Battery	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	12/15/2023 4:27:35PM

Volatile Organics by EPA 8021B

Analyst: RAS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2350004-BLK1) Prepared: 12/11/23 Analyzed: 12/14/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.62		8.00		95.2	70-130			

LCS (2350004-BS1) Prepared: 12/11/23 Analyzed: 12/14/23

Benzene	4.84	0.0250	5.00		96.8	70-130			
Ethylbenzene	4.66	0.0250	5.00		93.3	70-130			
Toluene	4.84	0.0250	5.00		96.9	70-130			
o-Xylene	4.78	0.0250	5.00		95.6	70-130			
p,m-Xylene	9.65	0.0500	10.0		96.5	70-130			
Total Xylenes	14.4	0.0250	15.0		96.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.62		8.00		95.2	70-130			

Matrix Spike (2350004-MS1) Source: E312053-02 Prepared: 12/11/23 Analyzed: 12/14/23

Benzene	4.85	0.0250	5.00	ND	96.9	54-133			
Ethylbenzene	4.68	0.0250	5.00	ND	93.6	61-133			
Toluene	4.86	0.0250	5.00	ND	97.1	61-130			
o-Xylene	4.79	0.0250	5.00	ND	95.8	63-131			
p,m-Xylene	9.68	0.0500	10.0	ND	96.8	63-131			
Total Xylenes	14.5	0.0250	15.0	ND	96.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.63		8.00		95.4	70-130			

Matrix Spike Dup (2350004-MSD1) Source: E312053-02 Prepared: 12/11/23 Analyzed: 12/14/23

Benzene	4.74	0.0250	5.00	ND	94.7	54-133	2.29	20	
Ethylbenzene	4.57	0.0250	5.00	ND	91.4	61-133	2.41	20	
Toluene	4.74	0.0250	5.00	ND	94.9	61-130	2.32	20	
o-Xylene	4.67	0.0250	5.00	ND	93.4	63-131	2.55	20	
p,m-Xylene	9.44	0.0500	10.0	ND	94.4	63-131	2.47	20	
Total Xylenes	14.1	0.0250	15.0	ND	94.1	63-131	2.50	20	
Surrogate: 4-Bromochlorobenzene-PID	7.61		8.00		95.1	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Federal Tank Battery	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	12/15/2023 4:27:35PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RAS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2350004-BLK1) Prepared: 12/11/23 Analyzed: 12/14/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.94		8.00		86.7	70-130			

LCS (2350004-BS2) Prepared: 12/11/23 Analyzed: 12/14/23

Gasoline Range Organics (C6-C10)	44.5	20.0	50.0		89.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.02		8.00		87.8	70-130			

Matrix Spike (2350004-MS2) Source: E312053-02 Prepared: 12/11/23 Analyzed: 12/14/23

Gasoline Range Organics (C6-C10)	45.4	20.0	50.0	ND	90.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.09		8.00		88.7	70-130			

Matrix Spike Dup (2350004-MSD2) Source: E312053-02 Prepared: 12/11/23 Analyzed: 12/14/23

Gasoline Range Organics (C6-C10)	44.3	20.0	50.0	ND	88.6	70-130	2.56	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.12		8.00		88.9	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Federal Tank Battery	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	12/15/2023 4:27:35PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2350045-BLK1)					Prepared: 12/13/23 Analyzed: 12/14/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	42.2		50.0		84.4	50-200			

LCS (2350045-BS1)					Prepared: 12/13/23 Analyzed: 12/14/23				
Diesel Range Organics (C10-C28)	219	25.0	250		87.7	38-132			
Surrogate: n-Nonane	40.8		50.0		81.6	50-200			

Matrix Spike (2350045-MS1)					Source: E312048-03		Prepared: 12/13/23 Analyzed: 12/14/23		
Diesel Range Organics (C10-C28)	226	25.0	250	ND	90.5	38-132			
Surrogate: n-Nonane	40.2		50.0		80.3	50-200			

Matrix Spike Dup (2350045-MSD1)					Source: E312048-03		Prepared: 12/13/23 Analyzed: 12/14/23		
Diesel Range Organics (C10-C28)	218	25.0	250	ND	87.4	38-132	3.49	20	
Surrogate: n-Nonane	42.6		50.0		85.1	50-200			





QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Federal Tank Battery Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported:  12/15/2023 4:27:35PM
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Anions by EPA 300.0/9056A

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2350035-BLK1)					Prepared: 12/12/23 Analyzed: 12/14/23				
Chloride	ND	20.0							
LCS (2350035-BS1)					Prepared: 12/12/23 Analyzed: 12/14/23				
Chloride	242	20.0	250		96.7	90-110			
Matrix Spike (2350035-MS1)					Source: E312048-02		Prepared: 12/12/23 Analyzed: 12/14/23		
Chloride	730	20.0	250	458	109	80-120			
Matrix Spike Dup (2350035-MSD1)					Source: E312048-02		Prepared: 12/12/23 Analyzed: 12/14/23		
Chloride	732	20.0	250	458	110	80-120	0.360	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Federal Tank Battery	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	12/15/23 16:27

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: Matador Production Company.				<b>Bill To</b> Attention: Matador Production Company Address: on file City, State, Zip: Phone: (337)319-8398 Email: clinton.talley@matadorresources.com		Lab Use Only				TAT				EPA Program				
Project: Charlie Sweeney Fed TB						Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA			
Project Manager: Ashley Giovengo						E312054		23052-0001					x					
Address: 3122 National Parks Hwy						Analysis and Method											RCRA	
City, State, Zip: Carlsbad NM, 88220						TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0		BGDOC NM	GDOC TX	State				
Phone: 575-988-0055														NM	CO	UT	AZ	TX
Email: agiovengo@ensolum.com				x														
Report due by:				Remarks														
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number													
10:00	12/6/2023	Soil	1 Jar	PH01 - 0'	1								X					
10:02	12/6/2023	Soil	1 Jar	PH01 - 1'	2								X					
10:04	12/6/2023	Soil	1 Jar	PH01 - 2'	3								X			Only run if PH01 - 1' is > 600CI		
12:21	12/6/2023	Soil	1 Jar	PH02 - 0'	4								X					
12:22	12/6/2023	Soil	1 Jar	PH02 - 1'	5								X					
12:24	12/6/2023	Soil	1 Jar	PH02 - 2'	6								X			Only run if PH02 - 1' is > 600CI		
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, ehafat@ensolum.com																		
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.												Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.						
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only										
[Signature]		12-7-23	1306	[Signature]		12-7-23	1606	Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N										
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 T2 T3										
[Signature]		12-7-23	1730	[Signature]		12-8-23	0700											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	AVG Temp °C										
[Signature]		12-8-23	1300	[Signature]		12-8-23	1300	4										
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other							Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA											
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																		



envirotech

## Envirotech Analytical Laboratory

Printed: 12/11/2023 12:54:29PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	12/08/23 13:00	Work Order ID:	E312054
Phone:	(972) 371-5200	Date Logged In:	12/08/23 14:15	Logged In By:	Alexa Michaels
Email:	agiovngo@ensolum.com	Due Date:	12/15/23 17:00 (5 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/Resolution

Samples 3 and 6 have remarks by client to only run these samples if the previous sample is >600Cl.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney TB

Work Order: E401172

Job Number: 23052-0001

Received: 1/26/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/2/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 2/2/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney TB  
Workorder: E401172  
Date Received: 1/26/2024 6:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 1/26/2024 6:30:00AM, under the Project Name: Charlie Sweeney TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
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Field Offices:

**Southern New Mexico Area**

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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 02/02/24 14:44
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS18-1'	E401172-01A	Soil	01/24/24	01/26/24	Glass Jar, 2 oz.
FS26-1'	E401172-02A	Soil	01/24/24	01/26/24	Glass Jar, 2 oz.
FS30-1'	E401172-03A	Soil	01/24/24	01/26/24	Glass Jar, 2 oz.
FS32-1'	E401172-04A	Soil	01/24/24	01/26/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/2/2024 2:44:28PM
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FS18-1'

E401172-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2404056	
Benzene	ND	0.0250	1	01/26/24	01/26/24	
Ethylbenzene	ND	0.0250	1	01/26/24	01/26/24	
Toluene	ND	0.0250	1	01/26/24	01/26/24	
o-Xylene	ND	0.0250	1	01/26/24	01/26/24	
p,m-Xylene	ND	0.0500	1	01/26/24	01/26/24	
Total Xylenes	ND	0.0250	1	01/26/24	01/26/24	
Surrogate: 4-Bromochlorobenzene-PID	95.2 %	70-130		01/26/24	01/26/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2404056	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/26/24	01/26/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	93.6 %	70-130		01/26/24	01/26/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2404062	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/26/24	01/27/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/26/24	01/27/24	
Surrogate: n-Nonane	111 %	50-200		01/26/24	01/27/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405008	
Chloride	339	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/2/2024 2:44:28PM
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FS26-1'

E401172-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2404056	
Benzene	ND	0.0250	1	01/26/24	01/26/24	
Ethylbenzene	ND	0.0250	1	01/26/24	01/26/24	
Toluene	ND	0.0250	1	01/26/24	01/26/24	
o-Xylene	ND	0.0250	1	01/26/24	01/26/24	
p,m-Xylene	ND	0.0500	1	01/26/24	01/26/24	
Total Xylenes	ND	0.0250	1	01/26/24	01/26/24	
Surrogate: 4-Bromochlorobenzene-PID	94.9 %	70-130		01/26/24	01/26/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2404056	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/26/24	01/26/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	94.7 %	70-130		01/26/24	01/26/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2404062	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/26/24	01/27/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/26/24	01/27/24	
Surrogate: n-Nonane	118 %	50-200		01/26/24	01/27/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2405008	
Chloride	344	200	10	01/29/24	01/29/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/2/2024 2:44:28PM
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FS30-1'

E401172-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2404056	
Benzene	ND	0.0250	1	01/26/24	01/26/24	
Ethylbenzene	ND	0.0250	1	01/26/24	01/26/24	
Toluene	ND	0.0250	1	01/26/24	01/26/24	
o-Xylene	ND	0.0250	1	01/26/24	01/26/24	
p,m-Xylene	ND	0.0500	1	01/26/24	01/26/24	
Total Xylenes	ND	0.0250	1	01/26/24	01/26/24	
Surrogate: 4-Bromochlorobenzene-PID	94.7 %	70-130		01/26/24	01/26/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2404056	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/26/24	01/26/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	93.4 %	70-130		01/26/24	01/26/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2404062	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/26/24	01/27/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/26/24	01/27/24	
Surrogate: n-Nonane	104 %	50-200		01/26/24	01/27/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2405008	
Chloride	403	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/2/2024 2:44:28PM
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FS32-1'

E401172-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2404056	
Benzene	ND	0.0250	1	01/26/24	01/26/24	
Ethylbenzene	ND	0.0250	1	01/26/24	01/26/24	
Toluene	ND	0.0250	1	01/26/24	01/26/24	
o-Xylene	ND	0.0250	1	01/26/24	01/26/24	
p,m-Xylene	ND	0.0500	1	01/26/24	01/26/24	
Total Xylenes	ND	0.0250	1	01/26/24	01/26/24	
Surrogate: 4-Bromochlorobenzene-PID	95.5 %	70-130		01/26/24	01/26/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2404056	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/26/24	01/26/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	94.7 %	70-130		01/26/24	01/26/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2404062	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/26/24	01/27/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/26/24	01/27/24	
Surrogate: n-Nonane	107 %	50-200		01/26/24	01/27/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2405008	
Chloride	418	200	10	01/29/24	01/29/24	



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/2/2024 2:44:28PM

Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2404056-BLK1) Prepared: 01/26/24 Analyzed: 01/26/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							

Surrogate: 4-Bromochlorobenzene-PID 7.81 8.00 97.6 70-130

LCS (2404056-BS1) Prepared: 01/26/24 Analyzed: 01/26/24

Benzene	5.13	0.0250	5.00		103	70-130			
Ethylbenzene	5.08	0.0250	5.00		102	70-130			
Toluene	5.13	0.0250	5.00		103	70-130			
o-Xylene	5.09	0.0250	5.00		102	70-130			
p,m-Xylene	10.4	0.0500	10.0		104	70-130			
Total Xylenes	15.4	0.0250	15.0		103	70-130			

Surrogate: 4-Bromochlorobenzene-PID 7.88 8.00 98.5 70-130

Matrix Spike (2404056-MS1) Source: E401168-03 Prepared: 01/26/24 Analyzed: 01/26/24

Benzene	5.06	0.0250	5.00	ND	101	54-133			
Ethylbenzene	4.99	0.0250	5.00	ND	99.8	61-133			
Toluene	5.06	0.0250	5.00	ND	101	61-130			
o-Xylene	5.01	0.0250	5.00	ND	100	63-131			
p,m-Xylene	10.2	0.0500	10.0	ND	102	63-131			
Total Xylenes	15.2	0.0250	15.0	ND	101	63-131			

Surrogate: 4-Bromochlorobenzene-PID 7.61 8.00 95.1 70-130

Matrix Spike Dup (2404056-MSD1) Source: E401168-03 Prepared: 01/26/24 Analyzed: 01/26/24

Benzene	5.04	0.0250	5.00	ND	101	54-133	0.443	20	
Ethylbenzene	5.00	0.0250	5.00	ND	100	61-133	0.247	20	
Toluene	5.04	0.0250	5.00	ND	101	61-130	0.322	20	
o-Xylene	5.02	0.0250	5.00	ND	100	63-131	0.260	20	
p,m-Xylene	10.2	0.0500	10.0	ND	102	63-131	0.300	20	
Total Xylenes	15.2	0.0250	15.0	ND	101	63-131	0.287	20	

Surrogate: 4-Bromochlorobenzene-PID 7.80 8.00 97.5 70-130



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/2/2024 2:44:28PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2404056-BLK1) Prepared: 01/26/24 Analyzed: 01/26/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.49		8.00		93.6	70-130			

LCS (2404056-BS2) Prepared: 01/26/24 Analyzed: 01/26/24

Gasoline Range Organics (C6-C10)	52.5	20.0	50.0		105	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.71		8.00		96.4	70-130			

Matrix Spike (2404056-MS2) Source: E401168-03 Prepared: 01/26/24 Analyzed: 01/26/24

Gasoline Range Organics (C6-C10)	50.2	20.0	50.0	ND	100	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.52		8.00		94.1	70-130			

Matrix Spike Dup (2404056-MSD2) Source: E401168-03 Prepared: 01/26/24 Analyzed: 01/26/24

Gasoline Range Organics (C6-C10)	49.4	20.0	50.0	ND	98.7	70-130	1.73	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.66		8.00		95.8	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/2/2024 2:44:28PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2404062-BLK1)					Prepared: 01/26/24 Analyzed: 01/26/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	54.4		50.0		109	50-200			

LCS (2404062-BS1)					Prepared: 01/26/24 Analyzed: 01/26/24				
Diesel Range Organics (C10-C28)	262	25.0	250		105	38-132			
Surrogate: n-Nonane	53.8		50.0		108	50-200			

Matrix Spike (2404062-MS1)					Source: E401160-05		Prepared: 01/26/24 Analyzed: 01/26/24		
Diesel Range Organics (C10-C28)	271	25.0	250	ND	108	38-132			
Surrogate: n-Nonane	54.8		50.0		110	50-200			

Matrix Spike Dup (2404062-MSD1)					Source: E401160-05		Prepared: 01/26/24 Analyzed: 01/27/24		
Diesel Range Organics (C10-C28)	280	25.0	250	ND	112	38-132	3.17	20	
Surrogate: n-Nonane	55.1		50.0		110	50-200			





QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported:  2/2/2024 2:44:28PM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405008-BLK1)					Prepared: 01/29/24 Analyzed: 01/29/24				
Chloride	ND	20.0							
LCS (2405008-BS1)					Prepared: 01/29/24 Analyzed: 01/29/24				
Chloride	248	20.0	250		99.2	90-110			
Matrix Spike (2405008-MS1)					Source: E401177-05		Prepared: 01/29/24 Analyzed: 01/29/24		
Chloride	341	20.0	250	91.6	99.7	80-120			
Matrix Spike Dup (2405008-MSD1)					Source: E401177-05		Prepared: 01/29/24 Analyzed: 01/29/24		
Chloride	345	20.0	250	91.6	102	80-120	1.34	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/02/24 14:44

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Project Information

## Chain of Custody

## Page 1 of

Client: Matador Production Company.	<table border="1"> <tr> <th colspan="2">Bill To</th> </tr> <tr> <td>Attention: Matador Production Company</td> </tr> <tr> <td>Address: on file</td> </tr> <tr> <td>City, State, Zip:</td> </tr> <tr> <td>Phone: (337)319-8398</td> </tr> <tr> <td>Email: clinton.talley@matadorresources.com</td> </tr> </table>	Bill To		Attention: Matador Production Company	Address: on file	City, State, Zip:	Phone: (337)319-8398	Email: clinton.talley@matadorresources.com	Lab Use Only				TAT				EPA Program																		
Bill To																																			
Attention: Matador Production Company																																			
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Phone: (337)319-8398																																			
Email: clinton.talley@matadorresources.com																																			
Project: Charlie Sweeney TB		Lab WO#	Job Number			1D	2D	3D	Standard	CWA	SDWA																								
Project Manager: Ashley Giovengo	E 401172	23052-0001						x																											
Address: 3122 National Parks Hwy	Analysis and Method									RCRA																									
City, State, Zip: Carlsbad NM, 88220	<table border="1"> <tr> <td rowspan="4">b/DRO/ORO by</td> <td rowspan="4">8021</td> <td rowspan="4">2260</td> <td rowspan="4">010</td> <td rowspan="4">300.0</td> <td rowspan="4"></td> <td rowspan="4"></td> <td rowspan="4">NM</td> <td rowspan="4">TX</td> <td colspan="5">State</td> </tr> <tr> <td>NM</td> <td>CO</td> <td>UT</td> <td>AZ</td> <td>TX</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	b/DRO/ORO by	8021	2260	010	300.0			NM	TX	State					NM	CO	UT	AZ	TX															
b/DRO/ORO by											8021	2260	010	300.0			NM	TX	State																
																			NM	CO	UT	AZ	TX												
Phone: 575-988-0055																																			
Email: agiovengo@ensolum.com																																			
Report due by:																																			

[illegible]

Additional Instructions: Please CC: [cburton@ensolum.com](mailto:cburton@ensolum.com), [agiovengo@ensolum.com](mailto:agiovengo@ensolum.com), [chamilton@ensolum.com](mailto:chamilton@ensolum.com), [ehaft@ensolum.com](mailto:ehaft@ensolum.com), [iestrella@ensolum.com](mailto:iestrella@ensolum.com)

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Cole Burton

Sampled by: Cole Burton

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature) <i>[Signature]</i>	Date 1/25/24	Time 8:15	Received by: (Signature) <i>[Signature]</i>	Date 1-25-24	Time 0815	Lab Use Only Received on ice: <input checked="" type="checkbox"/> Y / N
Relinquished by: (Signature) <i>[Signature]</i>	Date 1-25-24	Time 1400	Received by: (Signature) <i>[Signature]</i>	Date 1-25-24	Time 1630	
Relinquished by: (Signature) <i>[Signature]</i>	Date 1-25-24	Time 2330	Received by: (Signature) <i>[Signature]</i>	Date 1-26-24	Time 0630	T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other				Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA		

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this CQC. The liability of the laboratory is limited to the amount paid for on the report.



envirotech

## Envirotech Analytical Laboratory

Printed: 1/26/2024 1:23:26PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	01/26/24 06:30	Work Order ID:	E401172
Phone:	(972) 371-5200	Date Logged In:	01/25/24 15:28	Logged In By:	Alexa Michaels
Email:	agiovngo@ensolum.com	Due Date:	02/01/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney TB

Work Order: E401203

Job Number: 23052-0001

Received: 1/29/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/1/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 2/1/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney TB  
Workorder: E401203  
Date Received: 1/29/2024 9:23:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 1/29/2024 9:23:00AM, under the Project Name: Charlie Sweeney TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
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**Alexa Michaels**  
Sample Custody Officer  
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[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

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**Michelle Golzaes**  
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Cell: 505-947-8222  
[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Chain of Custody etc.

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 02/01/24 16:15
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS10 - 1'	E401203-01A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS11-1'	E401203-02A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS12-1'	E401203-03A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS13-1'	E401203-04A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS14-1'	E401203-05A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS20-1'	E401203-06A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS22-1'	E401203-07A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS28-1'	E401203-08A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS15-1.5'	E401203-09A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS19-1.5'	E401203-10A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS21-2'	E401203-11A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS23-2'	E401203-12A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS27-2'	E401203-13A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.
FS33-1.5'	E401203-14A	Soil	01/26/24	01/29/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS10 - 1'

E401203-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	101 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.5 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/29/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/29/24	
Surrogate: n-Nonane	98.3 %	50-200		01/29/24	01/29/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	394	200	10	01/29/24	01/29/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS11-1'  
E401203-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	100 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.1 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/29/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/29/24	
Surrogate: n-Nonane	91.7 %	50-200		01/29/24	01/29/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	348	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS12-1'  
E401203-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	99.7 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.6 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	96.0 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	381	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS13-1'  
E401203-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	101 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.5 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	90.4 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	328	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS14-1'  
E401203-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	100 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.9 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	100 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	219	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS20-1'

E401203-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	99.9 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.5 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	99.8 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	582	200	10	01/29/24	01/29/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS22-1'

E401203-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	99.4 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.9 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	91.7 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	227	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS28-1'  
E401203-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	99.0 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	90.5 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	87.7 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	555	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS15-1.5'

E401203-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	98.8 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.7 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	90.2 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	533	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS19-1.5'

E401203-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	98.8 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.5 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	86.9 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	515	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS21-2'

E401203-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	98.2 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.0 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	99.4 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	285	200	10	01/29/24	01/29/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS23-2'

E401203-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/29/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/29/24	
Toluene	ND	0.0250	1	01/29/24	01/29/24	
o-Xylene	ND	0.0250	1	01/29/24	01/29/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/29/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/29/24	
Surrogate: 4-Bromochlorobenzene-PID	95.9 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.5 %	70-130		01/29/24	01/29/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	92.0 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	272	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS27-2'

E401203-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/30/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/30/24	
Toluene	ND	0.0250	1	01/29/24	01/30/24	
o-Xylene	ND	0.0250	1	01/29/24	01/30/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/30/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/30/24	
Surrogate: 4-Bromochlorobenzene-PID	95.1 %	70-130		01/29/24	01/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.4 %	70-130		01/29/24	01/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	93.4 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	349	200	10	01/29/24	01/29/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/1/2024 4:15:27PM
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FS33-1.5'

E401203-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Benzene	ND	0.0250	1	01/29/24	01/30/24	
Ethylbenzene	ND	0.0250	1	01/29/24	01/30/24	
Toluene	ND	0.0250	1	01/29/24	01/30/24	
o-Xylene	ND	0.0250	1	01/29/24	01/30/24	
p,m-Xylene	ND	0.0500	1	01/29/24	01/30/24	
Total Xylenes	ND	0.0250	1	01/29/24	01/30/24	
Surrogate: 4-Bromochlorobenzene-PID	94.6 %	70-130		01/29/24	01/30/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405015	
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/29/24	01/30/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	93.0 %	70-130		01/29/24	01/30/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2405017	
Diesel Range Organics (C10-C28)	ND	25.0	1	01/29/24	01/30/24	
Oil Range Organics (C28-C36)	ND	50.0	1	01/29/24	01/30/24	
Surrogate: n-Nonane	95.1 %	50-200		01/29/24	01/30/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2405018	
Chloride	209	100	5	01/29/24	01/29/24	



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/1/2024 4:15:27PM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405015-BLK1) Prepared: 01/29/24 Analyzed: 01/29/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							

Surrogate: 4-Bromochlorobenzene-PID 7.75 8.00 96.9 70-130

LCS (2405015-BS1) Prepared: 01/29/24 Analyzed: 01/29/24

Benzene	3.84	0.0250	5.00		76.8	70-130			
Ethylbenzene	3.74	0.0250	5.00		74.8	70-130			
Toluene	3.87	0.0250	5.00		77.4	70-130			
o-Xylene	3.83	0.0250	5.00		76.5	70-130			
p,m-Xylene	7.74	0.0500	10.0		77.4	70-130			
Total Xylenes	11.6	0.0250	15.0		77.1	70-130			

Surrogate: 4-Bromochlorobenzene-PID 7.83 8.00 97.9 70-130

Matrix Spike (2405015-MS1) Source: E401203-08 Prepared: 01/29/24 Analyzed: 01/29/24

Benzene	4.57	0.0250	5.00	ND	91.4	54-133			
Ethylbenzene	4.46	0.0250	5.00	ND	89.1	61-133			
Toluene	4.61	0.0250	5.00	ND	92.1	61-130			
o-Xylene	4.58	0.0250	5.00	ND	91.6	63-131			
p,m-Xylene	9.21	0.0500	10.0	ND	92.1	63-131			
Total Xylenes	13.8	0.0250	15.0	ND	92.0	63-131			

Surrogate: 4-Bromochlorobenzene-PID 8.02 8.00 100 70-130

Matrix Spike Dup (2405015-MSD1) Source: E401203-08 Prepared: 01/29/24 Analyzed: 01/29/24

Benzene	4.10	0.0250	5.00	ND	82.0	54-133	10.9	20	
Ethylbenzene	3.98	0.0250	5.00	ND	79.7	61-133	11.2	20	
Toluene	4.13	0.0250	5.00	ND	82.6	61-130	10.9	20	
o-Xylene	4.11	0.0250	5.00	ND	82.2	63-131	10.7	20	
p,m-Xylene	8.24	0.0500	10.0	ND	82.4	63-131	11.1	20	
Total Xylenes	12.4	0.0250	15.0	ND	82.4	63-131	11.0	20	

Surrogate: 4-Bromochlorobenzene-PID 8.09 8.00 101 70-130



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/1/2024 4:15:27PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405015-BLK1) Prepared: 01/29/24 Analyzed: 01/29/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.25		8.00		90.6	70-130			

LCS (2405015-BS2) Prepared: 01/29/24 Analyzed: 01/30/24

Gasoline Range Organics (C6-C10)	40.3	20.0	50.0		80.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.47		8.00		93.4	70-130			

Matrix Spike (2405015-MS2) Source: E401203-08 Prepared: 01/29/24 Analyzed: 01/29/24

Gasoline Range Organics (C6-C10)	38.4	20.0	50.0	ND	76.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.32		8.00		91.6	70-130			

Matrix Spike Dup (2405015-MSD2) Source: E401203-08 Prepared: 01/29/24 Analyzed: 01/29/24

Gasoline Range Organics (C6-C10)	37.0	20.0	50.0	ND	74.0	70-130	3.58	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.33		8.00		91.6	70-130			





QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/1/2024 4:15:27PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405017-BLK1)					Prepared: 01/29/24 Analyzed: 01/29/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	50.5		50.0		101	50-200			

LCS (2405017-BS1)					Prepared: 01/29/24 Analyzed: 01/29/24				
Diesel Range Organics (C10-C28)	216	25.0	250		86.3	38-132			
Surrogate: n-Nonane	47.8		50.0		95.5	50-200			

Matrix Spike (2405017-MS1)					Source: E401186-05		Prepared: 01/29/24 Analyzed: 01/29/24		
Diesel Range Organics (C10-C28)	212	25.0	250	ND	84.7	38-132			
Surrogate: n-Nonane	52.4		50.0		105	50-200			

Matrix Spike Dup (2405017-MSD1)					Source: E401186-05		Prepared: 01/29/24 Analyzed: 01/29/24		
Diesel Range Organics (C10-C28)	204	25.0	250	ND	81.7	38-132	3.61	20	
Surrogate: n-Nonane	52.7		50.0		105	50-200			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported:  2/1/2024 4:15:27PM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405018-BLK1)						Prepared: 01/29/24 Analyzed: 01/29/24			
Chloride	ND	20.0							
LCS (2405018-BS1)						Prepared: 01/29/24 Analyzed: 01/29/24			
Chloride	254	20.0	250		102	90-110			
Matrix Spike (2405018-MS1)				Source: E401203-03		Prepared: 01/29/24 Analyzed: 01/29/24			
Chloride	665	200	250	381	113	80-120			
Matrix Spike Dup (2405018-MSD1)				Source: E401203-03		Prepared: 01/29/24 Analyzed: 01/29/24			
Chloride	668	200	250	381	115	80-120	0.428	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/01/24 16:15

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: Matador Production Company	<b>Bill To</b> Attention: Matador Production Company Address: on file City, State, Zip: Phone: (337)319-8398 Email: clinton.talley@matadorresources.com	<b>Lab Use Only</b>		<b>TAT</b>				<b>EPA Program</b>			
Project: Charlie Sweeney Fed TB		Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA		
Project Manager: Ashley Gioveno		E 401 203	23052-0001				x				
Address: 3122 National Parks Hwy		Analysis and Method							RCRA		
City, State, Zip: Carlsbad NM, 88220								State			
Phone: 575-988-0055							NM	CO	UT	AZ	TX
Email: agioveno@ensolum.com							x				
Report due by:							Remarks				

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TCEQ TPH	BGDOC NM	GDOC TX	Remarks
10:38	1/26/2024	Soil	1	FS10 - 1'	1							X		
10:31	1/26/2024	Soil	1	FS11 - 1'	2							X		
10:36	1/26/2024	Soil	1	FS12 - 1'	3							X		Please 1 day rush the chlorides only on this sample
10:30	1/26/2024	Soil	1	FS13 - 1'	4							X		
10:24	1/26/2024	Soil	1	FS14 - 1'	5							X		
10:16	1/26/2024	Soil	1	FS20 - 1'	6							X		Please 1 day rush the chlorides only on this sample
10:20	1/26/2024	Soil	1	FS22 - 1'	7							X		
10:14	1/26/2024	Soil	1	FS28 - 1'	8							X		Please 1 day rush the chlorides only on this sample
14:19	1/26/2024	Soil	1	FS15 - 1.5'	9							X		Please 1 day rush the chlorides only on this sample
14:23	1/26/2024	Soil	1	FS19 - 1.5	10							X		Please 1 day rush the chlorides only on this sample

**Additional Instructions:** Please CC: cburton@ensolum.com, agioveno@ensolum.com, chamilton@ensolum.com, ehaft@ensolum.com, iestrella@ensolum.com

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Cole Burton

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

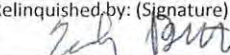

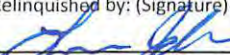
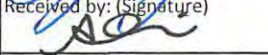
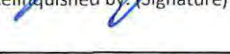
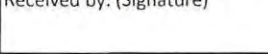
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C 4
Relinquished by: (Signature)	1-26-24	1741	Received by: (Signature)	1-26-24	1741	
Relinquished by: (Signature)	1-28-24	1605	Received by: (Signature)	1/29/24	9:23	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



Client: Matador Production Company					Bill To		Lab Use Only				TAT				EPA Program				
Project: Charlie Sweeney Fed TB					Attention: Matador Production Company		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA			
Project Manager: Ashley Giovengo					Address: on file		E 401203		23052-0001					x					
Address: 3122 National Parks Hwy					City, State, Zip:		Analysis and Method										RCRA		
City, State, Zip: Carlsbad NM, 88220					Phone: (337)319-8398		TPH GRO/DRO/ORO by 8015	BTX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TCEQ TPH	BGDOC NM	GDOC TX	State				
Phone: 575-988-0055					Email: clinton.talley@matadorresources.com										NM	CO	UT	AZ	TX
Email: agiovengo@ensolum.com															x				
Report due by:																	Remarks		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number														
15:18	1/26/2024	Soil	1	FS21 - 2'	11								X						
15:17	1/26/2024	Soil	1	FS23 - 2'	12								X						
15:22	1/26/2024	Soil	1	FS27 - 2'	13								X						
15:25	1/26/2024	Soil	1	FS33 - 1.5'	14								X						
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, ehafft@ensolum.com, iestrella@ensolum.com																			
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.											Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.								
Relinquished by: (Signature)					Date		Time		Received by: (Signature)					Date		Time			
					1-26-24		1741							1-26-24		1741			
Relinquished by: (Signature)					Date		Time		Received by: (Signature)					Date		Time			
					1-28-24		1605							1/29/24		9:23			
Relinquished by: (Signature)					Date		Time		Received by: (Signature)					Date		Time			
																			
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other											Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA								
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																			

## Envirotech Analytical Laboratory

Printed: 1/30/2024 9:06:20AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	01/29/24 09:23	Work Order ID:	E401203
Phone:	(972) 371-5200	Date Logged In:	01/29/24 09:23	Logged In By:	Angelina Pineda
Email:	agiovngo@ensolum.com	Due Date:	02/02/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/Resolution

Samples -03/-06/-08/-09/-10 are 1-day rushed analysis for Chlorides only per COC remarks from client.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Fed TB

Work Order: E401209

Job Number: 23052-0001

Received: 1/27/2024

Revision: 5

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/14/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/14/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Fed TB  
Workorder: E401209  
Date Received: 1/27/2024 8:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 1/27/2024 8:30:00AM, under the Project Name: Charlie Sweeney Fed TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Fed TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

**Lynn Jarboe**  
Laboratory Technical Representative  
Office: 505-421-LABS(5227)  
Cell: 505-320-4759  
[ljjarboe@envirotech-inc.com](mailto:ljjarboe@envirotech-inc.com)

**Michelle Golzaes**  
Client Representative  
Office: 505-421-LABS(5227)  
Cell: 505-947-8222  
[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 02/14/24 16:55
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
PH03 - 3'	E401209-01A	Soil	01/25/24	01/27/24	Glass Jar, 2 oz.
PH03 - 4'	E401209-02A	Soil	01/25/24	01/27/24	Glass Jar, 2 oz.
PH03 - 5'	E401209-03A	Soil	01/25/24	01/27/24	Glass Jar, 2 oz.
PH03 - 6'	E401209-04A	Soil	01/25/24	01/27/24	Glass Jar, 2 oz.
PH03 - 7'	E401209-05A	Soil	01/25/24	01/27/24	Glass Jar, 2 oz.
PH03 - 8'	E401209-06A	Soil	01/25/24	01/27/24	Glass Jar, 2 oz.
PH03 - 9'	E401209-07A	Soil	01/25/24	01/27/24	Glass Jar, 2 oz.
PH03 - 10'	E401209-08A	Soil	01/25/24	01/27/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/14/2024 4:55:10PM
---	--	----------------------------------

PH03 - 3'

E401209-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2405058	
Chloride	1550	200	10	01/31/24	02/01/24	
Sulfate	19700	400	20	02/12/24	02/13/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/14/2024 4:55:10PM
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PH03 - 4'

E401209-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: RAS		Batch: 2405058	
Chloride	1150	200	10	01/31/24	02/01/24	
Sulfate	19900	400	20	02/12/24	02/13/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/14/2024 4:55:10PM
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PH03 - 5'

E401209-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2405058	
Chloride	2630	200	10	01/31/24	02/01/24	
Sulfate	23000	400	20	02/12/24	02/13/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/14/2024 4:55:10PM
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PH03 - 6'

E401209-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2405058	
Chloride	2650	200	10	01/31/24	02/01/24	
Sulfate	22100	400	20	02/12/24	02/13/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/14/2024 4:55:10PM
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PH03 - 7'

E401209-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2405058	
Chloride	2420	200	10	01/31/24	02/01/24	
Sulfate	21200	400	20	02/12/24	02/13/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/14/2024 4:55:10PM
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PH03 - 8'

E401209-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2405058	
Chloride	2440	200	10	01/31/24	02/01/24	
Sulfate	21500	400	20	02/12/24	02/13/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/14/2024 4:55:10PM
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PH03 - 9'

E401209-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2405058	
Chloride	2220	200	10	01/31/24	02/01/24	
Sulfate	20600	400	20	02/12/24	02/13/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/14/2024 4:55:10PM
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PH03 - 10'  
E401209-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2405058	
Chloride	1610	200	10	01/31/24	02/01/24	
Sulfate	19200	400	20	02/12/24	02/13/24	





QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported:  2/14/2024 4:55:10PM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405058-BLK1)					Prepared: 01/31/24 Analyzed: 01/31/24				
Chloride	ND	20.0							
LCS (2405058-BS1)					Prepared: 01/31/24 Analyzed: 01/31/24				
Chloride	250	20.0	250		100	90-110			
Matrix Spike (2405058-MS1)					Source: E401208-03		Prepared: 01/31/24 Analyzed: 01/31/24		
Chloride	1350	20.0	250	1250	38.1	80-120			M4
Matrix Spike Dup (2405058-MSD1)					Source: E401208-03		Prepared: 01/31/24 Analyzed: 01/31/24		
Chloride	1380	20.0	250	1250	51.3	80-120	2.41	20	M4



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported:  2/14/2024 4:55:10PM
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Anions by EPA 300.0/9056A

Analyst: RAS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2407019-BLK1)					Prepared: 02/12/24 Analyzed: 02/13/24				
Sulfate	ND	20.0							
LCS (2407019-BS1)					Prepared: 02/12/24 Analyzed: 02/13/24				
Sulfate	247	20.0	250		98.9	90-110			
Matrix Spike (2407019-MS1)					Source: E401209-02RE1 Prepared: 02/12/24 Analyzed: 02/13/24				
Sulfate	19900	400	250	19900	4.67	80-120			M4
Matrix Spike Dup (2407019-MSD1)					Source: E401209-02RE1 Prepared: 02/12/24 Analyzed: 02/13/24				
Sulfate	20100	400	250	19900	77.2	80-120	0.907	20	M4

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.

Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/14/24 16:55

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: Matador Production Company.		<b>Bill To</b>		<b>Lab Use Only</b>		<b>TAT</b>				<b>EPA Program</b>			
Project: Charlie Sweeney Fed TB		Attention: Matador Production Company		Lab WO# E401209		Job Number 2352-0001		1D	2D	3D	Standard	CWA	SDWA
Project Manager: Ashley Giovengo		Address: on file									x		
Address: 3122 National Parks Hwy		City, State, Zip:		City, State, Zip:		Analysis and Method						RCRA	
City, State, Zip: Carlsbad NM, 88220		Phone: (337)319-8398		Phone: (337)319-8398									
Phone: 575-988-0055		Email: clinton.talley@matadorresources.com		Email: clinton.talley@matadorresources.com									
Email: agiovengo@ensolum.com													
Report due by:													

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TCEQ TPH	BGDOC NM	GDOC TX	Remarks
13:05	1/25/2024	Soil	1	PH03 - 3'	1					X				
13:15	1/25/2024	Soil	1	PH03 - 4'	2					X				
14:02	1/25/2024	Soil	1	PH04 - 5'	3					X				
14:06	1/25/2024	Soil	1	PH03 - 6'	4					X				
14:10	1/25/2024	Soil	1	PH03 - 7'	5					X				
14:14	1/25/2024	Soil	1	PH03 - 8'	6					X				
14:43	1/25/2024	Soil	1	PH03 - 9'	7					X				
15:00	1/25/2024	Soil	1	PH03 - 10'	8					X				

**Additional Instructions:** Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, ehafth@ensolum.com, iestrella@ensolum.com

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Cole Burton

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 5 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	<b>Lab Use Only</b> Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C 4
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
Andrew M. Ags	1-26-24	2300		1/27/24	8:30	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



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## Envirotech Analytical Laboratory

Printed: 1/29/2024 4:05:20PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	01/27/24 08:30	Work Order ID:	E401209
Phone:	(972) 371-5200	Date Logged In:	01/29/24 11:15	Logged In By:	Angelina Pineda
Email:	agiovngo@ensolum.com	Due Date:	02/02/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



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## Project Information

## Chain of Custody

Page 1 of 1

Client: Matador Production Company.					Bill To		Lab Use Only				TAT				EPA Program					
Project: Charlie Sweeney Fed TB					Attention: Matador Production Company		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA				
Project Manager: Ashley Giovengo					Address: on file		E401209		23052-0001					x						
Address: 3122 National Parks Hwy					City, State, Zip:		Analysis and Method										RCRA			
City, State, Zip: Carlsbad NM, 88220					Phone: (337)319-8398		TPH GRO/DRO by 8015	BTX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	Sulfate 300.0	TCEQ TPH	BGDOC NM	GDOC TX	State				
Phone: 575-988-0055					Email: clinton.talley@matadorresources.com											NM	CO	UT	AZ	TX
Email: agiovengo@ensolum.com					Report due by:											x				
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Remarks														
13:05	1/25/2024	Soil	1	PH03 - 3'	1															
13:15	1/25/2024	Soil	1	PH03 - 4'	2															
14:02	1/25/2024	Soil	1	<del>PH04 - 5'</del> PH03 - 5'	3	Changes made per client request 2/5/24 AP														
14:06	1/25/2024	Soil	1	PH03 - 6'	4															
14:10	1/25/2024	Soil	1	PH03 - 7'	5															
14:14	1/25/2024	Soil	1	PH03 - 8'	6															
14:43	1/25/2024	Soil	1	PH03 - 9'	7															
15:00	1/25/2024	Soil	1	PH03 - 10'	8															
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, ehaft@ensolum.com, iestrella@ensolum.com																				
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Cole Burton																				
Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.																				
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only												
		1/25/24	8:01			1-26-24	0801	Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N												
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 T2 T3												
		1-26-24	1715			1-26-24	1715													
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	AVG Temp °C												
		1-26-24	2300			1/27/24	8:30	4												
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other																				
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA																				
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																				



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Instructions: Please take note of any NO checkmarks.  
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Maiador Resources, LLC.	Date Received:	01/27/24 08:30	Work Order ID:	E401209
Phone:	(972) 371-5200	Date Logged In:	01/29/24 11:15	Logged In By:	Angelina Pineda
Email:	agiovng@ensolum.com	Due Date:	02/09/24 17:00 (9 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
  2. Does the number of samples per sampling site location match the COC? Yes
  3. Were samples dropped off by client or carrier? Yes
  4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
  5. Were all samples received within holding time? Yes
- Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
  8. If yes, was cooler received in good condition? Yes
  9. Was the sample(s) received intact, i.e., not broken? Yes
  10. Were custody/security seals present? No
  11. If yes, were custody/security seals intact? NA
  12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes
- Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pca sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information: Yes

Sample ID? Yes

Date/Time Collected? Yes

Collector's name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No

22. Are sample(s) correctly preserved? NA

24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No

27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No

29. Was a subcontract laboratory specified by the client and if so who? NA

Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



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Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Fed TB

Work Order: E402003

Job Number: 23052-0001

Received: 2/1/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/6/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/6/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Fed TB  
Workorder: E402003  
Date Received: 2/1/2024 8:46:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/1/2024 8:46:00AM, under the Project Name: Charlie Sweeney Fed TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Fed TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

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[ljjarboe@envirotech-inc.com](mailto:ljjarboe@envirotech-inc.com)

**Michelle Golzaes**  
Client Representative  
Office: 505-421-LABS(5227)  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 02/06/24 14:15
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS09-2'	E402003-01A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
SW01 0-2'	E402003-02A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
SW02 0-2'	E402003-03A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
SW03 0-2'	E402003-04A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
SW04 0-2'	E402003-05A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/6/2024 2:15:00PM
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FS09-2'

E402003-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Benzene	ND	0.0250	1	02/02/24	02/04/24	
Ethylbenzene	ND	0.0250	1	02/02/24	02/04/24	
Toluene	ND	0.0250	1	02/02/24	02/04/24	
o-Xylene	ND	0.0250	1	02/02/24	02/04/24	
p,m-Xylene	ND	0.0500	1	02/02/24	02/04/24	
Total Xylenes	ND	0.0250	1	02/02/24	02/04/24	
Surrogate: 4-Bromochlorobenzene-PID	94.8 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/02/24	02/04/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	96.5 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: JL		Batch: 2405133	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/03/24	02/03/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/03/24	02/03/24	
Surrogate: n-Nonane	91.2 %	50-200		02/03/24	02/03/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2406003	
Chloride	437	20.0	1	02/04/24	02/04/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/6/2024 2:15:00PM
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SW01 0-2'  
E402003-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Benzene	ND	0.0250	1	02/02/24	02/04/24	
Ethylbenzene	ND	0.0250	1	02/02/24	02/04/24	
Toluene	ND	0.0250	1	02/02/24	02/04/24	
o-Xylene	ND	0.0250	1	02/02/24	02/04/24	
p,m-Xylene	ND	0.0500	1	02/02/24	02/04/24	
Total Xylenes	ND	0.0250	1	02/02/24	02/04/24	
Surrogate: 4-Bromochlorobenzene-PID	94.0 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/02/24	02/04/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	96.5 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: JL		Batch: 2405133	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/03/24	02/04/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/03/24	02/04/24	
Surrogate: n-Nonane	89.4 %	50-200		02/03/24	02/04/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2406003	
Chloride	175	20.0	1	02/04/24	02/04/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/6/2024 2:15:00PM
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SW02 0-2'  
E402003-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Benzene	ND	0.0250	1	02/02/24	02/04/24	
Ethylbenzene	ND	0.0250	1	02/02/24	02/04/24	
Toluene	ND	0.0250	1	02/02/24	02/04/24	
o-Xylene	ND	0.0250	1	02/02/24	02/04/24	
p,m-Xylene	ND	0.0500	1	02/02/24	02/04/24	
Total Xylenes	ND	0.0250	1	02/02/24	02/04/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.4 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/02/24	02/04/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.6 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: JL		Batch: 2405133	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/03/24	02/04/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/03/24	02/04/24	
<i>Surrogate: n-Nonane</i>						
	90.8 %	50-200		02/03/24	02/04/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2406003	
Chloride	283	20.0	1	02/04/24	02/04/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/6/2024 2:15:00PM
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SW03 0-2'  
E402003-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Benzene	ND	0.0250	1	02/02/24	02/04/24	
Ethylbenzene	ND	0.0250	1	02/02/24	02/04/24	
Toluene	ND	0.0250	1	02/02/24	02/04/24	
o-Xylene	ND	0.0250	1	02/02/24	02/04/24	
p,m-Xylene	ND	0.0500	1	02/02/24	02/04/24	
Total Xylenes	ND	0.0250	1	02/02/24	02/04/24	
Surrogate: 4-Bromochlorobenzene-PID	94.4 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/02/24	02/04/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.0 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: JL		Batch: 2405133	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/03/24	02/04/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/03/24	02/04/24	
Surrogate: n-Nonane	93.5 %	50-200		02/03/24	02/04/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2406003	
Chloride	494	20.0	1	02/04/24	02/04/24	



## Sample Data

Matador Resources, LLC.  
5400 LBJ Freeway, Suite 1500  
Dallas TX, 75240

Project Name: Charlie Sweeney Fed TB  
Project Number: 23052-0001  
Project Manager: Ashley Giovengo

**Reported:**  
2/6/2024 2:15:00PM

SW04 0-2'

E402003-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Benzene	ND	0.0250	1	02/02/24	02/04/24	
Ethylbenzene	ND	0.0250	1	02/02/24	02/04/24	
Toluene	ND	0.0250	1	02/02/24	02/04/24	
o-Xylene	ND	0.0250	1	02/02/24	02/04/24	
p,m-Xylene	ND	0.0500	1	02/02/24	02/04/24	
Total Xylenes	ND	0.0250	1	02/02/24	02/04/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.1 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2405149	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/02/24	02/04/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.4 %	70-130		02/02/24	02/04/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: JL		Batch: 2405133	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/03/24	02/04/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/03/24	02/04/24	
<i>Surrogate: n-Nonane</i>						
	88.8 %	50-200		02/03/24	02/04/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2406003	
Chloride	311	20.0	1	02/04/24	02/05/24	



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/6/2024 2:15:00PM

Volatile Organics by EPA 8021B

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405149-BLK1) Prepared: 02/02/24 Analyzed: 02/04/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.53		8.00		94.1	70-130			

LCS (2405149-BS1) Prepared: 02/02/24 Analyzed: 02/04/24

Benzene	4.96	0.0250	5.00		99.2	70-130			
Ethylbenzene	4.94	0.0250	5.00		98.8	70-130			
Toluene	4.94	0.0250	5.00		98.7	70-130			
o-Xylene	4.89	0.0250	5.00		97.8	70-130			
p,m-Xylene	9.95	0.0500	10.0		99.5	70-130			
Total Xylenes	14.8	0.0250	15.0		98.9	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.56		8.00		94.5	70-130			

Matrix Spike (2405149-MS1) Source: E402003-03 Prepared: 02/02/24 Analyzed: 02/04/24

Benzene	4.95	0.0250	5.00	ND	98.9	54-133			
Ethylbenzene	4.91	0.0250	5.00	ND	98.1	61-133			
Toluene	4.91	0.0250	5.00	ND	98.2	61-130			
o-Xylene	4.86	0.0250	5.00	ND	97.3	63-131			
p,m-Xylene	9.89	0.0500	10.0	ND	98.9	63-131			
Total Xylenes	14.8	0.0250	15.0	ND	98.4	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.56		8.00		94.5	70-130			

Matrix Spike Dup (2405149-MSD1) Source: E402003-03 Prepared: 02/02/24 Analyzed: 02/04/24

Benzene	4.83	0.0250	5.00	ND	96.7	54-133	2.30	20	
Ethylbenzene	4.80	0.0250	5.00	ND	96.0	61-133	2.14	20	
Toluene	4.81	0.0250	5.00	ND	96.2	61-130	2.10	20	
o-Xylene	4.76	0.0250	5.00	ND	95.1	63-131	2.26	20	
p,m-Xylene	9.68	0.0500	10.0	ND	96.8	63-131	2.20	20	
Total Xylenes	14.4	0.0250	15.0	ND	96.2	63-131	2.22	20	
Surrogate: 4-Bromochlorobenzene-PID	7.58		8.00		94.8	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/6/2024 2:15:00PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405149-BLK1) Prepared: 02/02/24 Analyzed: 02/04/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.61		8.00		95.2	70-130			

LCS (2405149-BS2) Prepared: 02/02/24 Analyzed: 02/04/24

Gasoline Range Organics (C6-C10)	49.0	20.0	50.0		98.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.69		8.00		96.1	70-130			

Matrix Spike (2405149-MS2) Source: E402003-03 Prepared: 02/02/24 Analyzed: 02/04/24

Gasoline Range Organics (C6-C10)	48.3	20.0	50.0	ND	96.6	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.74		8.00		96.7	70-130			

Matrix Spike Dup (2405149-MSD2) Source: E402003-03 Prepared: 02/02/24 Analyzed: 02/04/24

Gasoline Range Organics (C6-C10)	49.0	20.0	50.0	ND	98.0	70-130	1.38	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.79		8.00		97.4	70-130			





QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/6/2024 2:15:00PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405133-BLK1)					Prepared: 02/03/24 Analyzed: 02/03/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	45.9		50.0		91.7	50-200			

LCS (2405133-BS1)					Prepared: 02/03/24 Analyzed: 02/03/24				
Diesel Range Organics (C10-C28)	270	25.0	250		108	38-132			
Surrogate: n-Nonane	45.1		50.0		90.2	50-200			

LCS Dup (2405133-BSD1)					Prepared: 02/03/24 Analyzed: 02/03/24				
Diesel Range Organics (C10-C28)	260	25.0	250		104	38-132	3.71	20	
Surrogate: n-Nonane	43.9		50.0		87.8	50-200			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/6/2024 2:15:00PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2406003-BLK1)					Prepared: 02/04/24 Analyzed: 02/04/24				
Chloride	ND	20.0							
LCS (2406003-BS1)					Prepared: 02/04/24 Analyzed: 02/04/24				
Chloride	247	20.0	250		98.7	90-110			
LCS Dup (2406003-BSD1)					Prepared: 02/04/24 Analyzed: 02/04/24				
Chloride	247	20.0	250		98.6	90-110	0.0543	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/06/24 14:15

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.





## Envirotech Analytical Laboratory

Printed: 2/2/2024 5:04:23PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/01/24 08:46	Work Order ID:	E402003
Phone:	(972) 371-5200	Date Logged In:	02/01/24 08:46	Logged In By:	Alexa Michaels
Email:	agiovngo@ensolum.com	Due Date:	02/06/24 17:00 (3 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? No  
Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Fed TB

Work Order: E402007

Job Number: 23052-0001

Received: 2/1/2024

Revision: 2

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/13/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 2/13/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Fed TB  
Workorder: E402007  
Date Received: 2/1/2024 8:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/1/2024 8:00:00AM, under the Project Name: Charlie Sweeney Fed TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Fed TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 02/13/24 15:29
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS01 - 2'	E402007-01A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS02 - 2'	E402007-02A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS03 - 2'	E402007-03A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS04 - 2'	E402007-04A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS05 - 2'	E402007-05A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS06 - 2'	E402007-06A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS07 - 2'	E402007-07A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS08 - 2'	E402007-08A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS16 - 2'	E402007-09A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS17 - 2'	E402007-10A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS24 - 2'	E402007-11A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS25 - 2'	E402007-12A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS29 - 2'	E402007-13A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.
FS31 - 2'	E402007-14A	Soil	01/29/24	02/01/24	Glass Jar, 2 oz.

## Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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## FS01 - 2'

## E402007-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.0 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.4 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/09/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/09/24	
<i>Surrogate: n-Nonane</i>						
	92.7 %	50-200		02/09/24	02/09/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	835	200	10	02/09/24	02/09/24	



## Sample Data

Matador Resources, LLC.  
5400 LBJ Freeway, Suite 1500  
Dallas TX, 75240

Project Name: Charlie Sweeney Fed TB  
Project Number: 23052-0001  
Project Manager: Ashley Giovengo

**Reported:**  
2/13/2024 3:29:02PM

## FS02 - 2'

## E402007-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	92.5 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.9 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/09/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/09/24	
<i>Surrogate: n-Nonane</i>						
	93.0 %	50-200		02/09/24	02/09/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	1170	200	10	02/09/24	02/09/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS03 - 2'

E402007-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
Surrogate: 4-Bromochlorobenzene-PID	92.9 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.6 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/09/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/09/24	
Surrogate: n-Nonane	94.6 %	50-200		02/09/24	02/09/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	2090	200	10	02/09/24	02/09/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS04 - 2'

E402007-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
Surrogate: 4-Bromochlorobenzene-PID	93.5 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.1 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/12/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/12/24	
Surrogate: n-Nonane	84.5 %	50-200		02/09/24	02/12/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	1430	200	10	02/09/24	02/09/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS05 - 2'

E402007-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2406110
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.4 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2406110
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.7 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2406109
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/09/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/09/24	
<i>Surrogate: n-Nonane</i>						
	95.9 %	50-200		02/09/24	02/09/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2406111
Chloride	996	200	10	02/09/24	02/09/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS06 - 2'

E402007-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2406110
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.4 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2406110
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.8 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2406109
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
<i>Surrogate: n-Nonane</i>						
	95.3 %	50-200		02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2406111
Chloride	1880	200	10	02/09/24	02/09/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS07 - 2'

E402007-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2406110
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.7 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2406110
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	92.0 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2406109
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
<i>Surrogate: n-Nonane</i>						
	95.9 %	50-200		02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2406111
Chloride	1960	200	10	02/09/24	02/09/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS08 - 2'

E402007-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
Surrogate: 4-Bromochlorobenzene-PID	94.4 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.5 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
Surrogate: n-Nonane	95.7 %	50-200		02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	1050	200	10	02/09/24	02/09/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS16 - 2'

E402007-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
Surrogate: 4-Bromochlorobenzene-PID	93.9 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.6 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
Surrogate: n-Nonane	93.3 %	50-200		02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	1210	200	10	02/09/24	02/09/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS17 - 2'

E402007-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2406110
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.3 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2406110
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.7 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2406109
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
<i>Surrogate: n-Nonane</i>						
	104 %	50-200		02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2406111
Chloride	890	200	10	02/09/24	02/10/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS24 - 2'

E402007-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
Surrogate: 4-Bromochlorobenzene-PID	93.2 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.8 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
Surrogate: n-Nonane	100 %	50-200		02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	1000	200	10	02/09/24	02/10/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS25 - 2'

E402007-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.2 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.1 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
<i>Surrogate: n-Nonane</i>						
	105 %	50-200		02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	783	200	10	02/09/24	02/10/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:29:02PM
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FS29 - 2'

E402007-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
Surrogate: 4-Bromochlorobenzene-PID	93.7 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.4 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
Surrogate: n-Nonane	97.4 %	50-200		02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	1320	200	10	02/09/24	02/10/24	



## Sample Data

Matador Resources, LLC.  
5400 LBJ Freeway, Suite 1500  
Dallas TX, 75240

Project Name: Charlie Sweeney Fed TB  
Project Number: 23052-0001  
Project Manager: Ashley Giovengo

**Reported:**  
2/13/2024 3:29:02PM

FS31 - 2'

E402007-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Benzene	ND	0.0250	1	02/09/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/09/24	02/10/24	
Toluene	ND	0.0250	1	02/09/24	02/10/24	
o-Xylene	ND	0.0250	1	02/09/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/09/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/09/24	02/10/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	92.8 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2406110	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/09/24	02/10/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.7 %	70-130		02/09/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2406109	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
<i>Surrogate: n-Nonane</i>						
	96.7 %	50-200		02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: RAS		Batch: 2406111	
Chloride	901	200	10	02/09/24	02/10/24	



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/13/2024 3:29:02PM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2406110-BLK1)

Prepared: 02/09/24 Analyzed: 02/09/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.50		8.00		93.8	70-130			

LCS (2406110-BS1)

Prepared: 02/09/24 Analyzed: 02/09/24

Benzene	4.98	0.0250	5.00		99.6	70-130			
Ethylbenzene	4.86	0.0250	5.00		97.1	70-130			
Toluene	4.98	0.0250	5.00		99.5	70-130			
o-Xylene	4.91	0.0250	5.00		98.1	70-130			
p,m-Xylene	9.93	0.0500	10.0		99.3	70-130			
Total Xylenes	14.8	0.0250	15.0		98.9	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.55		8.00		94.4	70-130			

LCS Dup (2406110-BSD1)

Prepared: 02/09/24 Analyzed: 02/09/24

Benzene	4.76	0.0250	5.00		95.3	70-130	4.41	20	
Ethylbenzene	4.65	0.0250	5.00		93.1	70-130	4.25	20	
Toluene	4.77	0.0250	5.00		95.3	70-130	4.31	20	
o-Xylene	4.70	0.0250	5.00		94.0	70-130	4.35	20	
p,m-Xylene	9.53	0.0500	10.0		95.3	70-130	4.09	20	
Total Xylenes	14.2	0.0250	15.0		94.8	70-130	4.18	20	
Surrogate: 4-Bromochlorobenzene-PID	7.56		8.00		94.5	70-130			





QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/13/2024 3:29:02PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2406110-BLK1) Prepared: 02/09/24 Analyzed: 02/09/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.29		8.00		91.1	70-130			

LCS (2406110-BS2) Prepared: 02/09/24 Analyzed: 02/09/24

Gasoline Range Organics (C6-C10)	46.2	20.0	50.0		92.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.51		8.00		93.9	70-130			

LCS Dup (2406110-BSD2) Prepared: 02/09/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	49.7	20.0	50.0		99.3	70-130	7.12	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.49		8.00		93.7	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/13/2024 3:29:02PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2406109-BLK1)					Prepared: 02/09/24 Analyzed: 02/09/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	47.0		50.0		94.0	50-200			

LCS (2406109-BS1)					Prepared: 02/09/24 Analyzed: 02/09/24				
Diesel Range Organics (C10-C28)	238	25.0	250		95.3	38-132			
Surrogate: n-Nonane	48.6		50.0		97.2	50-200			

Matrix Spike (2406109-MS1)					Source: E402007-03		Prepared: 02/09/24 Analyzed: 02/09/24		
Diesel Range Organics (C10-C28)	268	25.0	250	ND	107	38-132			
Surrogate: n-Nonane	36.5		50.0		73.0	50-200			

Matrix Spike Dup (2406109-MSD1)					Source: E402007-03		Prepared: 02/09/24 Analyzed: 02/09/24		
Diesel Range Organics (C10-C28)	261	25.0	250	ND	105	38-132	2.33	20	
Surrogate: n-Nonane	42.0		50.0		83.9	50-200			



QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported:  2/13/2024 3:29:02PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2406111-BLK1)					Prepared: 02/09/24 Analyzed: 02/09/24				
Chloride	ND	20.0							
LCS (2406111-BS1)					Prepared: 02/09/24 Analyzed: 02/09/24				
Chloride	247	20.0	250		99.0	90-110			
Matrix Spike (2406111-MS1)					Source: E402007-04		Prepared: 02/09/24 Analyzed: 02/09/24		
Chloride	1650	200	250	1430	86.5	80-120			
Matrix Spike Dup (2406111-MSD1)					Source: E402007-04		Prepared: 02/09/24 Analyzed: 02/09/24		
Chloride	1660	200	250	1430	91.2	80-120	0.711	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.

Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/13/24 15:29

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: Matador Production Company		Bill To		Lab Use Only		TAT		EPA Program					
Project: Charlie Sweeney Fed TB		Attention: Matador Production Company		Lab WO# E462007		Job Number 23052-0001		1D	2D	3D	Standard	CWA	SDWA
Project Manager: Ashley Giovengo		Address: on file									x		
Address: 3122 National Parks Hwy		City, State, Zip:		Analysis and Method								RCRA	
City, State, Zip: Carlsbad NM, 88220		Phone: (337)319-8398											
Phone: 575-988-0055		Email: clinton.talley@matadorresources.com											
Email: agiovengo@ensolum.com													
Report due by:													

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TCEQ TPH	BGDOC NM	GDOC TX	Remarks
14:55	1/29/2024	Soil	1	FS01 - 2'	1							X		Please hold these samples until we call to proceed with testing.
11:40	1/29/2024	Soil	1	FS02 - 2'	2							X		Please hold these samples until we call to proceed with testing.
8:47	1/29/2024	Soil	1	FS03 - 2'	3							X		Please hold these samples until we call to proceed with testing.
8:45	1/29/2024	Soil	1	FS04 - 2'	4							X		Please hold these samples until we call to proceed with testing.
8:41	1/29/2024	Soil	1	FS05 - 2'	5							X		Please hold these samples until we call to proceed with testing.
8:39	1/29/2024	Soil	1	FS06 - 2'	6							X		Please hold these samples until we call to proceed with testing.
8:38	1/29/2024	Soil	1	FS07 - 2'	7							X		Please hold these samples until we call to proceed with testing.
8:37	1/29/2024	Soil	1	FS08 - 2'	8							X		Please hold these samples until we call to proceed with testing.
9:20	1/29/2024	Soil	1	FS16 - 2'	9							X		Please hold these samples until we call to proceed with testing.
9:21	1/29/2024	Soil	1	FS17 - 2'	10							X		Please hold these samples until we call to proceed with testing.

**Additional Instructions:** Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, ehaft@ensolum.com, iestrella@ensolum.com **Please hold these samples until we call to proceed with testing.**

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Cole Burton

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
<i>[Signature]</i>	1-30-24	7:30	<i>[Signature]</i>	1-31-24	1055	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
<i>[Signature]</i>	1-31-24	1605	<i>[Signature]</i>	1-31-24	1846	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
<i>[Signature]</i>	2/1/24	0225	<i>[Signature]</i>	02024	0500	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



envirotech







## Envirotech Analytical Laboratory

Printed: 2/2/2024 3:21:20PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/01/24 08:00	Work Order ID:	E402007
Phone:	(972) 371-5200	Date Logged In:	02/01/24 09:27	Logged In By:	Alexa Michaels
Email:	agiovngo@ensolum.com	Due Date:	02/07/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: Cole BurtonComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? No  
Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Fed TB

Work Order: E402008

Job Number: 23052-0001

Received: 2/1/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/7/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/7/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Fed TB  
Workorder: E402008  
Date Received: 2/1/2024 4:28:00PM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/1/2024 4:28:00PM, under the Project Name: Charlie Sweeney Fed TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Fed TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
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**Alexa Michaels**  
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Field Offices:

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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 02/07/24 14:43
---	--	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH01 - 3'	E402008-01A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
BH01 - 4'	E402008-02A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
BH01 - 5'	E402008-03A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
BH01 - 6'	E402008-04A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
BH01 - 7'	E402008-05A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
BH01 - 8'	E402008-06A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
BH01 - 9'	E402008-07A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:43:36PM
---	--	---------------------------------

BH01 - 3'

E402008-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2406017
Chloride	4320	200	10	02/05/24	02/06/24	
Sulfate	18500	200	10	02/05/24	02/06/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:43:36PM
---	--	---------------------------------

BH01 - 4'

E402008-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406017	
Chloride	2270	200	10	02/05/24	02/06/24	
Sulfate	15500	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:43:36PM
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BH01 - 5'

E402008-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406017	
Chloride	2850	200	10	02/05/24	02/06/24	
Sulfate	17900	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:43:36PM
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BH01 - 6'

E402008-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406017	
Chloride	2760	200	10	02/05/24	02/06/24	
Sulfate	25000	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:43:36PM
---	--	---------------------------------

BH01 - 7'

E402008-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406017	
Chloride	1710	200	10	02/05/24	02/06/24	
Sulfate	22000	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:43:36PM
---	--	---------------------------------

BH01 - 8'

E402008-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406017	
Chloride	1090	200	10	02/05/24	02/06/24	
Sulfate	20700	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:43:36PM
---	--	---------------------------------

BH01 - 9'

E402008-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406017	
Chloride	957	200	10	02/05/24	02/06/24	
Sulfate	20100	200	10	02/05/24	02/06/24	





QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/7/2024 2:43:36PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2406017-BLK1) Prepared: 02/05/24 Analyzed: 02/05/24

Chloride	ND	20.0
Sulfate	ND	20.0

LCS (2406017-BS1) Prepared: 02/05/24 Analyzed: 02/05/24

Chloride	251	20.0	250	100	90-110
Sulfate	248	20.0	250	99.2	90-110

LCS Dup (2406017-BSD1) Prepared: 02/05/24 Analyzed: 02/05/24

Chloride	251	20.0	250	100	90-110	0.00878	20
Sulfate	249	20.0	250	99.7	90-110	0.532	20

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/07/24 14:43

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: Matador Production Company	<b>Bill To</b> Attention: Matador Production Company Address: on file City, State, Zip: Phone: (337)319-8398 Email: clinton.talley@matadorresources.com	<b>Lab Use Only</b>		<b>TAT</b>				<b>EPA Program</b>						
Project: Charlie Sweeney Fed TB		Lab WQ# E 402008	Job Number 23052-0051	1D	2D	3D	Standard	CWA	SDWA					
Project Manager: Ashley Giovengo		Analysis and Method							RCRA					
Address: 3122 National Parks Hwy		TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0 +S04	TCEQ TPH	BGDOC NM	GDOC TX	State				
City, State, Zip: Carlsbad NM, 88220										NM	CO	UT	AZ	TX
Phone: 575-988-0055										x				
Email: agiovengo@ensolum.com									Remarks					
Report due by:														

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0 +S04	TCEQ TPH	BGDOC NM	GDOC TX	Remarks
9:37	1/30/2024	Soil	1	BH01 - 3'	1					X				J-Flag
9:39	1/30/2024	Soil	1	BH01 - 4'	2					X				J-Flag
9:42	1/30/2024	Soil	1	BH01 - 5'	3					X				J-Flag
9:44	1/30/2024	Soil	1	BH01 - 6'	4					X				J-Flag
11:08	1/30/2024	Soil	1	BH01 - 7'	5					X				J-Flag
11:09	1/30/2024	Soil	1	BH01 - 8'	6					X				J-Flag
11:10	1/30/2024	Soil	1	BH01 - 9'	7					X				J-Flag

**Additional Instructions:** Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, ehaft@ensolum.com, iestrella@ensolum.com

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Cole Burton

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature) <i>[Signature]</i>	Date 1-31-24	Time 7:30	Received by: (Signature) <i>[Signature]</i>	Date 1-31-24	Time 1055	<b>Lab Use Only</b> Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Relinquished by: (Signature) <i>[Signature]</i>	Date 1-31-24	Time 1605	Received by: (Signature) <i>[Signature]</i>	Date 1-31-24	Time 1840	
Relinquished by: (Signature) <i>[Signature]</i>	Date 02-1-24	Time 0225	Received by: (Signature) <i>[Signature]</i>	Date 02-01-24	Time 18:25	
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other						Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



envirotech

## Envirotech Analytical Laboratory

Printed: 2/2/2024 5:10:22PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/01/24 16:28	Work Order ID:	E402008
Phone:	(972) 371-5200	Date Logged In:	02/01/24 09:31	Logged In By:	Alexa Michaels
Email:	agiovngo@ensolum.com	Due Date:	02/07/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? No
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? No  
Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Fed TB

Work Order: E402009

Job Number: 23052-0001

Received: 2/1/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/7/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/7/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Fed TB  
Workorder: E402009  
Date Received: 2/1/2024 9:34:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/1/2024 9:34:00AM, under the Project Name: Charlie Sweeney Fed TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Fed TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
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**Alexa Michaels**  
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Field Offices:

**Southern New Mexico Area**

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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)



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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 02/07/24 14:42
---	--	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH02-3'	E402009-01A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
BH02-4'	E402009-02A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
BH02-5'	E402009-03A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
BH02-6'	E402009-04A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:42:43PM
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BH02-3'

E402009-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2406017
Chloride	1770	200	10	02/05/24	02/06/24	
Sulfate	21400	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:42:43PM
---	--	---------------------------------

BH02-4'

E402009-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406017	
Chloride	1490	200	10	02/05/24	02/06/24	
Sulfate	22000	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:42:43PM
---	--	---------------------------------

BH02-5'

E402009-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406017	
Chloride	1540	200	10	02/05/24	02/06/24	
Sulfate	22100	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:42:43PM
---	--	---------------------------------

BH02-6'

E402009-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406017	
Chloride	1430	200	10	02/05/24	02/06/24	
Sulfate	20800	200	10	02/05/24	02/06/24	





QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/7/2024 2:42:43PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2406017-BLK1) Prepared: 02/05/24 Analyzed: 02/05/24

Chloride	ND	20.0
Sulfate	ND	20.0

LCS (2406017-BS1) Prepared: 02/05/24 Analyzed: 02/05/24

Chloride	251	20.0	250	100	90-110
Sulfate	248	20.0	250	99.2	90-110

LCS Dup (2406017-BSD1) Prepared: 02/05/24 Analyzed: 02/05/24

Chloride	251	20.0	250	100	90-110	0.00878	20
Sulfate	249	20.0	250	99.7	90-110	0.532	20

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/07/24 14:42

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Released to Imaging: 10/1/2024 11:13:49 AM

Received by OCD: 9/18/2024 9:56:21 AM

Client: Matador Production Company					Bill To					Lab Use Only					TAT				EPA Program					
Project: Charlie Sweeney Fed TB					Attention: Matador Production Company					Lab WO#		Job Number			1D	2D	3D	Standard	CWA	SDWA				
Project Manager: Ashley Giovengo					Address: on file					E 452609-014		135052-0001						X						
Address: 3122 National Parks Hwy					City, State, Zip:					Analysis and Method												RCRA		
City, State, Zip: Carlsbad NM, 88220					Phone: (337)319-8398					TPH GRO/DRO/ORO by 8015	BTX by 8021	VOC by 8260	Metals 6010	Chloride 300.0 +S04	TCEQ TPH	BGDOC NM	GDOC TX	State						
Phone: 575-988-0055					Email: clinton.talley@matadorresources.com													NM	CO	UT	AZ	TX		
Email: agiovengo@ensolum.com																		X						
Report due by:																				Remarks				
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number																			
11:56	1/30/2024	Soil	1	BH02 - 3'	1								X						J-Flag					
11:58	1/30/2024	Soil	1	BH02 - 4'	2								X						J-Flag					
11:59	1/30/2024	Soil	1	BH02 - 5'	3								X						J-Flag					
12:01	1/30/2024	Soil	1	BH02 - 6'	4								X						J-Flag					
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, ehaft@ensolum.com, iestrella@ensolum.com																								
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.										Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.														
Relinquished by: (Signature) <i>Cole Burton</i>					Date 1-31-24		Time 7:30		Received by: (Signature) <i>[Signature]</i>					Date 1-31-24		Time 1055		Lab Use Only						
Relinquished by: (Signature) <i>[Signature]</i>					Date 1-31-24		Time 1605		Received by: (Signature) <i>[Signature]</i>					Date 1-31-24		Time 1840		Received on ice: Y / N						
Relinquished by: (Signature) <i>[Signature]</i>					Date 2-1-24		Time 0225		Received by: (Signature) <i>[Signature]</i>					Date 020224		Time 0800		T1 T2 T3						
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other										Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA														
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																								

## Envirotech Analytical Laboratory

Printed: 2/2/2024 3:01:02PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/01/24 09:34	Work Order ID:	E402009
Phone:	(972) 371-5200	Date Logged In:	02/01/24 09:34	Logged In By:	Alexa Michaels
Email:	agiovngo@ensolum.com	Due Date:	02/07/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C No

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? No  
Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Fed TB

Work Order: E402011

Job Number: 23052-0001

Received: 2/1/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/7/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/7/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Fed TB  
Workorder: E402011  
Date Received: 2/1/2024 8:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/1/2024 8:00:00AM, under the Project Name: Charlie Sweeney Fed TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Fed TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

**Lynn Jarboe**  
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[ljjarboe@envirotech-inc.com](mailto:ljjarboe@envirotech-inc.com)

**Michelle Golzaes**  
Client Representative  
Office: 505-421-LABS(5227)  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)



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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 02/07/24 14:34
---	--	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS20-3'	E402011-01A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.
FS21-3'	E402011-02A	Soil	01/30/24	02/01/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/7/2024 2:34:18PM
---	--	---------------------------------

FS20-3'

E402011-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405122	
Benzene	ND	0.0250	1	02/02/24	02/03/24	
Ethylbenzene	ND	0.0250	1	02/02/24	02/03/24	
Toluene	ND	0.0250	1	02/02/24	02/03/24	
o-Xylene	ND	0.0250	1	02/02/24	02/03/24	
p,m-Xylene	ND	0.0500	1	02/02/24	02/03/24	
Total Xylenes	ND	0.0250	1	02/02/24	02/03/24	
Surrogate: 4-Bromochlorobenzene-PID	95.3 %	70-130		02/02/24	02/03/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405122	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/02/24	02/03/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.6 %	70-130		02/02/24	02/03/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2406038	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/06/24	02/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/06/24	02/07/24	
Surrogate: n-Nonane	92.3 %	50-200		02/06/24	02/07/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2406013	
Chloride	281	200	10	02/05/24	02/05/24	



## Sample Data

Matador Resources, LLC.  
5400 LBJ Freeway, Suite 1500  
Dallas TX, 75240

Project Name: Charlie Sweeney Fed TB  
Project Number: 23052-0001  
Project Manager: Ashley Giovengo

**Reported:**  
2/7/2024 2:34:18PM

FS21-3'

E402011-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405122	
Benzene	ND	0.0250	1	02/02/24	02/03/24	
Ethylbenzene	ND	0.0250	1	02/02/24	02/03/24	
Toluene	ND	0.0250	1	02/02/24	02/03/24	
o-Xylene	ND	0.0250	1	02/02/24	02/03/24	
p,m-Xylene	ND	0.0500	1	02/02/24	02/03/24	
Total Xylenes	ND	0.0250	1	02/02/24	02/03/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.9 %	70-130		02/02/24	02/03/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2405122	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/02/24	02/03/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	92.1 %	70-130		02/02/24	02/03/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2406038	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/06/24	02/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/06/24	02/07/24	
<i>Surrogate: n-Nonane</i>						
	89.0 %	50-200		02/06/24	02/07/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2406013	
Chloride	ND	200	10	02/05/24	02/05/24	



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/7/2024 2:34:18PM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405122-BLK1) Prepared: 02/02/24 Analyzed: 02/04/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.68		8.00		96.0	70-130			

LCS (2405122-BS1) Prepared: 02/02/24 Analyzed: 02/04/24

Benzene	4.65	0.0250	5.00		93.0	70-130			
Ethylbenzene	4.52	0.0250	5.00		90.3	70-130			
Toluene	4.64	0.0250	5.00		92.8	70-130			
o-Xylene	4.58	0.0250	5.00		91.6	70-130			
p,m-Xylene	9.23	0.0500	10.0		92.3	70-130			
Total Xylenes	13.8	0.0250	15.0		92.1	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.73		8.00		96.6	70-130			

LCS Dup (2405122-BSD1) Prepared: 02/02/24 Analyzed: 02/04/24

Benzene	4.83	0.0250	5.00		96.6	70-130	3.75	20	
Ethylbenzene	4.70	0.0250	5.00		93.9	70-130	3.88	20	
Toluene	4.81	0.0250	5.00		96.3	70-130	3.62	20	
o-Xylene	4.77	0.0250	5.00		95.3	70-130	3.92	20	
p,m-Xylene	9.60	0.0500	10.0		96.0	70-130	3.86	20	
Total Xylenes	14.4	0.0250	15.0		95.8	70-130	3.88	20	
Surrogate: 4-Bromochlorobenzene-PID	7.73		8.00		96.7	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/7/2024 2:34:18PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2405122-BLK1) Prepared: 02/02/24 Analyzed: 02/04/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.35		8.00		91.8	70-130			

LCS (2405122-BS2) Prepared: 02/02/24 Analyzed: 02/04/24

Gasoline Range Organics (C6-C10)	45.6	20.0	50.0		91.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.49		8.00		93.6	70-130			

LCS Dup (2405122-BSD2) Prepared: 02/02/24 Analyzed: 02/04/24

Gasoline Range Organics (C6-C10)	47.1	20.0	50.0		94.1	70-130	3.09	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.44		8.00		93.0	70-130			





QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/7/2024 2:34:18PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2406038-BLK1)					Prepared: 02/06/24 Analyzed: 02/06/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	44.7		50.0		89.3	50-200			

LCS (2406038-BS1)					Prepared: 02/06/24 Analyzed: 02/06/24				
Diesel Range Organics (C10-C28)	251	25.0	250		100	38-132			
Surrogate: n-Nonane	44.2		50.0		88.4	50-200			

Matrix Spike (2406038-MS1)					Source: E402004-02		Prepared: 02/06/24 Analyzed: 02/06/24		
Diesel Range Organics (C10-C28)	249	25.0	250	ND	99.5	38-132			
Surrogate: n-Nonane	48.7		50.0		97.5	50-200			

Matrix Spike Dup (2406038-MSD1)					Source: E402004-02		Prepared: 02/06/24 Analyzed: 02/06/24		
Diesel Range Organics (C10-C28)	246	25.0	250	ND	98.4	38-132	1.17	20	
Surrogate: n-Nonane	47.8		50.0		95.5	50-200			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/7/2024 2:34:18PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2406013-BLK1)					Prepared: 02/05/24 Analyzed: 02/05/24				
Chloride	ND	20.0							
LCS (2406013-BS1)					Prepared: 02/05/24 Analyzed: 02/05/24				
Chloride	251	20.0	250		101	90-110			
LCS Dup (2406013-BSD1)					Prepared: 02/05/24 Analyzed: 02/05/24				
Chloride	257	20.0	250		103	90-110	2.03	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/07/24 14:34

- ND Analyte NOT DETECTED at or above the reporting limit
  - NR Not Reported
  - RPD Relative Percent Difference
  - DNI Did Not Ignite
  - DNR Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Page 12 of 13

## Envirotech Analytical Laboratory

Printed: 2/2/2024 3:06:49PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/01/24 08:00	Work Order ID:	E402011
Phone:	(972) 371-5200	Date Logged In:	02/01/24 09:42	Logged In By:	Alexa Michaels
Email:	agiovngo@ensolum.com	Due Date:	02/07/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? No  
Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Fed TB

Work Order: E402025

Job Number: 23052-0001

Received: 2/2/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/9/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 2/9/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Fed TB  
Workorder: E402025  
Date Received: 2/2/2024 6:10:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/2/2024 6:10:00AM, under the Project Name: Charlie Sweeney Fed TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Fed TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
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## Sample Summary

Matador Resources, LLC.  
5400 LBJ Freeway, Suite 1500  
Dallas TX, 75240

Project Name: Charlie Sweeney Fed TB  
Project Number: 23052-0001  
Project Manager: Ashley Giovengo

**Reported:**  
02/09/24 14:39

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BG01 - 0'	E402025-01A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG01 - 1'	E402025-02A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG01 - 2'	E402025-03A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG01 - 4'	E402025-04A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG01 - 10'	E402025-05A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG02 - 0'	E402025-06A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG02 - 1'	E402025-07A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG02 - 2'	E402025-08A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG02 - 3'	E402025-09A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG02 - 4'	E402025-10A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG02 - 10'	E402025-11A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG03 - 0'	E402025-12A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG03 - 1'	E402025-13A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG03 - 2'	E402025-14A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG03 - 3'	E402025-15A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG03 - 10'	E402025-16A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG04 - 0'	E402025-17A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG04 - 1'	E402025-18A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG04 - 2'	E402025-19A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG04 - 4'	E402025-20A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG04 - 8'	E402025-21A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG05 - 0'	E402025-22A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG05 - 1'	E402025-23A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG05 - 2'	E402025-24A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG05 - 6'	E402025-25A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG06 - 0'	E402025-26A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG06 - 1'	E402025-27A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.
BG06 - 1.5'	E402025-28A	Soil	01/31/24	02/02/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG01 - 0'

E402025-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2406020
Chloride	ND	200	10	02/07/24	02/08/24	
Sulfate	16900	200	10	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG01 - 1'  
E402025-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	200	10	02/07/24	02/08/24	
Sulfate	17500	200	10	02/07/24	02/08/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG01 - 2'  
E402025-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	200	10	02/07/24	02/08/24	
Sulfate	17300	200	10	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG01 - 4'  
E402025-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	200	10	02/07/24	02/08/24	
Sulfate	17200	200	10	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG01 - 10'  
E402025-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	200	10	02/07/24	02/08/24	
Sulfate	17200	200	10	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG02 - 0'  
E402025-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	60.3	40.0	2	02/07/24	02/08/24	
Sulfate	275	40.0	2	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG02 - 1'  
E402025-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	3920	1000	50	02/07/24	02/08/24	
Sulfate	15000	1000	50	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG02 - 2'  
E402025-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	4260	1000	50	02/07/24	02/08/24	
Sulfate	12600	1000	50	02/07/24	02/08/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG02 - 3'  
E402025-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	4050	1000	50	02/07/24	02/08/24	
Sulfate	24300	1000	50	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG02 - 4'  
E402025-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2406020
Chloride	ND	1000	50	02/07/24	02/08/24	
Sulfate	19200	1000	50	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG02 - 10'  
E402025-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	1000	50	02/07/24	02/08/24	
Sulfate	20700	1000	50	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG03 - 0'  
E402025-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	11800	1000	50	02/07/24	02/08/24	
Sulfate	20500	1000	50	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG03 - 1'  
E402025-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	400	20	02/07/24	02/08/24	
Sulfate	1770	400	20	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG03 - 2'  
E402025-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	400	20	02/07/24	02/08/24	
Sulfate	2460	400	20	02/07/24	02/08/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG03 - 3'  
E402025-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	400	20	02/07/24	02/08/24	
Sulfate	1790	400	20	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG03 - 10'  
E402025-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	400	20	02/07/24	02/08/24	
Sulfate	2160	400	20	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG04 - 0'  
E402025-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	200	10	02/07/24	02/08/24	
Sulfate	16900	200	10	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG04 - 1'  
E402025-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY		Batch: 2406020	
Chloride	ND	400	20	02/07/24	02/08/24	
Sulfate	2400	400	20	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG04 - 2'

E402025-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	400	20	02/07/24	02/08/24	
Sulfate	2270	400	20	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG04 - 4'  
E402025-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406020	
Chloride	ND	400	20	02/07/24	02/08/24	
Sulfate	2370	400	20	02/07/24	02/08/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG04 - 8'

E402025-21

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2406019
Chloride	ND	100	5	02/05/24	02/06/24	
Sulfate	17600	100	5	02/05/24	02/06/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG05 - 0'  
E402025-22

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406019	
Chloride	395	200	10	02/05/24	02/06/24	
Sulfate	18100	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG05 - 1'  
E402025-23

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406019	
Chloride	592	200	10	02/05/24	02/06/24	
Sulfate	19800	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG05 - 2'  
E402025-24

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406019	
Chloride	244	200	10	02/05/24	02/06/24	
Sulfate	20000	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG05 - 6'  
E402025-25

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406019	
Chloride	ND	200	10	02/05/24	02/06/24	
Sulfate	18400	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG06 - 0'  
E402025-26

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406019	
Chloride	5470	400	20	02/05/24	02/06/24	
Sulfate	26100	400	20	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG06 - 1'  
E402025-27

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406019	
Chloride	739	200	10	02/05/24	02/06/24	
Sulfate	19000	200	10	02/05/24	02/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23052-0001 Project Manager: Ashley Giovengo	Reported: 2/9/2024 2:39:09PM
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BG06 - 1.5'  
E402025-28

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2406019	
Chloride	356	200	10	02/05/24	02/06/24	
Sulfate	18200	200	10	02/05/24	02/06/24	





QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/9/2024 2:39:09PM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2406019-BLK1)					Prepared: 02/05/24 Analyzed: 02/06/24				
Chloride	ND	20.0							
Sulfate	ND	20.0							
LCS (2406019-BS1)					Prepared: 02/05/24 Analyzed: 02/06/24				
Chloride	255	20.0	250		102	90-110			
Sulfate	245	20.0	250		98.0	90-110			
LCS Dup (2406019-BSD1)					Prepared: 02/05/24 Analyzed: 02/06/24				
Chloride	255	20.0	250		102	90-110	0.300	20	
Sulfate	245	20.0	250		98.2	90-110	0.221	20	



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	2/9/2024 2:39:09PM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2406020-BLK1) Prepared: 02/07/24 Analyzed: 02/08/24

Chloride	ND	20.0
Sulfate	ND	20.0

LCS (2406020-BS1) Prepared: 02/07/24 Analyzed: 02/08/24

Chloride	260	20.0	250	104	90-110
Sulfate	252	20.0	250	101	90-110

LCS Dup (2406020-BSD1) Prepared: 02/07/24 Analyzed: 02/08/24

Chloride	261	20.0	250	104	90-110	0.183	20
Sulfate	252	20.0	250	101	90-110	0.0412	20

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23052-0001	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	02/09/24 14:39

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

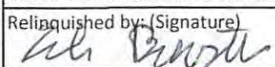
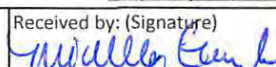
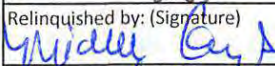
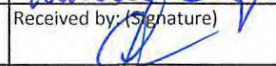


Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: Matador Production Company				Bill To		Lab Use Only				TAT				EPA Program		
Project: Charlie Sweeney Fed TB				Attention: Matador Production Company		Lab WO# E 402025		Job Number 23052-0001		1D	2D	3D	Standard	CWA	SDWA	
Project Manager: Ashley Giovengo				Address: on file		Analysis and Method									RCRA	
Address: 3122 National Parks Hwy				City, State, Zip:												
City, State, Zip: Carlsbad NM, 88220				Phone: (337)319-8398		State									TX	
Phone: 575-988-0055				Email: clinton.talley@matadorresources.com											NM	
Email: agiovengo@ensolum.com						Remarks										
Report due by:															X	
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0 + SO4	TCEQ TPH	BGDOC NM	GDOC TX			
8:23	1/31/2024	Soil	1	BG01 - 0'	1					X				J-flag - Please run for Sulphates also		
8:25	1/31/2024	Soil	1	BG01 - 1'	2					X				J-flag - Please run for Sulphates also		
8:27	1/31/2024	Soil	1	BG01 - 2'	3					X				J-flag - Please run for Sulphates also		
8:36	1/31/2024	Soil	1	BG01 - 4'	4					X				J-flag - Please run for Sulphates also		
8:53	1/31/2024	Soil	1	BG01 - 10'	5					X				J-flag - Please run for Sulphates also		
9:03	1/31/2024	Soil	1	BG02 - 0'	6					X				J-flag - Please run for Sulphates also		
9:06	1/31/2024	Soil	1	BG02 - 1'	7					X				J-flag - Please run for Sulphates also		
9:08	1/31/2024	Soil	1	BG02 - 2'	8					X				J-flag - Please run for Sulphates also		
9:11	1/31/2024	Soil	1	BG02 - 3'	9					X				J-flag - Please run for Sulphates also		
9:15	1/31/2024	Soil	1	BG02 - 4'	10					X				J-flag - Please run for Sulphates also		

Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, ehaf@ensolum.com, iestrella@ensolum.com

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.						Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.					
Sampled by: Cole Burton											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only			
		2-1-24	7:30			2-1-24	1047	Received on ice: Y / N			
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 T2 T3			
		2-1-24	1630			2/1/24	1630				
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	AVG Temp °C			
		2/1/24	2348			02/02/24	0600	4			
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other						Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA					
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.											





Released to Imaging: 10/17/2024 11:13:49 AM

Client: Matador Production Company	<b>Bill To</b> Attention: Matador Production Company Address: on file City, State, Zip: Phone: (337)319-8398 Email: clinton.talley@matadorresources.com	<b>Lab Use Only</b>		<b>TAT</b>				<b>EPA Program</b>					
Project: Charlie Sweeney Fed TB		Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA				
Project Manager: Ashley Giovengo		E402025	23052-0001				x						
Address: 3122 National Parks Hwy		<b>Analysis and Method</b>								RCRA			
City, State, Zip: Carlsbad NM, 88220		TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0 + SO4	TCEQ TPH	BGDOC NM	GDOC TX	State			
Phone: 575-988-0055										NM	CO	UT	AZ
Email: agiovengo@ensolum.com									x				
Report due by:	Remarks												

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0 + SO4	TCEQ TPH	BGDOC NM	GDOC TX	Remarks
9:45	1/31/2024	Soil	1	BG02 - 10'	11					X				J-flag - Please run for Sulphates also
10:10	1/31/2024	Soil	1	BG03 - 0'	12					X				J-flag - Please run for Sulphates also
10:22	1/31/2024	Soil	1	BG03 - 1'	13					X				J-flag - Please run for Sulphates also
10:24	1/31/2024	Soil	1	BG03 - 2'	14					X				J-flag - Please run for Sulphates also
10:27	1/31/2024	Soil	1	BG03 - 3'	15					X				J-flag - Please run for Sulphates also
10:56	1/31/2024	Soil	1	BG03 - 10'	16					X				J-flag - Please run for Sulphates also
11:06	1/31/2024	Soil	1	BG04 - 0'	17					X				J-flag - Please run for Sulphates also
11:07	1/31/2024	Soil	1	BG04 - 1'	18					X				J-flag - Please run for Sulphates also
11:09	1/31/2024	Soil	1	BG04 - 2'	19					X				J-flag - Please run for Sulphates also
11:15	1/31/2024	Soil	1	BG04 - 4'	20					X				J-flag - Please run for Sulphates also

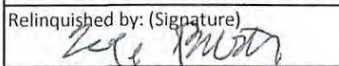
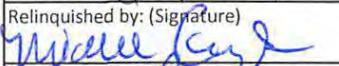
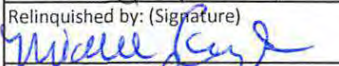
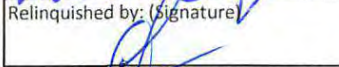
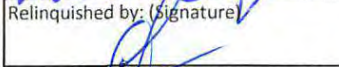
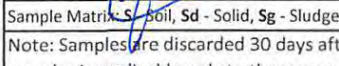
**Additional Instructions:** Please CC: cburton@ensolum.com, agiovengo@ensolum.com, chamilton@ensolum.com, ehafth@ensolum.com, iestrella@ensolum.com

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.						Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.					
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only			
<i>[Signature]</i>		2-1-24	7:30	<i>[Signature]</i>		2-1-24	1047	Received on ice: <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N			
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 _____ T2 _____ T3 _____			
<i>[Signature]</i>		2-1-24	1620	<i>[Signature]</i>		2/1/24	1630				
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	AVG Temp °C <u>4</u>			
<i>[Signature]</i>		2/1/24	2348	<i>[Signature]</i>		020224	0610				
Sample Matrix: <u>S</u> - Soil, <u>Sd</u> - Solid, <u>Sg</u> - Sludge, <u>A</u> - Aqueous, <u>O</u> - Other _____						Container Type: <u>g</u> - glass, <u>p</u> - poly/plastic, <u>ag</u> - amber glass, <u>v</u> - VOA					
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.											



Client: Matador Production Company				Bill To		Lab Use Only		TAT				EPA Program							
Project: Charlie Sweeney Fed TB				Attention: Matador Production Company		Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA						
Project Manager: Ashley Giovenego				Address: on file		E 402025 23052-0001					x								
Address: 3122 National Parks Hwy				City, State, Zip:		Analysis and Method								RCRA					
City, State, Zip: Carlsbad NM, 88220				Phone: (337)319-8398		TPH GRO/DRO/ORO by 8015	BTX by 8021	VOC by 8260	Metals 6010	Chloride 300.0 + SO4	TCEQ TPH	BGDOC NM	GDOC TX	State					
Phone: 575-988-0055				Email: clinton_talley@matadorresources.com										NM	CO	UT	AZ	TX	
Email: agiovenego@ensolum.com																			
Report due by:																			
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number									Remarks					
11:31	1/31/2024	Soil	1	BG04 - 8'	21					X					J-flag - Please run for Sulphates also				
12:50	1/31/2024	Soil	1	BG05 - 0'	22					X					J-flag - Please run for Sulphates also				
12:53	1/31/2024	Soil	1	BG05 - 1'	23					X					J-flag - Please run for Sulphates also				
12:55	1/31/2024	Soil	1	BG05 - 2'	24					X					J-flag - Please run for Sulphates also				
13:10	1/31/2024	Soil	1	BG05 - 6'	25					X					J-flag - Please run for Sulphates also				
13:17	1/31/2024	Soil	1	BG06 - 0'	26					X					J-flag - Please run for Sulphates also				
13:39	1/31/2024	Soil	1	BG06 - 1'	27					X					J-flag - Please run for Sulphates also				
13:45	1/31/2024	Soil	1	BG06 - 1.5'	28					X					J-flag - Please run for Sulphates also				

**Additional Instructions:** Please CC: cburton@ensolum.com, agiovenego@ensolum.com, chamilton@ensolum.com, ehaft@ensolum.com, iestrella@ensolum.com

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.						Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.					
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only			
		2-1-24	7:30			2-1-24	1047	Received on ice: Y / N			
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 T2 T3			
		2-1-24	1630			2/1/24	1630				
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	AVG Temp °C			
		2/1/24	2348			2/2/24	920	4			
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other						Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA					
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.											



## Envirotech Analytical Laboratory

Printed: 2/2/2024 9:16:24AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	02/02/24 06:10	Work Order ID:	E402025
Phone:	(972) 371-5200	Date Logged In:	02/02/24 08:51	Logged In By:	Jessica Liesse
Email:	agiovngo@ensolum.com	Due Date:	02/08/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: Cole BurtonComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 

Sample ID?	Yes
Date/Time Collected?	Yes
Collectors name?	No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Fed TB

Work Order: E406219

Job Number: 23003-0002

Received: 6/25/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
6/28/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 6/28/24



Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240

Project Name: Charlie Sweeney Fed TB  
Workorder: E406219  
Date Received: 6/25/2024 5:15:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/25/2024 5:15:00AM, under the Project Name: Charlie Sweeney Fed TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Fed TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

**Lynn Jarboe**  
Laboratory Technical Representative  
Office: 505-421-LABS(5227)  
Cell: 505-320-4759  
[ljjarboe@envirotech-inc.com](mailto:ljjarboe@envirotech-inc.com)

**Michelle Gonzales**  
Client Representative  
Office: 505-421-LABS(5227)  
Cell: 505-947-8222  
[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	06/28/24 11:41

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS03-4'	E406219-01A	Soil	06/21/24	06/25/24	Glass Jar, 2 oz.
FS04-4'	E406219-02A	Soil	06/21/24	06/25/24	Glass Jar, 2 oz.
FS06-14'	E406219-03A	Soil	06/24/24	06/25/24	Glass Jar, 2 oz.
	E406219-03B	Soil	06/24/24	06/25/24	Glass Jar, 2 oz.
FS07-12'	E406219-04A	Soil	06/24/24	06/25/24	Glass Jar, 2 oz.
	E406219-04B	Soil	06/24/24	06/25/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 6/28/2024 11:41:32AM
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FS03-4'  
E406219-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2426016	
Benzene	ND	0.0250	1	06/25/24	06/27/24	
Ethylbenzene	ND	0.0250	1	06/25/24	06/27/24	
Toluene	ND	0.0250	1	06/25/24	06/27/24	
o-Xylene	ND	0.0250	1	06/25/24	06/27/24	
p,m-Xylene	ND	0.0500	1	06/25/24	06/27/24	
Total Xylenes	ND	0.0250	1	06/25/24	06/27/24	
Surrogate: 4-Bromochlorobenzene-PID	92.1 %	70-130		06/25/24	06/27/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2426016	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/25/24	06/27/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	105 %	70-130		06/25/24	06/27/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2426019	
Diesel Range Organics (C10-C28)	ND	25.0	1	06/25/24	06/25/24	
Oil Range Organics (C28-C36)	ND	50.0	1	06/25/24	06/25/24	
Surrogate: n-Nonane	106 %	50-200		06/25/24	06/25/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2426021	
Chloride	3080	200	10	06/25/24	06/25/24	



## Sample Data

Matador Resources, LLC.  
5400 LBJ Freeway, Suite 1500  
Dallas TX, 75240

Project Name: Charlie Sweeney Fed TB  
Project Number: 23003-0002  
Project Manager: Ashley Giovengo

**Reported:**  
6/28/2024 11:41:32AM

FS04-4'

E406219-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2426016
Benzene	ND	0.0250	1	06/25/24	06/27/24	
Ethylbenzene	ND	0.0250	1	06/25/24	06/27/24	
Toluene	ND	0.0250	1	06/25/24	06/27/24	
o-Xylene	ND	0.0250	1	06/25/24	06/27/24	
p,m-Xylene	ND	0.0500	1	06/25/24	06/27/24	
Total Xylenes	ND	0.0250	1	06/25/24	06/27/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.2 %	70-130		06/25/24	06/27/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2426016
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/25/24	06/27/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	104 %	70-130		06/25/24	06/27/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2426019
Diesel Range Organics (C10-C28)	ND	25.0	1	06/25/24	06/25/24	
Oil Range Organics (C28-C36)	ND	50.0	1	06/25/24	06/25/24	
<i>Surrogate: n-Nonane</i>						
	111 %	50-200		06/25/24	06/25/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2426021
Chloride	2840	200	10	06/25/24	06/25/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 6/28/2024 11:41:32AM
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FS06-14'

E406219-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2426016
Benzene	ND	0.0250	1	06/25/24	06/27/24	
Ethylbenzene	ND	0.0250	1	06/25/24	06/27/24	
Toluene	ND	0.0250	1	06/25/24	06/27/24	
o-Xylene	ND	0.0250	1	06/25/24	06/27/24	
p,m-Xylene	ND	0.0500	1	06/25/24	06/27/24	
Total Xylenes	ND	0.0250	1	06/25/24	06/27/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	91.6 %	70-130		06/25/24	06/27/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2426016
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/25/24	06/27/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	104 %	70-130		06/25/24	06/27/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2426019
Diesel Range Organics (C10-C28)	ND	25.0	1	06/25/24	06/25/24	
Oil Range Organics (C28-C36)	ND	50.0	1	06/25/24	06/25/24	
<i>Surrogate: n-Nonane</i>						
	99.4 %	50-200		06/25/24	06/25/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2426021
Chloride	ND	200	10	06/25/24	06/25/24	





Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 6/28/2024 11:41:32AM
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FS07-12'

E406219-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2426016	
Benzene	ND	0.0250	1	06/25/24	06/27/24	
Ethylbenzene	ND	0.0250	1	06/25/24	06/27/24	
Toluene	ND	0.0250	1	06/25/24	06/27/24	
o-Xylene	ND	0.0250	1	06/25/24	06/27/24	
p,m-Xylene	ND	0.0500	1	06/25/24	06/27/24	
Total Xylenes	ND	0.0250	1	06/25/24	06/27/24	
Surrogate: 4-Bromochlorobenzene-PID	91.6 %	70-130		06/25/24	06/27/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2426016	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/25/24	06/27/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	105 %	70-130		06/25/24	06/27/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2426019	
Diesel Range Organics (C10-C28)	ND	25.0	1	06/25/24	06/25/24	
Oil Range Organics (C28-C36)	ND	50.0	1	06/25/24	06/25/24	
Surrogate: n-Nonane	105 %	50-200		06/25/24	06/25/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2426021	
Chloride	ND	200	10	06/25/24	06/25/24	



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	6/28/2024 11:41:32AM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2426016-BLK1) Prepared: 06/25/24 Analyzed: 06/27/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.42		8.00		92.7	70-130			

LCS (2426016-BS1) Prepared: 06/25/24 Analyzed: 06/27/24

Benzene	5.07	0.0250	5.00		101	70-130			
Ethylbenzene	4.78	0.0250	5.00		95.6	70-130			
Toluene	5.00	0.0250	5.00		100	70-130			
o-Xylene	4.88	0.0250	5.00		97.5	70-130			
p,m-Xylene	9.82	0.0500	10.0		98.2	70-130			
Total Xylenes	14.7	0.0250	15.0		98.0	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.47		8.00		93.3	70-130			

Matrix Spike (2426016-MS1) Source: E406219-02 Prepared: 06/25/24 Analyzed: 06/27/24

Benzene	5.12	0.0250	5.00	ND	102	54-133			
Ethylbenzene	4.80	0.0250	5.00	ND	96.1	61-133			
Toluene	5.03	0.0250	5.00	ND	101	61-130			
o-Xylene	4.92	0.0250	5.00	ND	98.3	63-131			
p,m-Xylene	9.88	0.0500	10.0	ND	98.8	63-131			
Total Xylenes	14.8	0.0250	15.0	ND	98.7	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.46		8.00		93.2	70-130			

Matrix Spike Dup (2426016-MSD1) Source: E406219-02 Prepared: 06/25/24 Analyzed: 06/27/24

Benzene	5.04	0.0250	5.00	ND	101	54-133	1.61	20	
Ethylbenzene	4.74	0.0250	5.00	ND	94.7	61-133	1.43	20	
Toluene	4.96	0.0250	5.00	ND	99.1	61-130	1.51	20	
o-Xylene	4.85	0.0250	5.00	ND	96.9	63-131	1.45	20	
p,m-Xylene	9.75	0.0500	10.0	ND	97.5	63-131	1.40	20	
Total Xylenes	14.6	0.0250	15.0	ND	97.3	63-131	1.42	20	
Surrogate: 4-Bromochlorobenzene-PID	7.37		8.00		92.2	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	6/28/2024 11:41:32AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2426016-BLK1) Prepared: 06/25/24 Analyzed: 06/27/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.34		8.00		104	70-130			

LCS (2426016-BS2) Prepared: 06/25/24 Analyzed: 06/27/24

Gasoline Range Organics (C6-C10)	51.5	20.0	50.0		103	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.49		8.00		106	70-130			

Matrix Spike (2426016-MS2) Source: E406219-02 Prepared: 06/25/24 Analyzed: 06/27/24

Gasoline Range Organics (C6-C10)	48.8	20.0	50.0	ND	97.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.52		8.00		106	70-130			

Matrix Spike Dup (2426016-MSD2) Source: E406219-02 Prepared: 06/25/24 Analyzed: 06/27/24

Gasoline Range Organics (C6-C10)	46.5	20.0	50.0	ND	93.0	70-130	4.77	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.50		8.00		106	70-130			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	6/28/2024 11:41:32AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2426019-BLK1) Prepared: 06/25/24 Analyzed: 06/25/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	48.0		50.0		95.9	50-200			

LCS (2426019-BS1) Prepared: 06/25/24 Analyzed: 06/25/24

Diesel Range Organics (C10-C28)	291	25.0	250		116	38-132			
Surrogate: n-Nonane	50.7		50.0		101	50-200			

Matrix Spike (2426019-MS1) Source: E406220-01 Prepared: 06/25/24 Analyzed: 06/25/24

Diesel Range Organics (C10-C28)	321	25.0	250	ND	129	38-132			
Surrogate: n-Nonane	55.3		50.0		111	50-200			

Matrix Spike Dup (2426019-MSD1) Source: E406220-01 Prepared: 06/25/24 Analyzed: 06/25/24

Diesel Range Organics (C10-C28)	309	25.0	250	ND	123	38-132	4.06	20	
Surrogate: n-Nonane	53.1		50.0		106	50-200			



QC Summary Data

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	Reported:
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	
Dallas TX, 75240	Project Manager:	Ashley Giovengo	6/28/2024 11:41:32AM

Anions by EPA 300.0/9056A

Analyst: JM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2426021-BLK1)					Prepared: 06/25/24 Analyzed: 06/25/24				
Chloride	ND	20.0							
LCS (2426021-BS1)					Prepared: 06/25/24 Analyzed: 06/25/24				
Chloride	250	20.0	250		100	90-110			
Matrix Spike (2426021-MS1)					Source: E406216-06		Prepared: 06/25/24 Analyzed: 06/25/24		
Chloride	500	20.0	250	245	102	80-120			
Matrix Spike Dup (2426021-MSD1)					Source: E406216-06		Prepared: 06/25/24 Analyzed: 06/25/24		
Chloride	496	20.0	250	245	101	80-120	0.792	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	06/28/24 11:41

- ND      Analyte NOT DETECTED at or above the reporting limit
  - NR      Not Reported
  - RPD      Relative Percent Difference
  - DNI      Did Not Ignite
  - DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Page 14 of 15





## Envirotech Analytical Laboratory

Printed: 6/26/2024 8:29:35AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	06/25/24 05:15	Work Order ID:	E406219
Phone:	(972) 371-5200	Date Logged In:	06/24/24 16:24	Logged In By:	Alexa Michaels
Email:	agiovngo@ensolum.com	Due Date:	07/01/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Matador Resources, LLC.

Project Name: Charlie Sweeney Fed TB

Work Order: E409020

Job Number: 23003-0002

Received: 9/5/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
9/10/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 9/10/24

Ashley Giovengo  
5400 LBJ Freeway, Suite 1500  
Dallas, TX 75240



Project Name: Charlie Sweeney Fed TB  
Workorder: E409020  
Date Received: 9/5/2024 6:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 9/5/2024 6:00:00AM, under the Project Name: Charlie Sweeney Fed TB.

The analytical test results summarized in this report with the Project Name: Charlie Sweeney Fed TB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 09/10/24 15:31
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW05 - 0-4'	E409020-01A	Soil	09/03/24	09/05/24	Glass Jar, 2 oz.
SW06 - 0-4'	E409020-02A	Soil	09/03/24	09/05/24	Glass Jar, 2 oz.
SW07 - 4-14'	E409020-03A	Soil	09/03/24	09/05/24	Glass Jar, 2 oz.
SW08 - 0-14'	E409020-04A	Soil	09/03/24	09/05/24	Glass Jar, 2 oz.
SW09 - 0-12'	E409020-05A	Soil	09/03/24	09/05/24	Glass Jar, 2 oz.
SW10 - 4-14'	E409020-06A	Soil	09/03/24	09/05/24	Glass Jar, 2 oz.
SW11 - 4-14'	E409020-07A	Soil	09/03/24	09/05/24	Glass Jar, 2 oz.
SW12 - 4-12'	E409020-08A	Soil	09/03/24	09/05/24	Glass Jar, 2 oz.



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 9/10/2024 3:31:28PM
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SW05 - 0-4'  
E409020-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2436051
Chloride	ND	200	10	09/05/24	09/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 9/10/2024 3:31:28PM
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SW06 - 0-4'  
E409020-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2436051
Chloride	723	200	10	09/05/24	09/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 9/10/2024 3:31:28PM
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SW07 - 4-14'  
E409020-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2436051
Chloride	3720	200	10	09/05/24	09/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 9/10/2024 3:31:28PM
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SW08 - 0-14'  
E409020-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2436051
Chloride	651	100	5	09/05/24	09/06/24	

Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 9/10/2024 3:31:28PM
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SW09 - 0-12'  
E409020-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2436051
Chloride	132	20.0	1	09/05/24	09/06/24	

Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 9/10/2024 3:31:28PM
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SW10 - 4-14'  
E409020-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2436051
Chloride	448	20.0	1	09/05/24	09/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 9/10/2024 3:31:28PM
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SW11 - 4-14'  
E409020-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2436051
Chloride	184	20.0	1	09/05/24	09/06/24	



Sample Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported: 9/10/2024 3:31:28PM
---	--	----------------------------------

SW12 - 4-12'  
E409020-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2436051
Chloride	674	200	10	09/05/24	09/06/24	

QC Summary Data

Matador Resources, LLC. 5400 LBJ Freeway, Suite 1500 Dallas TX, 75240	Project Name: Charlie Sweeney Fed TB Project Number: 23003-0002 Project Manager: Ashley Giovengo	Reported:  9/10/2024 3:31:28PM
---	--	--------------------------------------

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

Blank (2436051-BLK1)					Prepared: 09/05/24 Analyzed: 09/05/24				
Chloride	ND	20.0							
LCS (2436051-BS1)					Prepared: 09/05/24 Analyzed: 09/05/24				
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2436051-MS1)					Source: E409020-03		Prepared: 09/05/24 Analyzed: 09/06/24		
Chloride	3610	200	250	3720	NR	80-120			M4
Matrix Spike Dup (2436051-MSD1)					Source: E409020-03		Prepared: 09/05/24 Analyzed: 09/06/24		
Chloride	3770	200	250	3720	23.6	80-120	4.47	20	M4

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Matador Resources, LLC.	Project Name:	Charlie Sweeney Fed TB	
5400 LBJ Freeway, Suite 1500	Project Number:	23003-0002	Reported:
Dallas TX, 75240	Project Manager:	Ashley Giovengo	09/10/24 15:31

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Chain of Custody

Page 1 of 1

Received by OCD: 9/18/2024 9:56:21 AM

Client Information				Invoice Information		Lab Use Only		TAT				State						
Client: Matador Production Company				Company: Ensolum LLC		Lab WO#	Job Number	1D	2D	3D	Std	NM	CO	UT	TX			
Project: Charlie Sweeney Fed TB				Address: 3122 National Parks Hwy		E409020	23003-0002				X	X						
Project Manager: Ashley Giovengo				City, State, Zip: Carlsbad NM, 88220														
Address: 3122 National Parks Hwy				Phone: 575-988-0055														
City, State, Zip: Carlsbad NM, 88220				Email: agiovengo@ensolum.com														
Phone: 575-988-0055				Miscellaneous:														
Email: agiovengo@ensolum.com																		
Sample Information						Analysis and Method								EPA Program				
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	lgDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA	
16:32	9/3/2024	S	1	SW05 - 0-4'		1					X							
15:17	9/3/2024	S	1	SW06 - 0-4'		2					X							
15:33	9/3/2024	S	1	SW07 - 4-14'		3					X							
16:29	9/3/2024	S	1	SW08 - 0-14'		4					X							
15:38	9/3/2024	S	1	SW09 - 0-12'		5					X							
16:31	9/3/2024	S	1	SW10 - 4-14'		6					X							
15:48	9/3/2024	S	1	SW11 - 4-14'		7					X							
15:52	9/3/2024	S	1	SW12 - 4-12'		8					X							
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, iestrella@ensolum.com, bdeal@ensolum.com, chamilton@ensolum.com, bsimmons@ensolum.com																		
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.																		
Sampled by: Cole Burton																		
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.  Lab Use Only Received on ice: Y / N  T1 _____ T2 _____ T3 _____  AVG Temp °C 4										
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time											
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other																		
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA																		
Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																		



## Envirotech Analytical Laboratory

Printed: 9/5/2024 7:30:53AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Matador Resources, LLC.	Date Received:	09/05/24 06:00	Work Order ID:	E409020
Phone:	(972) 371-5200	Date Logged In:	09/04/24 17:48	Logged In By:	Noe Soto
Email:	agiovngo@ensolum.com	Due Date:	09/11/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/Resolution

Visible whiteout on COC.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



## APPENDIX E

### NMOCD Correspondence

---



**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**

QUESTIONS

Action 305537

**QUESTIONS**

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305537
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

**Location of Release Source**

Site Name	CHARLIE SWEENY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	6,260
What is the estimated number of samples that will be gathered	38
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/23/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	n/a
Please provide any information necessary for navigation to sampling site	32.254637 -104.119618

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
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State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS  
  
Action 305537

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305537
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	1/19/2024

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State of New Mexico  
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Oil Conservation Division  
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Santa Fe, NM 87505

QUESTIONS  
  
Action 305542

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305542
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	CHARLIE SWEENY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	6,260
What is the estimated number of samples that will be gathered	38
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/24/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	n/a
Please provide any information necessary for navigation to sampling site	32.254637 -104.119618



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**State of New Mexico**  
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**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
  
Action 305542

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305542
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	1/19/2024

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

QUESTIONS  
  
Action 305550

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305550
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	CHARLIE SWEENY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	6,260
What is the estimated number of samples that will be gathered	38
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/25/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	n/a
Please provide any information necessary for navigation to sampling site	32.254637 -104.119618

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State of New Mexico  
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Oil Conservation Division  
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Santa Fe, NM 87505

CONDITIONS  
  
Action 305550

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305550
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	1/19/2024

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State of New Mexico  
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Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 305557

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305557
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	CHARLIE SWEENY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	6,260
What is the estimated number of samples that will be gathered	38
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/26/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	n/a
Please provide any information necessary for navigation to sampling site	32.254637 -104.119618

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**Oil Conservation Division**  
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**Santa Fe, NM 87505**

CONDITIONS  
  
Action 305557

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305557
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	1/19/2024

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

QUESTIONS  
  
Action 305566

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305566
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	CHARLIE SWEENY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	6,260
What is the estimated number of samples that will be gathered	38
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/29/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	n/a
Please provide any information necessary for navigation to sampling site	32.254637 -104.119618

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

CONDITIONS  
  
Action 305566

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305566
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	1/19/2024



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

QUESTIONS  
  
Action 305570

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305570
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	CHARLIE SWEENY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	6,260
What is the estimated number of samples that will be gathered	38
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/30/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	n/a
Please provide any information necessary for navigation to sampling site	32.254637 -104.119618

**District I**  
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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 305570

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 305570
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	1/19/2024

**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**

QUESTIONS

Action 355861

**QUESTIONS**

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 355861
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENEY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	CHARLIE SWEENEY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	800
What is the estimated number of samples that will be gathered	4
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	06/21/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	N/A
Please provide any information necessary for navigation to sampling site	: 32.254637, -104.119618

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

CONDITIONS  
  
Action 355861

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 355861
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	6/19/2024

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

QUESTIONS  
  
Action 356832

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 356832
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	CHARLIE SWEENY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	6,260
What is the estimated number of samples that will be gathered	4
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	06/24/2024
Time sampling will commence	09:00 AM
Warning: Notification can not be less than two business days prior to conducting final sampling.	
Please provide any information necessary for observers to contact samplers	N/A
Please provide any information necessary for navigation to sampling site	32.254637, -104.119618

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
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Phone:(575) 748-1283 Fax:(575) 748-9720  
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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 356832

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 356832
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
c_talley	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	6/24/2024

**From:** [Wells, Shelly, EMNRD](#)  
**To:** [Ashley Giovengo](#); [clinton.talley@matadorresources.com](mailto:clinton.talley@matadorresources.com); [Jason Touchet](#)  
**Cc:** [Cole Burton](#); [Bratcher, Michael, EMNRD](#); [Hamlet, Robert, EMNRD](#)  
**Subject:** RE: [EXTERNAL] 48-hour Confirmation Sampling Notification - Matador Production Company - Charlie Sweeney Fed TB - nAPP2332849245  
**Date:** Monday, June 24, 2024 1:53:43 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)

---

[ \*\*EXTERNAL EMAIL\*\* ]

Good afternoon Ashley,

Due to the OCD Permitting connectivity issues of 6/20/24-Present, a variance to the two business day notification for confirmation sampling is approved for NAPP2332849245 CHARLIE SWEENEY FED TANK BATTERY for 6/24/24. Please submit a C-141N for these samples when possible (it can be post-dated). Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Kind regards,

Shelly

[Shelly Wells](#) \* Environmental Specialist-Advanced  
Environmental Bureau  
EMNRD-Oil Conservation Division  
1220 S. St. Francis Drive|Santa Fe, NM 87505  
(505)469-7520|[Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

---

**From:** Ashley Giovengo <[agiovengo@ensolum.com](mailto:agiovengo@ensolum.com)>  
**Sent:** Monday, June 24, 2024 1:06 PM  
**To:** Hamlet, Robert, EMNRD <[Robert.Hamlet@emnrd.nm.gov](mailto:Robert.Hamlet@emnrd.nm.gov)>; Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>; [clinton.talley@matadorresources.com](mailto:clinton.talley@matadorresources.com); [Jason Touchet](mailto:Jason.Touchet@matadorresources.com) <[jason.touchet@matadorresources.com](mailto:jason.touchet@matadorresources.com)>  
**Cc:** Cole Burton <[cburton@ensolum.com](mailto:cburton@ensolum.com)>  
**Subject:** [EXTERNAL] 48-hour Confirmation Sampling Notification - Matador Production Company - Charlie Sweeney Fed TB - nAPP2332849245

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

A representative from Matador Production Company (Clinton Talley), tried to extend the 48-



hour confirmation sampling notification for the Charlie Sweeney site via the NMOCD web portal, however the portal seems to be experiencing issues or is currently down for maintenance. Please see the confirmation sampling details for the Charlie Sweeney site below.

**When:** 06/24/2024 @ 09:00 am MST

**Incident Number:** nAPP2332849245

**Where:** P-31-23S-28E (32.254637,-104.119618)

**Number of Samples:** 2

**Spill Sq. Footage:** 400 sq. ft.

**Additional Information:** N/A

**Additional Instructions:** 32.254637, -104.119618

Thanks,



**Ashley Giovengo**

Senior Scientist

575-988-0055

**Ensolum, LLC**

**in f X**

“Your authenticity is your superpower.” – Unknown

**From:** [Clinton Talley](#)  
**To:** [Ashley Giovengo](#)  
**Cc:** [Jason Touchet](#); [Cole Burton](#)  
**Subject:** FW: The Oil Conservation Division (OCD) has rejected the application, Application ID: 316745  
**Date:** Friday, May 17, 2024 2:04:31 PM

---

[ \*\*EXTERNAL EMAIL\*\* ]

Well, at least we have some room...

---

**From:** OCDOnline@state.nm.us <OCDOnline@state.nm.us>  
**Sent:** Friday, May 17, 2024 2:01 PM  
**To:** Clinton Talley <clinton.talley@matadorresources.com>  
**Subject:** The Oil Conservation Division (OCD) has rejected the application, Application ID: 316745

**\*\*EXTERNAL EMAIL\*\***

To whom it may concern (c/o Clint Talley for MATADOR PRODUCTION COMPANY),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2332849245, for the following reasons:

- **Remediation closure denied. OCD will accept the background chloride limit of 1,328 mg/kg. Continue remediating the open excavation to these standards and submit updated remediation closure report to the OCD by 7/16/24.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 316745.

Please review and make the required correction(s) prior to resubmitting.

If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,  
Shelly Wells  
Environmental Specialist-A  
505-469-7520  
[Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

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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

QUESTIONS  
  
Action 378967

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 378967
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	CHARLIE SWEENY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	6,647
What is the estimated number of samples that will be gathered	5
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/03/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	N/A
Please provide any information necessary for navigation to sampling site	32.254637, -104.119618

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
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**District IV**  
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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 378967

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 378967
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
j_touchet	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/28/2024



## APPENDIX F

### Referenced Reports

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	NAB1906754904
District RP	2RP-5289
Facility ID	fAB1906754729
Application ID	pAB1906754448

## Release Notification

### Responsible Party

Responsible Party: Matador Resources	OGRID: 228937
Contact Name: John Hurt	Contact Telephone: 972-371-5200
Contact email: JHurt@matadorresources.com	Incident # (assigned by OCD) NAB1906754904
Contact mailing address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

### Location of Release Source

Latitude 32.2219634

Longitude -104.0504256  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Janie Conner Tank Battery	Site Type: Tank Battery
Date Release Discovered 2/19/2019	API# (if applicable)

Unit Letter	Section	Township	Range	County
A	14	24S	28E	EDDY

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: McDonald)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 24	Volume Recovered (bbls) 6
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Equipment Failure – Fire Tube on Heater Treater

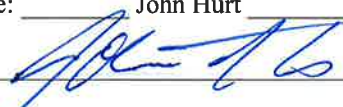

\*\* 24 bbls of a crude oil and water mixture

Incident ID	NAB1906754448
District RP	2RP-5289
Facility ID	fAB1906754729
Application ID	pAB1906754448

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? <25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by SMA on 2/20/2019 to NMOCD District II via email	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
Printed Name: <u>John Hurt</u>	Title: <u>RES Specialist</u>
Signature: <u></u>	Date: <u>3/4/19</u>
email: <u>JHurt@matadorresources.com</u>	Telephone: <u>972-371-5200</u>
<b>OCD Only</b>	
Received by: <u></u>	Date: <u>3/8/19</u>



**Hamlet, Robert, EMNRD**

---

**From:** Hamlet, Robert, EMNRD  
**Sent:** Monday, March 11, 2019 7:59 AM  
**To:** 'Melodie Sanjari'  
**Cc:** Venegas, Victoria, EMNRD; Bratcher, Mike, EMNRD; Austin Weyant; Heather Patterson; John Hurt  
**Subject:** OCD tracking number - Janie Conner Tank Battery (2RP-5289) 2-19-2019

RE: Matador Resources \* Janie Conner Tank Battery \* DOR: 02/19/2019

All,

The OCD tracking number for this release event is 2RP-5289.

Thank you,

Robert J Hamlet  
State of New Mexico  
Energy, Minerals, and Natural Resources  
Oil Conservation Division  
811 S. First St., Artesia NM 88210  
(575) 840-5963  
[Robert.Hamlet@state.nm.us](mailto:Robert.Hamlet@state.nm.us)

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

---

**From:** Bustamante, Amalia, EMNRD  
**Sent:** Friday, March 8, 2019 3:22 PM  
**To:** Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>  
**Cc:** Hamlet, Robert, EMNRD <[Robert.Hamlet@state.nm.us](mailto:Robert.Hamlet@state.nm.us)>; Venegas, Victoria, EMNRD <[Victoria.Venegas@state.nm.us](mailto:Victoria.Venegas@state.nm.us)>  
**Subject:** RE: Janie Conner Tank Battery Initial C141

**2RP-5289**

  
Oil Conservation Division-District II

---

**From:** Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>  
**Sent:** Monday, March 4, 2019 12:03 PM  
**To:** Bustamante, Amalia, EMNRD <[Amalia.Bustamante@state.nm.us](mailto:Amalia.Bustamante@state.nm.us)>  
**Cc:** Hamlet, Robert, EMNRD <[Robert.Hamlet@state.nm.us](mailto:Robert.Hamlet@state.nm.us)>; Venegas, Victoria, EMNRD <[Victoria.Venegas@state.nm.us](mailto:Victoria.Venegas@state.nm.us)>  
**Subject:** FW: Janie Conner Tank Battery Initial C141

**From:** Melodie Sanjari <[melodie.sanjari@soudermiller.com](mailto:melodie.sanjari@soudermiller.com)>  
**Sent:** Monday, March 4, 2019 10:53 AM  
**To:** Hamlet, Robert, EMNRD <[Robert.Hamlet@state.nm.us](mailto:Robert.Hamlet@state.nm.us)>; Venegas, Victoria, EMNRD <[Victoria.Venegas@state.nm.us](mailto:Victoria.Venegas@state.nm.us)>; Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>; Bustamante, Amalia, EMNRD <[Amalia.Bustamante@state.nm.us](mailto:Amalia.Bustamante@state.nm.us)>  
**Cc:** Austin Weyant <[austin.veyant@soudermiller.com](mailto:austin.veyant@soudermiller.com)>; Heather Patterson <[heather.patterson@soudermiller.com](mailto:heather.patterson@soudermiller.com)>; John Hurt <[JHurt@matadorresources.com](mailto:JHurt@matadorresources.com)>  
**Subject:** [EXT] Janie Conner Tank Battery Initial C141

To Whom it May Concern,

Please find the attached, signed Initial C141 for the release at the Janie Conner Tank Battery (24 Hour Notification sent on 2/20/2019).

If you have any questions or concerns please don't hesitate to reach out.

Thank you.

**Melodie Sanjari**  
Staff Scientist



**Souder, Miller & Associates**

Engineering ♦ Environmental ♦ Surveying  
201 S Halagueno Street  
Carlsbad, NM 88220  
[www.soudermiller.com](http://www.soudermiller.com)  
(574) 370-9782 (cell)  
(505) 299-0942 Ext. 2204



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**Bratcher, Mike, EMNRD**

---

**From:** Melodie Sanjari <melodie.sanjari@soudermiller.com>  
**Sent:** Monday, April 15, 2019 1:16 PM  
**To:** Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Venegas, Victoria, EMNRD  
**Cc:** Austin Weyant; Heather Patterson; John Hurt  
**Subject:** [EXT] Janie Conner Production Battery Background Levels

Good Morning All,

As per our discussion at the NMOCD District II office on 4/15/2019, we will begin remediation on the release associated with the Janie Conner using our pre oil and gas baseline backgrounds from the same location, which averages out to 1200 mg/kg chloride.

We will also be packaging and submitting the data for the area's background soil types.

Thank you all so much for your time today

Best,

Melodie Sanjari

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## Hamlet, Robert, EMNRD

---

**From:** Melodie Sanjari <melodie.sanjari@soudermiller.com>  
**Sent:** Wednesday, February 20, 2019 2:20 PM  
**To:** Hamlet, Robert, EMNRD; Venegas, Victoria, EMNRD; Bratcher, Mike, EMNRD  
**Cc:** John Hurt; Austin Weyant  
**Subject:** [EXT] Janie Conner Tank Battery 24 Hour Notification

**Responsible Party:**

Matador Resources Company  
OGRID: 228937  
5400 LBJ Freeway, Suite 1500 Dallas, TX 75240  
John Hurt  
[JHurt@matadorresources.com](mailto:JHurt@matadorresources.com)  
972-371-5200

**Location:**

MATADOR PRODUCTION COMPANY  
Janie Conner Tank Battery  
UL:A S: 14 T24S R28E  
**API:** 30-015-43463

**Facility Type:** Tank Battery

**GPS Location:** 32.2219634 -104.0504256

**Surface Land Owner:**

**Cause of Release:** Equipment Failure – Fire Tube on Heater Treater

**Release Material:** Produced Water & Crude Oil

**Pathway:** The release occurred around heater treated and flowed west to the battery containment and travelled south off the pad into a San Mateo pipeline ROW

**Initial Action:** Source was eliminated and surficial material was recovered

**Date of Discovery :** 2/19/2019

**Estimated surface release area:** 300 square yards

**Estimated Volume loss:** Predicted to be less than 25 bbls

**Estimated Volume Recovered:** vac truck responded; approx. 10 bbls

**Melodie Sanjari**

*Staff Scientist*



**Souder, Miller & Associates**

Engineering ♦ Environmental ♦ Surveying  
201 S Halagueno Street  
Carlsbad, NM 88220  
[www.soudermiller.com](http://www.soudermiller.com)  
(574) 370-9782 (cell)  
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**Hamlet, Robert, EMNRD**

---

**From:** Melodie Sanjari <melodie.sanjari@soudermiller.com>  
**Sent:** Monday, March 4, 2019 10:53 AM  
**To:** Hamlet, Robert, EMNRD; Venegas, Victoria, EMNRD; Bratcher, Mike, EMNRD; Bustamante, Amalia, EMNRD  
**Cc:** Austin Weyant; Heather Patterson; John Hurt  
**Subject:** [EXT] Janie Conner Tank Battery Initial C141  
**Attachments:** Intial C141 Signed JC.pdf

To Whom it May Concern,

Please find the attached, signed Initial C141 for the release at the Janie Conner Tank Battery (24 Hour Notification sent on 2/20/2019).

If you have any questions or concerns please don't hesitate to reach out.

Thank you.

**Melodie Sanjari**  
Staff Scientist

**Souder, Miller & Associates**

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**Hamlet, Robert, EMNRD**

---

**From:** Melodie Sanjari <melodie.sanjari@soudermiller.com>  
**Sent:** Tuesday, April 23, 2019 1:28 PM  
**To:** Hamlet, Robert, EMNRD; Venegas, Victoria, EMNRD  
**Cc:** Heather Patterson; John Hurt  
**Subject:** [EXT] 48 Hour Closure Sampling Notice

Good Morning All,

Per NMAC 19.15.29.12 (D)(1)a, this email is to inform all interested parties that SMA will be collecting closure samples beginning at approximately 8 a.m. on April 25<sup>th</sup>, 2019 on the Janie Conner Tank Battery location. This email will serve as our 48 hour notification. We will send an update if this time or date changes.

Thank you

**Melodie Sanjari**  
Staff Scientist

**Souder, Miller & Associates**

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**Venegas, Victoria, EMNRD**

---

**From:** Melodie Sanjari <melodie.sanjari@soudermiller.com>  
**Sent:** Wednesday, May 15, 2019 3:29 PM  
**To:** Hamlet, Robert, EMNRD; Venegas, Victoria, EMNRD  
**Cc:** John Hurt; Heather Patterson  
**Subject:** [EXT] RE: Janie Conner Tank Battery Closure Report 2RP-5289

Good Afternoon All,

Please find the attached Closure Report associated with 2RP-5289; the Janie Conner Tank Battery. I know we discussed this one at length in person, if you have any questions or concerns please do not hesitate to reach out.

Have a lovely rest of your week!

**Melodie Sanjari**  
*Staff Scientist*

**Souder, Miller & Associates**

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(575) 689-8801

May 14, 2019

#5E27960 – BG6

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

SUBJECT: Remediation Closure Report for the Janie Conner Tank Battery Release (2RP-5289), Eddy County New Mexico

To Whom it May Concern:

On behalf of Matador Resources, Souder, Miller & Associates (SMA) has prepared this Remediation Closure Report that describes the remediation of a release of liquids related to oil and gas production activities at the Janie Conner Tank Battery. The site is in Unit A, Section 14, Township 24S, Range 28E, Eddy County, New Mexico, on private land. Figure 1 illustrates the vicinity and site location on an USGS 7.5-minute quadrangle map.

Table 1 summarizes release information and Closure Criteria.

Table 1: Release Information and Closure Criteria			
Name	Janie Conner Tank Battery	Company	Matador Resources
API Number	N/A	Location	32.2219634, -104.0504256
Incident Number	2RP-5289		
Estimated Date of Release	2/19/2019	Date Reported to NMOCD	2/20/2019
Land Owner	Private	Reported To	NMOCD District II
Source of Release	Equipment Failure at the Heater Treater		
Released Volume	24 bbls	Released Material	Crude Oil w/ traces of Produced Water
Recovered Volume	6 bbls	Net Release	18 bbls
NMOCD Closure Criteria	<50 feet to groundwater		
SMA Response Dates	2/19/2019 4/2/2019 4/25/2019 4/26/2019		

## **1.0 Background**

On February 19, 2019, a release was discovered at the Janie Conner Tank Battery due to equipment failure at the heater treater. The release traveled down surface lines to the west and eventually to the buried production pipeline to the buried pipeline right-of-way (ROW) directly south of location. Initial response activities were conducted by the operator, and included source elimination, site security and stabilization activities which led to the recovery six barrels of standing fluid that was disposed of at an NMOCD approved facility. Figures 1 and 2 illustrate the vicinity and site location, Figure 3 illustrates the release location. The C-141 form is included in Appendix A.

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

The Janie Conner Tank Battery is located in Malaga, New Mexico on privately-owned land at an elevation of approximately 2981 feet above mean sea level (amsl).

Based upon New Mexico Office of the State Engineer (NMOSE) data (Appendix B), depth to groundwater in the area is estimated to be 35-40 feet below grade surface (bgs). There are five known water sources within ½-mile of the location, according to NMOSE online water well database ([https://gis.ose.state.nm.us/gisapps/ose\\_pod\\_locations/](https://gis.ose.state.nm.us/gisapps/ose_pod_locations/); accessed 2/22/2019) and the USGS online water well database. The nearest significant watercourse is an unnamed canal, located approximately 230 feet to the north. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it lies within a sensitive area as described in 19.15.29.12.C(4) NMAC; however, this does not change the NMOCD Closure Criteria Stands for this site.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of less than 50 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC and NMOCD District II approved background chloride concentrations.

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

## **3.0 Release Characterization and Remediation Activities**

On February 19, 2019, SMA personnel arrived on site in response to the release associated with Janie Conner Tank Battery. SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly stained area. A total of three sample locations (L1-L3) were investigated using a hand-auger, to depths up to 2 feet bgs. A minimum of two samples were collected at each sampling location. A total of eight samples were collected for laboratory analysis of total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Table 3 itemizes the samples and field-screening results as well as identifying any variances from the typical specification of two samples per boring. Locations for initial samples are depicted on Figure 4A.

Because the site is located in an irrigated river valley which has been characterized by naturally high chloride concentrations in the past, SMA returned to the location to establish several background locations to document this trend. On April 2<sup>nd</sup>, SMA conducted a background sampling event, establishing four background sample locations up- and down-gradient of the site, to depths up to 10 and 12 feet bgs (JC, JC2, JC3 and JC4). Thirteen of the collected samples were submitted for laboratory analysis for total chloride using EPA Method 300.0. Resulting chloride concentrations varied from 130 mg/kg to 9900 mg/kg (Table 3 & Figure 3).

Janie Conner Tanker Battery Remediation Closure Report (2RP-5289)  
May 14, 2019

Page 3 of 5

Prior to the construction of the Janie Conner Tank Battery, SMA conducted a baseline sampling event for Matador Resources in late 2016. Three sample locations were established on undisturbed land during this sampling event (P1-P3; Figure 3) and returned the chloride concentrations of 170 mg/kg, 1600 mg/kg and 1800 mg/kg, respectively (Table 3). The data was a portion of a collective report on the Background Soil Data around Malaga/Loving, Eddy County, New Mexico that has been previously submitted to NMOCD in conjunction with other projects (Appendix F).

The data collected from the background and baseline sampling events was discussed in a meeting with NMOCD District II in Artesia, NM on April 15<sup>th</sup>, 2019. During the meeting, it was discussed that several soil types and soil type mixtures in the Loving and Malaga area will return high sodium chloride levels in the absence of oil and gas production activities. This is not only naturally occurring in several saline soil types in the area, but also a result of poor agricultural and irrigation practices in the area over the past century. This also explains why samples at different depths and different sample locations can range from such a low level to drastically higher. At the conclusion of the meeting, it was understood by SMA that NMOCD would accept an adjusted closure criteria of 1800 mg/kg for chloride reflective of the baseline samples collected prior to oil and gas activity at the location of the Janie Conner Tank Battery.

On April 25 and 26, 2019, SMA returned to the site to oversee the excavation and hydro excavation of contaminated soil. Any part of the release area what was within 2 feet of buried or surface pipelines was removed using hydro-excavation, as per Matador's safety policy. SMA guided the excavation activities by collecting confirmation soil samples for field screening. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria specific to the location would be met. The area around sample location L1 was excavated to 3 feet bgs, while the remainder of the release area (represented by L2 and L3) was excavated to a depth of 2 feet bgs. NMOCD was notified on April 23, 2019 that closure samples were expected to be collected in two (2) business days.

The confirmation samples were collected from within the excavation in accordance with a systematic sampling approach detailed in Appendix C. This systematic method meets the EPAs data quality assessment standards (DQA) for composite sampling as defined by (Myers 1997). Confirmation samples were comprised of five-point composites of the base (BH1-BH4) and walls (SW1 – SW5).

Laboratory results indicated that the sample area represented by location BH2 exceeded the site-specific standard for chloride. On May 5, 2019, SMA returned to the location to collect another composite sample from the bottom of the excavation. No further excavation was required.

A total of nine samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Laboratory samples were collected in accordance with the sampling protocol included in Appendix C. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix D).

Figure 4B shows the extent of the excavation and confirmation sample locations. Laboratory results are summarized in Table 3. Laboratory reports are included in Appendix D.

Contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil was transported and disposed of at an NMOCD permitted disposal facility.

Janie Conner Tanker Battery Remediation Closure Report (2RP-5289)  
May 14, 2019

Page 4 of 5


#### **4.0 Scope and Limitations**

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing 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 Melodie R. Sanjari at 574-370-9782 or Shawna Chubbuck at 505-325-7535.

Submitted by:  
SOUDER, MILLER & ASSOCIATES

Reviewed by:

A handwritten signature in black ink that reads "M. Sanjari".

Melodie Sanjari  
Staff Scientist

A handwritten signature in blue ink that reads "Shawna Chubbuck".

Shawna Chubbuck  
Senior Scientist

Janie Conner Tanker Battery Remediation Closure Report (2RP-5289)  
May 14, 2019

Page 5 of 5

## **ATTACHMENTS:**

### **Figures:**

Figure 1: Vicinity and Well Head Protection Map  
Figure 2: Surface Water Radius Map  
Figure 3: Background Sample Locations  
Figure 4A: Initial Site and Sample Location Map  
Figure 4B: Excavation and Confirmation Closure Sample Map

### **Tables:**

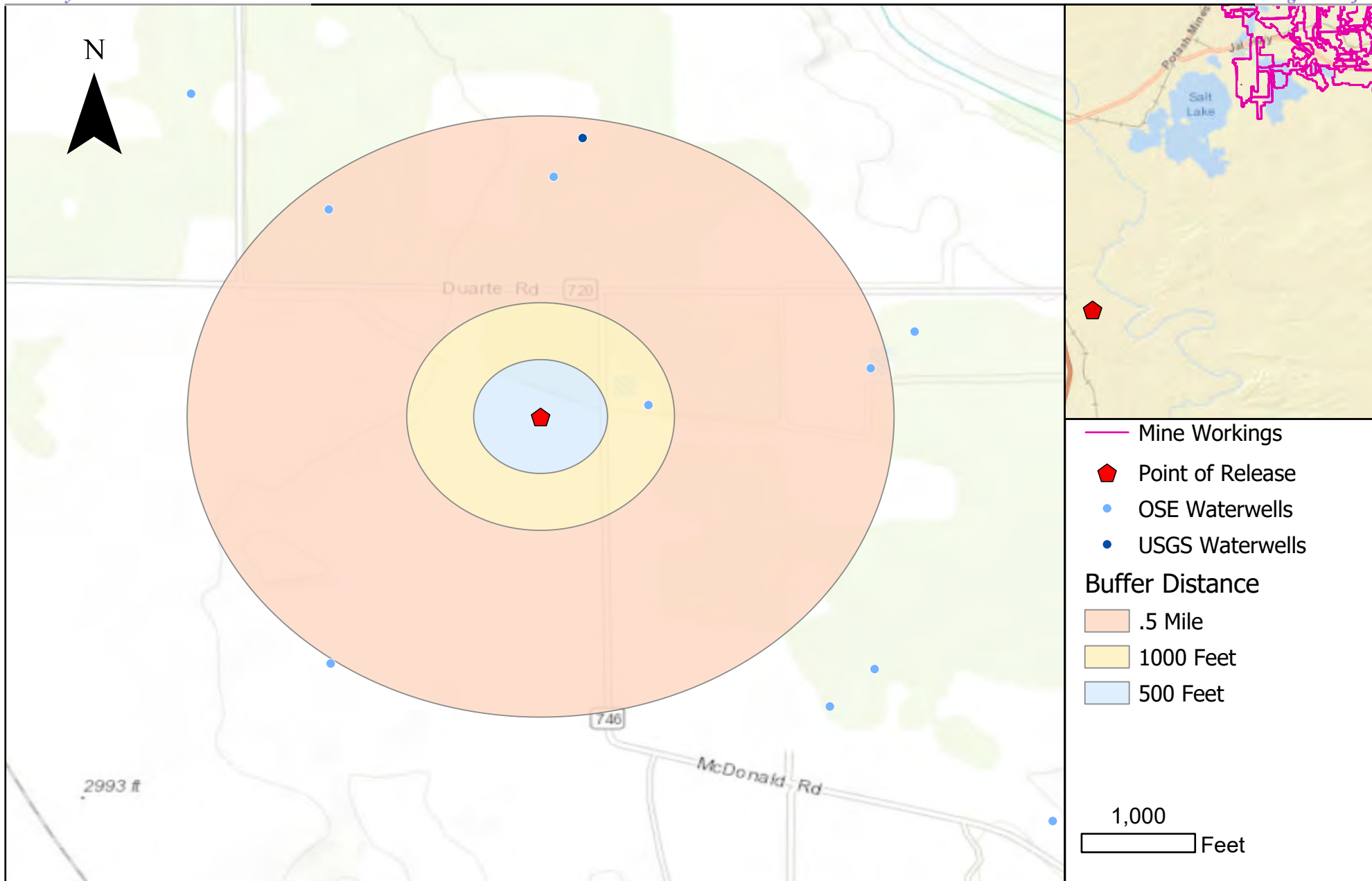
Table 2: NMOCD Closure Criteria Justification  
Table 3: Summary of Sample Results

### **Appendices:**

Appendix A: C141: Initial & Final  
Appendix B: NMOSE Wells Report  
Appendix C: VSP Sampling Protocol  
Appendix D: Laboratory Analytical Reports  
Appendix E: Excavation Photo  
Appendix F: Background Soil Data Report in the Loving/Malaga Area of Eddy County, NM

# FIGURES





Regional Vicinity & Wellhead Protection Map  
Janie Conner Tank Battery - Matador Resources

Figure 1

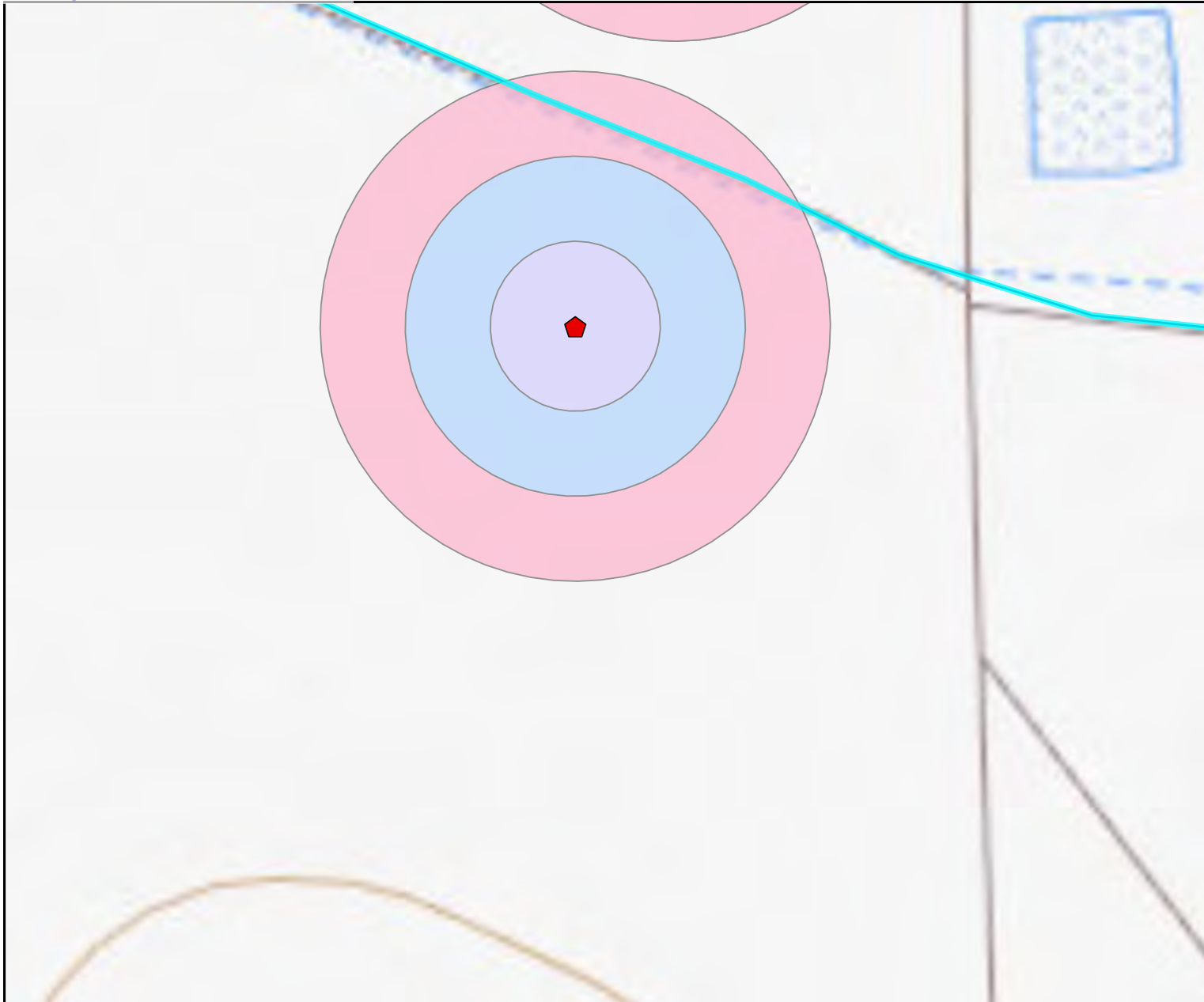
Revisions		
By: _____	Date: _____	Descr: _____
By: _____	Date: _____	Descr: _____











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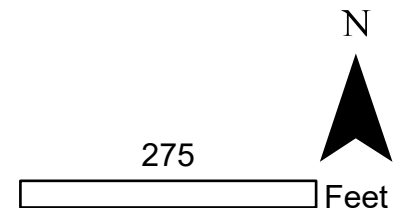
Drawn	MRS
Date	2/21/2019
Checked	_____
Approved	_____



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-  Point of Release
-  Springs Seeps
-  Streams Canals
-  Rivers
-  NM Wetlands
-  Lakes Playas
-  FEMA Flood Zones 2011
- Buffer Distance**
  -  100 Feet
  -  200 Feet
  -  300 Feet



Janie Conner Tank Battery - Matador Resources  
Surface Water Protection Map

Figure 2

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

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Drawn	_____
Date	2/21/2019
Checked	_____
Approved	_____



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● Background Sample Locations

■ Release Area

N

380 Feet

Background Sample Location Map  
Janie Conner Tank Battery- Matador Resources

Figure 3

Revisions		
By: _____	Date: _____	Descr: _____
By: _____	Date: _____	Descr: _____
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Drawn	_____
Date	<del>5/14/2019</del>
Checked	_____
Approved	_____



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- Sample Locations
- Point of Release
- Pipelines
- Release Area



71

Feet

Matador Resources  
Janie Conner Tank Battery -  
Initial Site & Sample Location Map

Figure 4A

Revisions

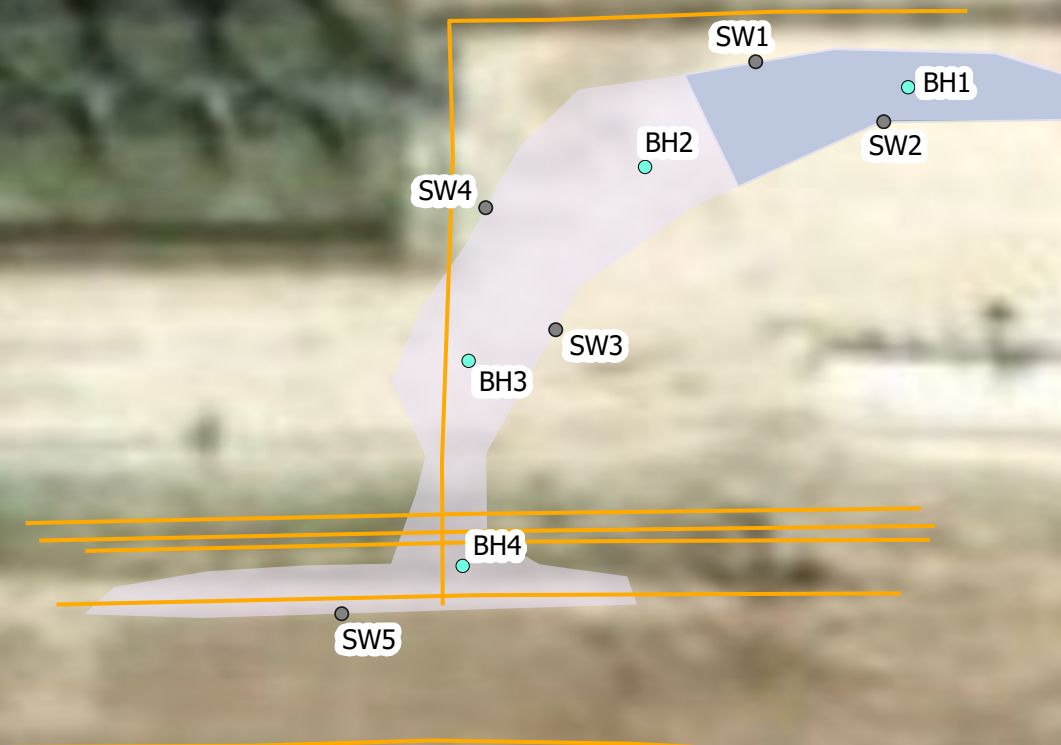
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_

Drawn \_\_\_\_\_  
Date 2/26/2019  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_



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Closure Sample and Excavation Map  
Janie Conner Tank Battery - Matador Resources  
Malaga, New Mexico

Figure 4B

## Revisions

By:	Date:	Descr:
By: _____	Date: _____	Descr: _____
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Drawn	_____
Date	5/2/2019
Checked	_____
Approved	_____



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# TABLES

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	35-40	OSE
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)		810; 2160; 2490; 2550 OSE & USGS
Horizontal Distance to Nearest Significant Watercourse (ft)	230	Canal to the North

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS		1800	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	yes or no	if yes, then				
<300' from continuously flowing watercourse or other significant watercourse?	yes	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	no					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	no					
<1000' from fresh water well or spring?	yes					
Human and Other Areas						
<300' from an occupied permanent residence, school, hospital, institution or church?	no					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	no					
<100' from wetland?	no					
within area overlying a subsurface mine	no					
within an unstable area?	no					
within a 100-year floodplain?	no					



Table 3:  
Summary of Sample ResultsMatador Resources  
Janie Conner Tank Battery

Sample ID	Sample Date	Depth (feet bgs)	Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria				50	10	1000			100	1800
INITIAL SAMPLE ANALYSIS										
L1	2/19/2019	0.5	excavated	0.801	<0.023	23	310	99	432	900
		1	excavated	--	--	<4.8	54	<49	54	1100
		2	excavated	--	--	<4.9	120	<50	120	1500
L2		0.5	excavated	94.2	1.4	2600	7300	1800	11700	620
		1	excavated	--	--	31	420	150	601	510
		2	excavated	--	--	5.4	<9.9	<49	5.2	1300
L3		1	excavated	608	29	12000	27,000	8,300	47300	98
		2	excavated	--	--	5000	13,000	4,000	22000	<60
BASELINE SAMPLE ANALYSIS FROM BACKGROUND SOIL REPORT										
P1	7/22/2016	0.5	--	--	--	--	--	--	--	170
P2		0.5	--	--	--	--	--	--	--	1600
P3		0.5	--	--	--	--	--	--	--	1800
RECENT BACKGROUND SAMPLE ANALYSIS										
JC	4/2/2019	2	--	--	--	--	--	--	--	990
		6	--	--	--	--	--	--	--	290
		10	--	--	--	--	--	--	--	160
		12	--	--	--	--	--	--	--	130
JC2		2	--	--	--	--	--	--	--	170
		4	--	--	--	--	--	--	--	190
		10	--	--	--	--	--	--	--	100
JC3		2								4900
		4	--	--	--	--	--	--	--	2200
		6	--	--	--	--	--	--	--	1400
		10	--	--	--	--	--	--	--	750
JC4		2	--	--	--	--	--	--	--	9900
		6	--	--	--	--	--	--	--	4900
		10	--	--	--	--	--	--	--	3600
CONFIRMATION CLOSURE SAMPLE ANALYSIS										
BH1	4/25/2019	3	sample	<0.22	<0.024	<4.9	<8.8	<44	<57.7	470
BH2	4/25/2019	2	sample	<0.222	<0.025	<4.9	<10	<50	<64.9	2300
	5/5/2019	2	sample	--	--	--	--	--	--	1100
BH3	4/25/2019	2	sample	<0.217	<0.024	<4.8	<9.2	<46	<60.0	1100
BH4	4/26/2019	2	sample	<0.225	<0.025	<5.0	31	<47	31	1400
SW1	4/25/2019	surface - 3	sample	<0.225	<0.025	<5.0	<9.7	<48	<62.7	150
SW2		surface - 3	sample	<0.215	<0.024	<4.8	<9.4	<47	<61.2	530
SW3		surface - 2	sample	<0.217	<0.024	<4.8	<8.7	<44	<57.5	370
SW4		surface -2	sample	<0.225	<0.025	<5.0	<9.8	<49	<63.8	550
SW5	4/26/2019	surface - 2	sample	<0.224	<0.025	<5.0	<9.1	<45	<59.1	1200

"--" = Not Analyzed

\* = per Reclamation Standard (19.15.29.13.D(1) NMAC)

# APPENDIX A

## C141: INITIAL & 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 Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party: Matador Resources	OGRID: 228937
Contact Name: John Hurt	Contact Telephone: 972-371-5200
Contact email: JHurt@matadorresources.com	Incident # (assigned by OCD)
Contact mailing address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

### Location of Release Source

Latitude 32.2219634

Longitude -104.0504256  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Janie Conner Tank Battery	Site Type: Tank Battery
Date Release Discovered 2/19/2019	API# (if applicable)

Unit Letter	Section	Township	Range	County
A	14	24S	28E	EDDY

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: McDonald)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 24	Volume Recovered (bbls) 6
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Equipment Failure – Fire Tube on Heater Treater

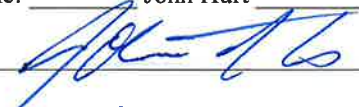
\*\* 24 bbls of a crude oil and water mixture

Incident ID	Page 345 of 874
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? <25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by SMA on 2/20/2019 to NMOCD District II via email	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
Printed Name: <u>John Hurt</u>	Title: <u>RES Specialist</u>
Signature: 	Date: <u>3/4/19</u>
email: <u>JHurt@matadorresources.com</u>	Telephone: <u>972-371-5200</u>
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____

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 Department

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	2RP-5289
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party: Matador Resources	OGRID: 228937
Contact Name: John Hurt	Contact Telephone: 972-371-5200
Contact email: JHurt@matadorresources.com	Incident # (assigned by OCD)
Contact mailing address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

### Location of Release Source

Latitude 32.2219634

Longitude -104.0504256  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Janie Conner Tank Battery	Site Type: Tank Battery
Date Release Discovered 2/19/2019	API# (if applicable)

Unit Letter	Section	Township	Range	County
A	14	24S	28E	EDDY

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: McDonald)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 24	Volume Recovered (bbls) 6
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Equipment Failure – Fire Tube on Heater Treater

\*\* 24 bbls of a crude oil and water mixture



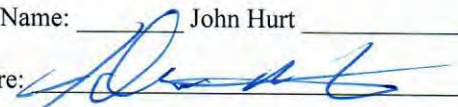
## Oil Conservation Division

Incident ID	
District RP	2RP-5289
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? <25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by SMA on 2/20/2019 to NMOCD District II via email	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
Printed Name: <u>John Hurt</u>	Title: <u>RES Specialist</u>
Signature: 	Date: <u>5/14/19</u>
email: <u>JHurt@matadorresources.com</u>	Telephone: <u>972-371-5200</u>
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____



Incident ID	
District RP	2RP-5289
Facility ID	
Application ID	

## Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	35-40 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

### **Characterization Report Checklist:** *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.



## Oil Conservation Division

Incident ID	
District RP	2RP-5289
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: John Hurt Title: RES Specialist

Signature:  Date: 5/14/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	2RP-5289
Facility ID	
Application ID	

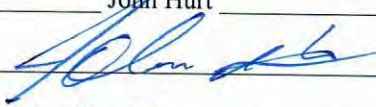
## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: John Hurt Title: RES Specialist  
Signature:  Date: 5/14/19  
email: JHurt@matadorresources.com Telephone: 972-371-5200

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

# APPENDIX B

## NMOSE WELLS REPORT



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">C 00738</a>	CUB	ED		3	1	1	13	24S	28E	589673	3565472*	237	125	12	113
<a href="#">C 00574</a>	CUB	ED		2	4	4	11	24S	28E	589452	3566081*	439	200	20	180
<a href="#">C 00903</a>	C	ED			2	1	13	24S	28E	590178	3565575*	670	57	30	27
<a href="#">C 00464</a>	CUB	ED		2	2	1	13	24S	28E	590277	3565674*	765	111	28	83

Average Depth to Water: **22 feet**

Minimum Depth: **12 feet**

Maximum Depth: **30 feet**

Record Count: 4

UTMNAD83 Radius Search (in meters):

**Easting (X):** 589511.6

**Northing (Y):** 3565645.69

**Radius:** 804

\*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.

10/16/18 9:13 AM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



# APPENDIX C

## VSP SAMPLING PROTOCOL

VSP Sample Design Report for Using Stratified Sampling to Estimate the Population Proportion

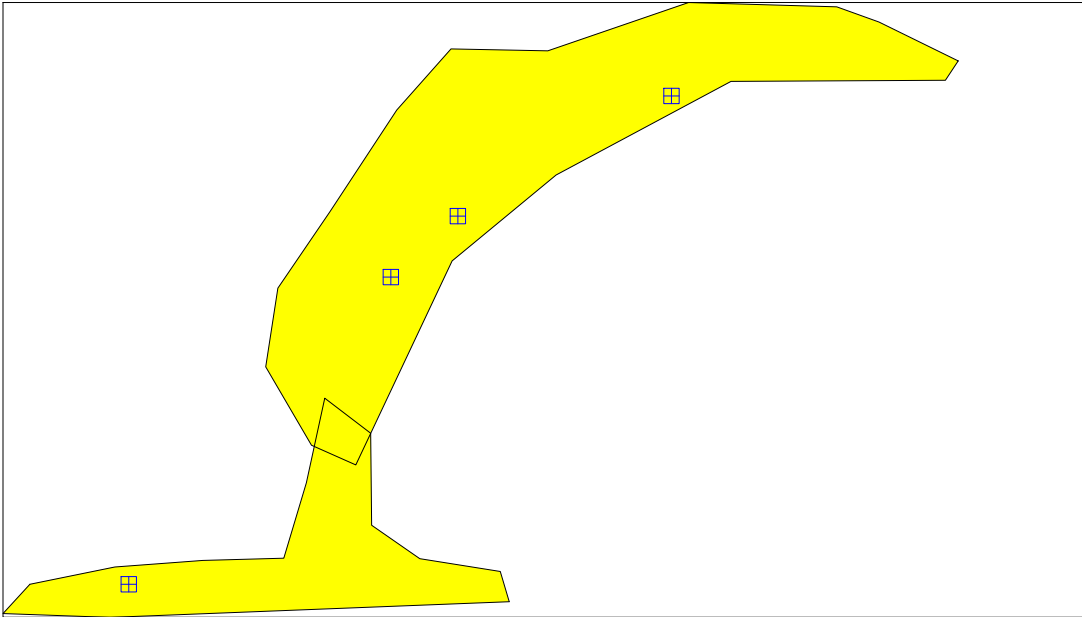
Summary

This report summarizes the stratified sampling design used, associated statistical assumptions, as well as general guidelines for conducting post-sampling data analysis. Sampling plan components presented here include how many sampling locations to choose and where within the sampling area to collect those samples. The type of medium to sample (i.e., soil, groundwater, etc.) and how to analyze the samples (in-situ, fixed laboratory, etc.) are addressed in other sections of the sampling plan. It is important to note that the decision for sample size calculation is determined for the combined strata, rather than any individual strata.

The following table summarizes the proportion stratified sampling design developed. A figure that shows sampling locations in the field and a table that lists sampling location coordinates are also provided below.

SUMMARY OF SAMPLING DESIGN	
Primary Objective of Design	Estimate the population proportion of all strata combined
Criteria for Determining Total Number of Samples	Achieve pre-specified precision of the estimated proportion for specified stratum costs, but no restriction on total costs
Sample Placement (Location) in the Field	Random sampling within grids within each stratum
Formula for calculating number of sampling locations	From Gilbert (1987, page 51)
Method for calculating number of sampling locations in each stratum	Optimal Allocation
Calculated total number of samples	4
Stratum 1	3
Stratum 2	1
Total area of all strata	2418.42 ft <sup>2</sup>

<sup>a</sup> Including measurement analyses and fixed overhead costs. See the Cost of Sampling section for an explanation of the costs presented here.



Area: Area 1						
X Coord	Y Coord	Label	Value	Type	Historical	Sample Area
628585.1635	444589.1800			Random in Grid		
628594.4880	444597.6741			Random in Grid		
628624.2165	444614.3863			Random in Grid		

Area: Area 2						
X Coord	Y Coord	Label	Value	Type	Historical	Sample Area
628548.6948	444546.4220			Random in Grid		

Primary Sampling Objective

The primary purpose of sampling at this site is to estimate the proportion for the entire site, i.e., for all strata combined, such that the estimated proportion has the minimum possible standard deviation under the condition that the sampling and measurement costs cannot exceed a specified amount. Preexisting information was used to divide the site into 2 non-overlapping strata that were expected to be more homogeneous internally than for the entire site (all strata combined). The expected variability of values within each stratum was estimated or approximated, and the stratum weights,  $W_h$ , were determined so that the total number of samples could be allocated appropriately among the strata.

Number of Total Samples: Calculation Equation and Inputs

The total number of samples is computed to achieve the pre-specified precision of the estimated population proportion for specified stratum costs, but no restriction on total costs. *Note that the calculation is for the total number of samples, i.e., for combined strata, rather than individual strata.*

The formula used to calculate the total number of samples is:

$$n = \frac{\left( \sum_{h=1}^L W_h \sqrt{P_h(1-P_h)} \sqrt{c_h} \right) \sum_{h=1}^L \frac{W_h \sqrt{P_h(1-P_h)}}{\sqrt{c_h}}}{V + \frac{1}{N} \sum_{h=1}^L W_h P_h (1-P_h)}$$

where

- $L$  is the number of strata,  $h=1,2,...,L$ ,
- $P_h$  is the estimated proportion of measurements in stratum  $h$ ,
- $W_h = N_h / N$  is the weight associated with stratum  $h$ ,
- $N_h$  is the total number of possible sampling locations (units) in stratum  $h$ ,
- $N$  is the total number of possible units in all strata combined,  $N = \sum_{h=1}^L N_h$

- $V$  is the pre-specified variance or precision, and
- $c_h$  is the cost of collecting and measuring a sample in stratum  $h$ .

The values of these inputs that result in the calculated number of sampling locations are:

Parameter	Stratum	
	1	2
$P_h$	0.2	0.2
$W_h$	1778.03	640.391

Parameter	Input Value
$V$	1



### Allocation of Samples to Strata

The total number of samples is allocated to the individual strata on an optimal basis using the formula:

$$n_h = n \frac{N_h \sqrt{P_h(1-P_h)} / \sqrt{c_h}}{\sum_{h=1}^L N_h \sqrt{P_h(1-P_h)} / \sqrt{c_h}}$$

where

- $n_h$  is the number of samples allocated to stratum  $h$ ,
- $L$  is the number of strata,
- $N_h$  is the total number of units in stratum  $h$ ,
- $P_h$  is the proportion in stratum  $h$ ,
- $c_h$  is the cost per population unit in stratum  $h$ .

$n$  is the total number of units sampled in all strata,

$$n = \sum_{h=1}^L n_h$$

Using this formula, the number of samples allocated to each stratum is:

Stratum	Number of Samples
1	3
2	1
<b>Total Samples</b>	<b>4</b>

### Method for Determining Sampling Locations

Five methods for determining sample locations are provided in VSP: 1) simple random sampling, 2) random sampling within grids, 3) systematic sampling with a random start, 4) systematic sampling with a fixed start and 5) adaptive grid sampling. One may use a different method for each stratum, based on the conceptual site model and decision to be made for a given stratum. For this site, sample locations were chosen using random sampling within grids in each stratum.

Locating the sample points using a random sampling within grids method combines appealing aspects of both the random and the systematic grid methods. It provides data that are separated by many distances, providing information about the spatial structure of the potential contamination. It also ensures good coverage of the entire site, although not as completely as if systematic grid sampling were performed.

### Statistical Assumptions

The assumptions associated with the formulas for computing the number of samples are:

1. The estimated stratum proportions,  $P_h$ , are reasonable and representative of the stratum populations being sampled.
2. The sampling locations are selected using simple random sampling.
3. The stratum costs,  $C_h$ , and the fixed cost  $C_0$ , are accurate.

The first and third assumptions will be assessed in a post data collection analysis. The second assumption, although not strictly valid for strata where systematic grid sampling was used rather than simple random sampling, is not expected to significantly affect conclusions of the study because (1) the gridded sample locations were selected based on a random start and (2) any patterns of contamination in the field that may exist are not expected to coincide with the regularity of the grid sampling pattern.

### **Recommended Data Analysis Activities**

Post data collection activities generally follow those outlined in EPA's Guidance for Data Quality Assessment (EPA, 2000). The data analysts will become familiar with the context of the problem and goals for data collection and assessment. The data will be verified and validated before being subjected to statistical or other analyses. Graphical and analytical tools will be used to verify to the extent possible the assumptions of any statistical analyses that are performed as well as to achieve a general understanding of the data. The data will be assessed to determine whether they are adequate in both quality and quantity to support the primary objective of sampling.

Estimates for the proportion of the population values will be calculated using the formulas appropriate for stratified sampling; these formulas are found in EPA QA/G-5S (EPA, 2001). Results of the exploratory and quantitative assessments of the data will be reported, along with conclusions that may be supported by them.

This report was automatically produced\* by Visual Sample Plan (VSP) software version 7.11b.

This design was last modified 4/15/2019 4:54:01 PM.

Software and documentation available at <http://vsp.pnnl.gov>

Software copyright (c) 2019 Battelle Memorial Institute. All rights reserved.

\* - The report contents may have been modified or reformatted by end-user of software.

# APPENDIX D

## LABORATORY ANALYTICAL REPORTS



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

February 28, 2019

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

RE: Janie Conner TB

OrderNo.: 1902896

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 8 sample(s) on 2/21/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1902896

Date Reported: 2/28/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L1-0.5

Project: Janie Conner TB

Collection Date: 2/19/2019 10:00:00 AM

Lab ID: 1902896-001

Matrix: SOIL

Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>smb</b>
Chloride	900	60		mg/Kg	20	2/22/2019 7:13:43 PM	43302
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>lrm</b>
Diesel Range Organics (DRO)	310	9.7		mg/Kg	1	2/22/2019 10:13:03 AM	43278
Motor Oil Range Organics (MRO)	99	49		mg/Kg	1	2/22/2019 10:13:03 AM	43278
Surr: DNOP	116	70-130		%Rec	1	2/22/2019 10:13:03 AM	43278
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	23	4.7		mg/Kg	1	2/22/2019 3:05:51 PM	43274
Surr: BFB	236	73.8-119	S	%Rec	1	2/22/2019 3:05:51 PM	43274
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	2/22/2019 3:05:51 PM	43274
Toluene	0.081	0.047		mg/Kg	1	2/22/2019 3:05:51 PM	43274
Ethylbenzene	0.060	0.047		mg/Kg	1	2/22/2019 3:05:51 PM	43274
Xylenes, Total	0.66	0.093		mg/Kg	1	2/22/2019 3:05:51 PM	43274
Surr: 4-Bromofluorobenzene	99.1	80-120		%Rec	1	2/22/2019 3:05:51 PM	43274

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

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

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## Analytical Report

Lab Order 1902896

Date Reported: 2/28/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L1-1

Project: Janie Conner TB

Collection Date: 2/19/2019 10:05:00 AM

Lab ID: 1902896-002

Matrix: SOIL

Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CJS
Chloride	1100	60		mg/Kg	20	2/25/2019 12:47:09 PM	43327
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: lrm
Diesel Range Organics (DRO)	54	9.9		mg/Kg	1	2/25/2019 4:03:18 PM	43303
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/25/2019 4:03:18 PM	43303
Surr: DNOP	83.6	70-130		%Rec	1	2/25/2019 4:03:18 PM	43303
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/23/2019 3:24:24 PM	43294
Surr: BFB	97.2	73.8-119		%Rec	1	2/23/2019 3:24:24 PM	43294

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 1902896

Date Reported: 2/28/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L1-2

Project: Janie Conner TB

Collection Date: 2/19/2019 10:10:00 AM

Lab ID: 1902896-003

Matrix: SOIL

Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CJS
Chloride	1500	60		mg/Kg	20	2/25/2019 12:59:33 PM	43327
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: lrm
Diesel Range Organics (DRO)	120	9.9		mg/Kg	1	2/25/2019 1:06:37 PM	43303
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/25/2019 1:06:37 PM	43303
Surr: DNOP	91.4	70-130		%Rec	1	2/25/2019 1:06:37 PM	43303
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/23/2019 4:32:25 PM	43294
Surr: BFB	106	73.8-119		%Rec	1	2/23/2019 4:32:25 PM	43294

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 1902896

Date Reported: 2/28/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L2-0.5

Project: Janie Conner TB

Collection Date: 2/19/2019 10:15:00 AM

Lab ID: 1902896-004

Matrix: SOIL

Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>smb</b>
Chloride	620	60		mg/Kg	20	2/22/2019 7:26:08 PM	43302
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>lrm</b>
Diesel Range Organics (DRO)	7300	100		mg/Kg	10	2/22/2019 1:26:38 PM	43278
Motor Oil Range Organics (MRO)	1800	500		mg/Kg	10	2/22/2019 1:26:38 PM	43278
Surr: DNOP	0	70-130	S	%Rec	10	2/22/2019 1:26:38 PM	43278
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	2600	240		mg/Kg	50	2/22/2019 12:34:36 PM	43274
Surr: BFB	239	73.8-119	S	%Rec	50	2/22/2019 12:34:36 PM	43274
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	1.4	1.2		mg/Kg	50	2/22/2019 12:34:36 PM	43274
Toluene	20	2.4		mg/Kg	50	2/22/2019 12:34:36 PM	43274
Ethylbenzene	5.8	2.4		mg/Kg	50	2/22/2019 12:34:36 PM	43274
Xylenes, Total	67	4.8		mg/Kg	50	2/22/2019 12:34:36 PM	43274
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	50	2/22/2019 12:34:36 PM	43274

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

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

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## Analytical Report

Lab Order 1902896

Date Reported: 2/28/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L2-1

Project: Janie Conner TB

Collection Date: 2/19/2019 10:20:00 AM

Lab ID: 1902896-005

Matrix: SOIL

Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CJS
Chloride	510	60		mg/Kg	20	2/25/2019 1:36:46 PM	43327
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: lrm
Diesel Range Organics (DRO)	420	9.9		mg/Kg	1	2/25/2019 1:28:38 PM	43303
Motor Oil Range Organics (MRO)	150	49		mg/Kg	1	2/25/2019 1:28:38 PM	43303
Surr: DNOP	99.2	70-130		%Rec	1	2/25/2019 1:28:38 PM	43303
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	31	4.7		mg/Kg	1	2/23/2019 4:55:03 PM	43294
Surr: BFB	269	73.8-119	S	%Rec	1	2/23/2019 4:55:03 PM	43294

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 1902896

Date Reported: 2/28/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L2-2

Project: Janie Conner TB

Collection Date: 2/19/2019 10:25:00 AM

Lab ID: 1902896-006

Matrix: SOIL

Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CJS
Chloride	1300	60		mg/Kg	20	2/25/2019 1:49:11 PM	43327
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: lrm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/25/2019 1:50:41 PM	43303
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/25/2019 1:50:41 PM	43303
Surr: DNOP	74.5	70-130		%Rec	1	2/25/2019 1:50:41 PM	43303
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	5.4	4.9		mg/Kg	1	2/23/2019 5:17:42 PM	43294
Surr: BFB	112	73.8-119		%Rec	1	2/23/2019 5:17:42 PM	43294

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 1902896

Date Reported: 2/28/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L3-1

Project: Janie Conner TB

Collection Date: 2/19/2019 10:30:00 AM

Lab ID: 1902896-007

Matrix: SOIL

Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>smb</b>
Chloride	98	60		mg/Kg	20	2/22/2019 8:03:21 PM	43302
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>lrm</b>
Diesel Range Organics (DRO)	27000	960		mg/Kg	100	2/22/2019 1:50:52 PM	43278
Motor Oil Range Organics (MRO)	8300	4800		mg/Kg	100	2/22/2019 1:50:52 PM	43278
Surr: DNOP	0	70-130	S	%Rec	100	2/22/2019 1:50:52 PM	43278
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	12000	490		mg/Kg	100	2/22/2019 12:57:31 PM	43274
Surr: BFB	255	73.8-119	S	%Rec	100	2/22/2019 12:57:31 PM	43274
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	29	2.4		mg/Kg	100	2/22/2019 12:57:31 PM	43274
Toluene	190	4.9		mg/Kg	100	2/22/2019 12:57:31 PM	43274
Ethylbenzene	29	4.9		mg/Kg	100	2/22/2019 12:57:31 PM	43274
Xylenes, Total	360	9.8		mg/Kg	100	2/22/2019 12:57:31 PM	43274
Surr: 4-Bromofluorobenzene	118	80-120		%Rec	100	2/22/2019 12:57:31 PM	43274

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

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

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## Analytical Report

Lab Order 1902896

Date Reported: 2/28/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L3-2

Project: Janie Conner TB

Collection Date: 2/19/2019 10:35:00 AM

Lab ID: 1902896-008

Matrix: SOIL

Received Date: 2/21/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CJS
Chloride	ND	60		mg/Kg	20	2/25/2019 2:01:36 PM	43327
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: lrm
Diesel Range Organics (DRO)	13000	190		mg/Kg	20	2/25/2019 3:19:04 PM	43303
Motor Oil Range Organics (MRO)	4000	970		mg/Kg	20	2/25/2019 3:19:04 PM	43303
Surr: DNOP	0	70-130	S	%Rec	20	2/25/2019 3:19:04 PM	43303
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	5000	240		mg/Kg	50	2/23/2019 5:40:19 PM	43294
Surr: BFB	247	73.8-119	S	%Rec	50	2/23/2019 5:40:19 PM	43294

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#: 1902896

28-Feb-19

Client: Souder, Miller &amp; Associates

Project: Janie Conner TB

Sample ID: MB-43302	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 43302	RunNo: 57905
Prep Date: 2/22/2019	Analysis Date: 2/22/2019	SeqNo: 1939513 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	1.5

Sample ID: LCS-43302	SampType: LCS	TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 43302	RunNo: 57905
Prep Date: 2/22/2019	Analysis Date: 2/22/2019	SeqNo: 1939514 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	14	1.5 15.00 0 94.7 90 110

Sample ID: MB-43327	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 43327	RunNo: 57937
Prep Date: 2/25/2019	Analysis Date: 2/25/2019	SeqNo: 1940123 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	1.5

Sample ID: LCS-43327	SampType: LCS	TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 43327	RunNo: 57937
Prep Date: 2/25/2019	Analysis Date: 2/25/2019	SeqNo: 1940124 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
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#: 1902896

28-Feb-19

**Client:** Souder, Miller & Associates**Project:** Janie Conner TB

Sample ID: <b>LCS-43278</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>43278</b>	RunNo: <b>57896</b>								
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>	SeqNo: <b>1938482</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	63.9	124			
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID: <b>MB-43278</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>43278</b>	RunNo: <b>57896</b>								
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>	SeqNo: <b>1938483</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		109	70	130			

Sample ID: <b>1902896-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>L1-0.5</b>	Batch ID: <b>43278</b>	RunNo: <b>57896</b>								
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>	SeqNo: <b>1938485</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	360	9.7	48.50	311.8	91.4	53.5	126			
Surr: DNOP	4.6		4.850		93.9	70	130			

Sample ID: <b>1902896-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>L1-0.5</b>	Batch ID: <b>43278</b>	RunNo: <b>57896</b>								
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>	SeqNo: <b>1938486</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	380	10	49.75	311.8	140	53.5	126	6.88	21.7	S
Surr: DNOP	5.9		4.975		118	70	130	0	0	

Sample ID: <b>LCS-43303</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>43303</b>	RunNo: <b>57917</b>								
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/25/2019</b>	SeqNo: <b>1939464</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.2	63.9	124			
Surr: DNOP	4.3		5.000		87.0	70	130			

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

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

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

WO#: 1902896

28-Feb-19

**Client:** Souder, Miller & Associates**Project:** Janie Conner TB

Sample ID: <b>MB-43303</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>43303</b>	RunNo: <b>57917</b>								
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/25/2019</b>	SeqNo: <b>1939465</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.3		10.00		83.3	70	130			

Sample ID: <b>1902896-002AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>L1-1</b>	Batch ID: <b>43303</b>	RunNo: <b>57917</b>								
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/25/2019</b>	SeqNo: <b>1940338</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	73	9.7	48.40	54.43	38.8	53.5	126			S
Surr: DNOP	3.9		4.840		80.5	70	130			

Sample ID: <b>1902896-002AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>L1-1</b>	Batch ID: <b>43303</b>	RunNo: <b>57917</b>								
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/25/2019</b>	SeqNo: <b>1940339</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	65	9.7	48.50	54.43	21.9	53.5	126	11.9	21.7	S
Surr: DNOP	3.8		4.850		78.1	70	130	0	0	

Sample ID: <b>LCS-43309</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>43309</b>	RunNo: <b>57917</b>								
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/25/2019</b>	SeqNo: <b>1940344</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.0		5.000		79.3	70	130			

Sample ID: <b>MB-43309</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>43309</b>	RunNo: <b>57917</b>								
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/25/2019</b>	SeqNo: <b>1940345</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		93.3	70	130			

**Qualifiers:**

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

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

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

WO#: 1902896

28-Feb-19

**Client:** Souder, Miller & Associates**Project:** Janie Conner TB

Sample ID: <b>MB-43271</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>43271</b>			RunNo: <b>57873</b>						
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>			SeqNo: <b>1937710</b>	Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	870		1000		87.3	73.8	119			

Sample ID: <b>LCS-43271</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>43271</b>			RunNo: <b>57873</b>						
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>			SeqNo: <b>1937711</b>	Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		104	73.8	119			

Sample ID: <b>MB-43274</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>43274</b>			RunNo: <b>57872</b>						
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>			SeqNo: <b>1937715</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	73.8	119			

Sample ID: <b>LCS-43274</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>43274</b>			RunNo: <b>57872</b>						
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>			SeqNo: <b>1937716</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	106	80.1	123			
Surr: BFB	1100		1000		113	73.8	119			

Sample ID: <b>MB-43294</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>43294</b>			RunNo: <b>57911</b>						
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/23/2019</b>			SeqNo: <b>1938951</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		86.1	73.8	119			

Sample ID: <b>LCS-43294</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>43294</b>			RunNo: <b>57911</b>						
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/23/2019</b>			SeqNo: <b>1938952</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	80.1	123			
Surr: BFB	1100		1000		107	73.8	119			

**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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1902896  
28-Feb-19

Client: Souder, Miller & Associates  
Project: Janie Conner TB

Sample ID: 1902896-002AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range
Client ID: L1-1	Batch ID: 43294	RunNo: 57911
Prep Date: 2/22/2019	Analysis Date: 2/23/2019	SeqNo: 1938954 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	31	4.8 23.76 2.371 121 69.1 142
Surr: BFB	1100	950.6 118 73.8 119

Sample ID: 1902896-002AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range
Client ID: L1-1	Batch ID: 43294	RunNo: 57911
Prep Date: 2/22/2019	Analysis Date: 2/23/2019	SeqNo: 1938955 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	34	5.0 25.00 2.371 128 69.1 142 10.2 20
Surr: BFB	1200	1000 119 73.8 119 0 0 S

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

Page 13 of 14

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

WO#: 1902896

28-Feb-19

**Client:** Souder, Miller & Associates**Project:** Janie Conner TB

Sample ID: <b>MB-43274</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>43274</b>	RunNo: <b>57872</b>								
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>	SeqNo: <b>1938745</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID: <b>LCS-43274</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>43274</b>	RunNo: <b>57872</b>								
Prep Date: <b>2/21/2019</b>	Analysis Date: <b>2/22/2019</b>	SeqNo: <b>1938746</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.8	80	120			
Toluene	0.95	0.050	1.000	0	94.7	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.0	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.4	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.8	80	120			

Sample ID: <b>MB-43294</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>43294</b>	RunNo: <b>57911</b>								
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/23/2019</b>	SeqNo: <b>1938999</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	80	120			

Sample ID: <b>LCS-43294</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>43294</b>	RunNo: <b>57911</b>								
Prep Date: <b>2/22/2019</b>	Analysis Date: <b>2/23/2019</b>	SeqNo: <b>1939000</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

**Qualifiers:**

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



Hall Environmental Analysis Laboratory  
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: 1902896

RcptNo: 1

Received By: Isaiah Ortiz

2/21/2019 8:40:00 AM

I-OK

Completed By: Isaiah Ortiz

2/21/2019 8:49:38 AM

I-OK

Reviewed By: IO

2/21/19

LB: ENM 2/21/19

### Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Courier

### Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐5. Sample(s) in proper container(s)? Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒10. Were any sample containers received broken? Yes ☐ No ☒11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐13. Is it clear what analyses were requested? Yes ☒ No ☐14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

# of preserved bottles checked for pH:

&lt;2 or &gt;12 unless noted)

Adjusted:

Checked by:

### Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via:

☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

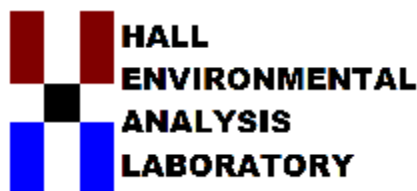
Client Instructions:

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			





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

August 05, 2016

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

RE: Janie Connor 201

OrderNo.: 1607D21

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/26/2016 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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 1607D21

Date Reported: 8/5/2016

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: P1

Project: Janie Connor 201

Collection Date: 7/22/2016 12:00:00 PM

Lab ID: 1607D21-001

Matrix: SOIL

Received Date: 7/26/2016 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	170	30		mg/Kg	20	8/1/2016 10:24:48 PM	26731
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	11	9.6		mg/Kg	1	8/1/2016 12:02:53 PM	26694
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/1/2016 12:02:53 PM	26694
Surr: DNOP	53.9	70-130	S	%Rec	1	8/1/2016 12:02:53 PM	26694
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/27/2016 3:59:13 PM	26606
Surr: BFB	106	80-120		%Rec	1	7/27/2016 3:59:13 PM	26606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	7/27/2016 3:59:13 PM	26606
Benzene	ND	0.024		mg/Kg	1	7/27/2016 3:59:13 PM	26606
Toluene	ND	0.048		mg/Kg	1	7/27/2016 3:59:13 PM	26606
Ethylbenzene	ND	0.048		mg/Kg	1	7/27/2016 3:59:13 PM	26606
Xylenes, Total	ND	0.097		mg/Kg	1	7/27/2016 3:59:13 PM	26606
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	7/27/2016 3:59:13 PM	26606

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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 7

## Analytical Report

Lab Order 1607D21

Date Reported: 8/5/2016

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: P2

Project: Janie Connor 201

Collection Date: 7/22/2016 12:00:00 PM

Lab ID: 1607D21-002

Matrix: SOIL

Received Date: 7/26/2016 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1600	75		mg/Kg	50	8/2/2016 9:22:20 PM	26731
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/27/2016 6:52:04 PM	26603
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/27/2016 6:52:04 PM	26603
Surr: DNOP	48.4	70-130	S	%Rec	1	7/27/2016 6:52:04 PM	26603
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/27/2016 4:22:52 PM	26606
Surr: BFB	106	80-120		%Rec	1	7/27/2016 4:22:52 PM	26606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Methyl tert-butyl ether (MTBE)	ND	0.093		mg/Kg	1	7/27/2016 4:22:52 PM	26606
Benzene	ND	0.023		mg/Kg	1	7/27/2016 4:22:52 PM	26606
Toluene	ND	0.047		mg/Kg	1	7/27/2016 4:22:52 PM	26606
Ethylbenzene	ND	0.047		mg/Kg	1	7/27/2016 4:22:52 PM	26606
Xylenes, Total	ND	0.093		mg/Kg	1	7/27/2016 4:22:52 PM	26606
Surr: 4-Bromofluorobenzene	97.8	80-120		%Rec	1	7/27/2016 4:22:52 PM	26606

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

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

Lab Order 1607D21

Date Reported: 8/5/2016

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: P3

Project: Janie Connor 201

Collection Date: 7/22/2016 12:00:00 PM

Lab ID: 1607D21-003

Matrix: SOIL

Received Date: 7/26/2016 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1800	75		mg/Kg	50	8/2/2016 9:34:44 PM	26731
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/27/2016 7:20:02 PM	26603
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/27/2016 7:20:02 PM	26603
Surr: DNOP	47.8	70-130	S	%Rec	1	7/27/2016 7:20:02 PM	26603
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/27/2016 4:46:28 PM	26606
Surr: BFB	106	80-120		%Rec	1	7/27/2016 4:46:28 PM	26606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	7/27/2016 4:46:28 PM	26606
Benzene	ND	0.024		mg/Kg	1	7/27/2016 4:46:28 PM	26606
Toluene	ND	0.048		mg/Kg	1	7/27/2016 4:46:28 PM	26606
Ethylbenzene	ND	0.048		mg/Kg	1	7/27/2016 4:46:28 PM	26606
Xylenes, Total	ND	0.096		mg/Kg	1	7/27/2016 4:46:28 PM	26606
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	7/27/2016 4:46:28 PM	26606

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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#: 1607D21  
05-Aug-16

Client: Souder, Miller & Associates  
Project: Janie Connor 201

Sample ID	MB-26731	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions						
Client ID:	PBS	Batch ID:	26731	RunNo:	36149						
Prep Date:	8/1/2016	Analysis Date:	8/1/2016	SeqNo:	1119547	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-26731	SampType:	LCS	TestCode:	EPA Method 300.0: Anions						
Client ID:	LCSS	Batch ID:	26731	RunNo:	36149						
Prep Date:	8/1/2016	Analysis Date:	8/1/2016	SeqNo:	1119549	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	14	1.5	15.00	0	92.9	90	110				

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
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 7

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

WO#: 1607D21

05-Aug-16

**Client:** Souder, Miller & Associates**Project:** Janie Connor 201

Sample ID <b>MB-26603</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>26603</b>		RunNo: <b>36010</b>							
Prep Date: <b>7/26/2016</b>	Analysis Date: <b>7/27/2016</b>		SeqNo: <b>1115521</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.0		10.00		80.5	70	130			

Sample ID <b>LCS-26603</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>26603</b>		RunNo: <b>36010</b>							
Prep Date: <b>7/26/2016</b>	Analysis Date: <b>7/27/2016</b>		SeqNo: <b>1115716</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	62.6	124			
Surr: DNOP	4.5		5.000		90.9	70	130			

Sample ID <b>LCS-26694</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>26694</b>		RunNo: <b>36120</b>							
Prep Date: <b>7/29/2016</b>	Analysis Date: <b>8/1/2016</b>		SeqNo: <b>1118973</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.9	62.6	124			
Surr: DNOP	4.6		5.000		91.4	70	130			

Sample ID <b>MB-26694</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>26694</b>		RunNo: <b>36120</b>							
Prep Date: <b>7/29/2016</b>	Analysis Date: <b>8/1/2016</b>		SeqNo: <b>1118974</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.1		10.00		81.1	70	130			

**Qualifiers:**

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1607D21  
05-Aug-16

Client: Souder, Miller & Associates  
Project: Janie Connor 201

Sample ID	LCS-26606	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	26606	RunNo:	36031					
Prep Date:	7/26/2016	Analysis Date:	7/27/2016	SeqNo:	1115993	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.3	80	120			
Surr: BFB	1100		1000		114	80	120			

Sample ID	MB-26606	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	26606	RunNo:	36031					
Prep Date:	7/26/2016	Analysis Date:	7/27/2016	SeqNo:	1115994	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	1000		1000		104	80	120			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

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

Page 6 of 7

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1607D21  
05-Aug-16

Client: Souder, Miller & Associates  
Project: Janie Connor 201

Sample ID	LCS-26606		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 26606		RunNo: 36031					
Prep Date:	7/26/2016		Analysis Date: 7/27/2016		SeqNo: 1116018		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	95.1	61	143			
Benzene	0.99	0.025	1.000	0	99.4	75.3	123			
Toluene	0.96	0.050	1.000	0	96.3	80	124			
Ethylbenzene	0.97	0.050	1.000	0	96.9	82.8	121			
Xylenes, Total	2.9	0.10	3.000	0	96.7	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	MB-26606		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26606		RunNo: 36031					
Prep Date:	7/26/2016		Analysis Date: 7/27/2016		SeqNo: 1116019		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	0.99		1.000		98.6	80	120			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

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

Page 7 of 7





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: 1607D21

RcptNo: 1

Received by/date: AS 07/26/16

Logged By: Lindsay Mangin 7/26/2016 10:00:00 AM

Completed By: Lindsay Mangin 7/26/2016 10:07:38 AM

Reviewed By: [Signature] 07/26/16

**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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:

(&lt;2 or &gt;12 unless noted)

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

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

**Special Handling (if applicable)**

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Yes			

## Chain-of-Custody Record

Client: Souder Miller &amp; Associates

Billing Address 201 S Halagueno Carlsbad, NM

Phone #: 575 689-7040

Mail or Fax#: [austin.weyant@soudermiller.com](mailto:austin.weyant@soudermiller.com)

VQC Package:

Standard ☐ Level 4 (Full Validation)

Accreditation:

NELAP ☐ Other

EDD (Type)

☒ Standard ☐ Rush

Project Name:

Free Janie Connor 2014

Project #:

Project Manager:

Austin Weyant

Sampler: LC/M

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.90C

Date Time Matrix Sample Request ID

22-06 12:00 50.1 P1

6 4 4 P2

6 4 4 P3

Container Type and #

402

6

6

Preservative Type

/

/

/

HEAL No.

1607521

-001

-002

-003

Air Bubbles (Y or N)


**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

Received by: *[Signature]* Date Time5-16 200 *[Signature]* 7/25/16 1400

Relinquished by:

Date Time

5/16 (190) *[Signature]* 07/26/16 1000Remarks: email results to [lucas.middleton@soudermiller.com](mailto:lucas.middleton@soudermiller.com) and

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

April 10, 2019

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

RE: Janie Connor BG JC BG

OrderNo.: 1904173

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 22 sample(s) on 4/3/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order: 1904173

Date Reported: 4/10/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Lab Order: 1904173

Project: Janie Connor BG JC BG

Lab ID: 1904173-001

Collection Date: 4/2/2019 9:30:00 AM

Client Sample ID: JC-2'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	990	60		mg/Kg	20	4/6/2019 5:35:25 PM	44170

Lab ID: 1904173-003

Collection Date: 4/2/2019 9:50:00 AM

Client Sample ID: JC-6'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	290	60		mg/Kg	20	4/6/2019 5:47:50 PM	44170

Lab ID: 1904173-005

Collection Date: 4/2/2019 10:10:00 AM

Client Sample ID: JC-10'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	160	61		mg/Kg	20	4/6/2019 6:00:14 PM	44170

Lab ID: 1904173-006

Collection Date: 4/2/2019 10:20:00 AM

Client Sample ID: JC-12'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	130	60		mg/Kg	20	4/6/2019 6:37:29 PM	44170

Lab ID: 1904173-007

Collection Date: 4/2/2019 10:45:00 AM

Client Sample ID: JC2-2'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	170	60		mg/Kg	20	4/6/2019 6:49:54 PM	44170

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

Qualifiers: H Holding times for preparation or analysis exceeded  
PQL Practical Quantitative Limit  
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit

## Analytical Report

Lab Order: 1904173

Date Reported: 4/10/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Lab Order: 1904173

Project: Janie Connor BG JC BG

Lab ID: 1904173-009

Collection Date: 4/2/2019 10:55:00 AM

Client Sample ID: JC2-6'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	190	60		mg/Kg	20	4/6/2019 7:02:18 PM	44170

Lab ID: 1904173-011

Collection Date: 4/2/2019 11:05:00 AM

Client Sample ID: JC2-10'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	100	60		mg/Kg	20	4/6/2019 7:14:43 PM	44170

Lab ID: 1904173-012

Collection Date: 4/2/2019 11:30:00 AM

Client Sample ID: JC3-2'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	4900	150		mg/Kg	50	4/8/2019 4:20:17 PM	44170

Lab ID: 1904173-013

Collection Date: 4/2/2019 11:35:00 AM

Client Sample ID: JC3-4'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	2200	60		mg/Kg	20	4/6/2019 8:04:23 PM	44170

Lab ID: 1904173-014

Collection Date: 4/2/2019 11:45:00 AM

Client Sample ID: JC3-6'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	1400	60		mg/Kg	20	4/6/2019 8:16:48 PM	44170

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

Qualifiers: H Holding times for preparation or analysis exceeded  
PQL Practical Quantitative Limit  
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit

## Analytical Report

Lab Order: 1904173

Date Reported: 4/10/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Lab Order: 1904173

Project: Janie Connor BG JC BG

Lab ID: 1904173-016

Collection Date: 4/2/2019 11:55:00 AM

Client Sample ID: JC3-10'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
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## EPA METHOD 300.0: ANIONS

Analyst: CJS

Chloride	750	59		mg/Kg	20	4/6/2019 8:29:12 PM	44170
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Lab ID: 1904173-018

Collection Date: 4/2/2019 12:10:00 PM

Client Sample ID: JC4-2'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
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## EPA METHOD 300.0: ANIONS

Analyst: smb

Chloride	9900	600		mg/Kg	200	4/8/2019 4:32:42 PM	44170
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Lab ID: 1904173-020

Collection Date: 4/2/2019 12:30:00 PM

Client Sample ID: JC4-6'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	----	------	-------	----	---------------	----------

## EPA METHOD 300.0: ANIONS

Analyst: smb

Chloride	4900	150		mg/Kg	50	4/8/2019 4:45:07 PM	44170
----------	------	-----	--	-------	----	---------------------	-------

Lab ID: 1904173-022

Collection Date: 4/2/2019 12:50:00 PM

Client Sample ID: JC4-10'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
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## EPA METHOD 300.0: ANIONS

Analyst: smb

Chloride	3600	150		mg/Kg	50	4/8/2019 5:22:22 PM	44170
----------	------	-----	--	-------	----	---------------------	-------

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

Qualifiers: H Holding times for preparation or analysis exceeded  
PQL Practical Quantitative Limit  
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904173

10-Apr-19

Client: Souder, Miller & Associates

Project: Janie Connor BG JC BG

Sample ID: MB-44170	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 44170	RunNo: 58961								
Prep Date: 4/6/2019	Analysis Date: 4/6/2019	SeqNo: 1983371		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-44170	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 44170	RunNo: 58961								
Prep Date: 4/6/2019	Analysis Date: 4/6/2019	SeqNo: 1983373		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	90	110			

Qualifiers:

H Holding times for preparation or analysis exceeded

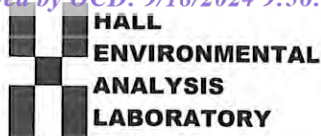
PQL Practical Quantitative Limit

W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit





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

## Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1904173

RcptNo: 1

Received By: Yazmine Garduno 4/3/2019 8:50:00 AM

Completed By: Erin Melendrez 4/3/2019 10:38:56 AM

Reviewed By: DAD 4/3/19

Reviewed By: JJC 4-3-19

### Chain of Custody

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

**Log In**

- |  |   |  |  |
|--|---|--|--|
| 3. Was an attempt made to cool the samples?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            | NA <input type="checkbox"/>                      |
| 4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to $6.0^{\circ}\text{C}$ | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            | NA <input type="checkbox"/>                      |
| 5. Sample(s) in proper container(s)?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 6. Sufficient sample volume for indicated test(s)?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 7. Are samples (except VOA and ONG) properly preserved?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 8. Was preservative added to bottles?  | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/>                      |
| 9. VOA vials have zero headspace?  | Yes <input type="checkbox"/>            | No <input type="checkbox"/>            | No VOA Vials <input checked="" type="checkbox"/> |
| 10. Were any sample containers received broken?  | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |  |
| 11. Does paperwork match bottle labels?<br>(Note discrepancies on chain of custody)            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 12. Are matrices correctly identified on Chain of Custody?                                     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 13. Is it clear what analyses were requested?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 14. Were all holding times able to be met?<br>(If no, notify customer for authorization.)      | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
- # of preserved bottles checked for pH: (<2)

Adjusted? Checked by:

## Special Handling (if applicable)

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

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

16. Additional remarks:

## 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			
2	2.8	Good	Yes			
3	5.6	Good	Yes			

## Chain-of-Custody Record

Client: SWA Carlsbad

Mailing Address:

Phone #:   
email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Date	Time	Matrix	Sample Name
4/2/19	9:30	Soil	JC-2'
	9:40		JC-4'
	9:50		JC-6'
	10:00		JC-8'
	10:10		JC-10'
	10:20		JC-12'

Turn-Around Time:

☐ Standard ☒ Rush 5 day

Project Name:

Janie Connor BG  
(JC-BG)

Project #:

Project Manager:

Melodie Sanjani

Sampler: MPSOn Ice: ☒ Yes ☐ No# of Coolers: 3Cooler Temp (including CFI): 21°C, 24°C, 5.0°C

Container Type and #

402

Preservative Type

HEAL No. 1904173

-001

-002

-003

-004

-005

-006

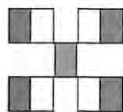
Received by: [Signature] Date: 4/2/19 Time: 1430Relinquished by: [Signature] Date: 4/2/19 Time: 1940

Remarks:

Material

Janel Connor 4/3/19 8:50

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

BTEX / MTBE / TMBs (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCBs	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub>	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
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PLEASE HOLD

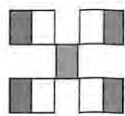
PLEASE HOLD





## Chain-of-Custody Record

Turn-Around Time:		<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
Project Name:		Janet Conner BGS (JC-BG)	
Project #:			
Project Manager:		Melodie Sanjari	
Sampler:		MPS	
On Ice:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
# of Coolers:		3	
Cooler Temp (including CFI):		2.1°C, 2.4°C, 5.6°C	
Container Type and #		Preservative Type	
HEAL No.		1904173	
Date	Time	Matrix	Sample Name
4/21/19	11:30	Soil	JC3-2'
	11:35		JC3-4'
	11:45		JC3 6'
	11:50		JC3 8'
	11:55		JC3 10'
	12:00		JC3 12'
Relinquished by:		Relinquished by:	
Date:	Time:	Date:	Time:
4/21/19	1430	4/21/19	1430
Date:	Time:	Date:	Time:
4/21/19	1900	4/21/19	1900



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

BTEX / MTBE / TMBs (8021)  
 TPH:8015D(GRO / DRO / MRO)  
 8081 Pesticides/8082 PCB's  
 EDB (Method 504.1)  
 PAHs by 8310 or 8270SIMS  
 RCRA 8 Metals  
 Cl, F, Br, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>  
 8260 (VOA)  
 8270 (Semi-VOA)  
 Total Coliform (Present/Absent)

Remarks:

Metadior

Received by:

Date

Time

Via:

Date

Time

Received by:

Date

Time

Via:

Date

Time







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

May 06, 2019

Melodie Sanjari  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL:  
FAX

RE: Janie Conner

OrderNo.: 1904D89

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 9 sample(s) on 4/30/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1904D89

Date Reported: 5/6/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: SW1

Project: Janie Conner

Collection Date: 4/25/2019 4:50:00 AM

Lab ID: 1904D89-001

Matrix: SOIL

Received Date: 4/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	150	60		mg/Kg	20	5/1/2019 4:21:45 PM	44638
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/1/2019 4:57:06 PM	44624
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/1/2019 4:57:06 PM	44624
Surr: DNOP	99.1	70-130		%Rec	1	5/1/2019 4:57:06 PM	44624
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/1/2019 9:27:27 PM	44616
Surr: BFB	91.3	73.8-119		%Rec	1	5/1/2019 9:27:27 PM	44616
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/1/2019 9:27:27 PM	44616
Toluene	ND	0.050		mg/Kg	1	5/1/2019 9:27:27 PM	44616
Ethylbenzene	ND	0.050		mg/Kg	1	5/1/2019 9:27:27 PM	44616
Xylenes, Total	ND	0.10		mg/Kg	1	5/1/2019 9:27:27 PM	44616
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	5/1/2019 9:27:27 PM	44616

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

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



Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1904D89  
Date Reported: 5/6/2019

CLIENT: Souder, Miller & Associates      Client Sample ID: SW2  
Project: Janie Conner      Collection Date: 4/25/2019 4:30:00 AM  
Lab ID: 1904D89-002      Matrix: SOIL      Received Date: 4/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	530	60		mg/Kg	20	5/1/2019 4:34:10 PM	44638
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/1/2019 5:19:12 PM	44624
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/1/2019 5:19:12 PM	44624
Surr: DNOP	96.8	70-130		%Rec	1	5/1/2019 5:19:12 PM	44624
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/1/2019 9:50:59 PM	44616
Surr: BFB	93.1	73.8-119		%Rec	1	5/1/2019 9:50:59 PM	44616
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/1/2019 9:50:59 PM	44616
Toluene	ND	0.048		mg/Kg	1	5/1/2019 9:50:59 PM	44616
Ethylbenzene	ND	0.048		mg/Kg	1	5/1/2019 9:50:59 PM	44616
Xylenes, Total	ND	0.095		mg/Kg	1	5/1/2019 9:50:59 PM	44616
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	5/1/2019 9:50:59 PM	44616

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 Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 1904D89

Date Reported: 5/6/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: SW3

Project: Janie Conner

Collection Date: 4/25/2019 12:00:00 PM

Lab ID: 1904D89-003

Matrix: SOIL

Received Date: 4/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	370	60		mg/Kg	20	5/1/2019 4:46:35 PM	44638
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	5/1/2019 5:41:32 PM	44624
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	5/1/2019 5:41:32 PM	44624
Surr: DNOP	95.2	70-130		%Rec	1	5/1/2019 5:41:32 PM	44624
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/1/2019 11:01:26 PM	44616
Surr: BFB	91.3	73.8-119		%Rec	1	5/1/2019 11:01:26 PM	44616
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/1/2019 11:01:26 PM	44616
Toluene	ND	0.048		mg/Kg	1	5/1/2019 11:01:26 PM	44616
Ethylbenzene	ND	0.048		mg/Kg	1	5/1/2019 11:01:26 PM	44616
Xylenes, Total	ND	0.097		mg/Kg	1	5/1/2019 11:01:26 PM	44616
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	5/1/2019 11:01:26 PM	44616

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

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

## Analytical Report

Lab Order 1904D89

Date Reported: 5/6/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: SW4

Project: Janie Conner

Collection Date: 4/25/2019 12:30:00 PM

Lab ID: 1904D89-004

Matrix: SOIL

Received Date: 4/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	550	60		mg/Kg	20	5/1/2019 4:59:00 PM	44638
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/1/2019 6:03:52 PM	44624
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/1/2019 6:03:52 PM	44624
Surr: DNOP	94.4	70-130		%Rec	1	5/1/2019 6:03:52 PM	44624
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/1/2019 11:24:51 PM	44616
Surr: BFB	89.5	73.8-119		%Rec	1	5/1/2019 11:24:51 PM	44616
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/1/2019 11:24:51 PM	44616
Toluene	ND	0.050		mg/Kg	1	5/1/2019 11:24:51 PM	44616
Ethylbenzene	ND	0.050		mg/Kg	1	5/1/2019 11:24:51 PM	44616
Xylenes, Total	ND	0.10		mg/Kg	1	5/1/2019 11:24:51 PM	44616
Surr: 4-Bromofluorobenzene	90.2	80-120		%Rec	1	5/1/2019 11:24:51 PM	44616

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

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

## Analytical Report

Lab Order 1904D89

Date Reported: 5/6/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: SW5

Project: Janie Conner

Collection Date: 4/26/2019 11:00:00 AM

Lab ID: 1904D89-005

Matrix: SOIL

Received Date: 4/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1200	60		mg/Kg	20	5/1/2019 7:15:29 PM	44662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	5/1/2019 6:26:16 PM	44624
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	5/1/2019 6:26:16 PM	44624
Surr: DNOP	95.7	70-130		%Rec	1	5/1/2019 6:26:16 PM	44624
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/1/2019 11:48:23 PM	44616
Surr: BFB	91.8	73.8-119		%Rec	1	5/1/2019 11:48:23 PM	44616
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/1/2019 11:48:23 PM	44616
Toluene	ND	0.050		mg/Kg	1	5/1/2019 11:48:23 PM	44616
Ethylbenzene	ND	0.050		mg/Kg	1	5/1/2019 11:48:23 PM	44616
Xylenes, Total	ND	0.099		mg/Kg	1	5/1/2019 11:48:23 PM	44616
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	5/1/2019 11:48:23 PM	44616

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

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

## Analytical Report

Lab Order 1904D89

Date Reported: 5/6/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: BH1

Project: Janie Conner

Collection Date: 4/25/2019 5:00:00 AM

Lab ID: 1904D89-006

Matrix: SOIL

Received Date: 4/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	470	60		mg/Kg	20	5/1/2019 7:52:42 PM	44662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	5/1/2019 6:48:17 PM	44624
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	5/1/2019 6:48:17 PM	44624
Surr: DNOP	94.8	70-130		%Rec	1	5/1/2019 6:48:17 PM	44624
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2019 12:11:56 AM	44616
Surr: BFB	89.0	73.8-119		%Rec	1	5/2/2019 12:11:56 AM	44616
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/2/2019 12:11:56 AM	44616
Toluene	ND	0.049		mg/Kg	1	5/2/2019 12:11:56 AM	44616
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2019 12:11:56 AM	44616
Xylenes, Total	ND	0.098		mg/Kg	1	5/2/2019 12:11:56 AM	44616
Surr: 4-Bromofluorobenzene	88.2	80-120		%Rec	1	5/2/2019 12:11:56 AM	44616

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

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

## Analytical Report

Lab Order 1904D89

Date Reported: 5/6/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: BH2

Project: Janie Conner

Collection Date: 4/25/2019 11:45:00 AM

Lab ID: 1904D89-007

Matrix: SOIL

Received Date: 4/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	2300	150		mg/Kg	50	5/2/2019 5:03:12 PM	44662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/1/2019 7:10:44 PM	44624
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/1/2019 7:10:44 PM	44624
Surr: DNOP	94.4	70-130		%Rec	1	5/1/2019 7:10:44 PM	44624
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2019 12:35:23 AM	44616
Surr: BFB	93.2	73.8-119		%Rec	1	5/2/2019 12:35:23 AM	44616
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/2/2019 12:35:23 AM	44616
Toluene	ND	0.049		mg/Kg	1	5/2/2019 12:35:23 AM	44616
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2019 12:35:23 AM	44616
Xylenes, Total	ND	0.099		mg/Kg	1	5/2/2019 12:35:23 AM	44616
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	5/2/2019 12:35:23 AM	44616

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

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

Page 7 of 13

## Analytical Report

Lab Order 1904D89

Date Reported: 5/6/2019

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: BH3

Project: Janie Conner

Collection Date: 4/25/2019 4:15:00 AM

Lab ID: 1904D89-008

Matrix: SOIL

Received Date: 4/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1100	60		mg/Kg	20	5/1/2019 9:07:10 PM	44662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/1/2019 7:33:04 PM	44624
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/1/2019 7:33:04 PM	44624
Surr: DNOP	75.2	70-130		%Rec	1	5/1/2019 7:33:04 PM	44624
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/2/2019 12:58:39 AM	44616
Surr: BFB	100	73.8-119		%Rec	1	5/2/2019 12:58:39 AM	44616
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	5/2/2019 12:58:39 AM	44616
Toluene	ND	0.048		mg/Kg	1	5/2/2019 12:58:39 AM	44616
Ethylbenzene	ND	0.048		mg/Kg	1	5/2/2019 12:58:39 AM	44616
Xylenes, Total	ND	0.097		mg/Kg	1	5/2/2019 12:58:39 AM	44616
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	5/2/2019 12:58:39 AM	44616

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

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



## Analytical Report

Lab Order 1904D89

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: BH4

Project: Janie Conner

Collection Date: 4/26/2019 12:00:00 PM

Lab ID: 1904D89-009

Matrix: SOIL

Received Date: 4/30/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1400	59		mg/Kg	20	5/1/2019 9:19:34 PM	44662
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	31	9.3		mg/Kg	1	5/7/2019 9:51:36 AM	44736
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/7/2019 9:51:36 AM	44736
Surr: DNOP	98.6	70-130		%Rec	1	5/7/2019 9:51:36 AM	44736
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/2/2019 1:22:15 AM	44616
Surr: BFB	97.0	73.8-119		%Rec	1	5/2/2019 1:22:15 AM	44616
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	5/2/2019 1:22:15 AM	44616
Toluene	ND	0.050		mg/Kg	1	5/2/2019 1:22:15 AM	44616
Ethylbenzene	ND	0.050		mg/Kg	1	5/2/2019 1:22:15 AM	44616
Xylenes, Total	ND	0.10		mg/Kg	1	5/2/2019 1:22:15 AM	44616
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	1	5/2/2019 1:22:15 AM	44616

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

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

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1904D89

06-May-19

Client: Souder, Miller &amp; Associates

Project: Janie Conner

Sample ID: MB-44638	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 44638	RunNo: 59556								
Prep Date: 5/1/2019	Analysis Date: 5/1/2019	SeqNo: 2007895		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-44638	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 44638	RunNo: 59556								
Prep Date: 5/1/2019	Analysis Date: 5/1/2019	SeqNo: 2007896		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.8	90	110			

Sample ID: MB-44662	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 44662	RunNo: 59556								
Prep Date: 5/1/2019	Analysis Date: 5/1/2019	SeqNo: 2007930		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-44662	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 44662	RunNo: 59556								
Prep Date: 5/1/2019	Analysis Date: 5/1/2019	SeqNo: 2007931		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.9	90	110			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
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 Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904D89

06-May-19

Client: Souder, Miller & Associates

Project: Janie Conner

Sample ID: LCS-44624	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 44624	RunNo: 59549								
Prep Date: 4/30/2019	Analysis Date: 5/1/2019	SeqNo: 2006946	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.3	63.9	124			
Surr: DNOP	3.8		5.000		75.6	70	130			

Sample ID: MB-44624	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 44624	RunNo: 59549								
Prep Date: 4/30/2019	Analysis Date: 5/1/2019	SeqNo: 2006948	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		81.9	70	130			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904D89

06-May-19

Client: Souder, Miller & Associates

Project: Janie Conner

Sample ID: LCS-44616		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS		Batch ID: 44616		RunNo: 59560						
Prep Date: 4/30/2019		Analysis Date: 5/1/2019		SeqNo: 2008126		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.8	80.1	123			
Surr: BFB	1000		1000		101	73.8	119			

Sample ID: MB-44616		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS		Batch ID: 44616		RunNo: 59560						
Prep Date: 4/30/2019		Analysis Date: 5/1/2019		SeqNo: 2008129		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.9	73.8	119			

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 Limit

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1904D89

06-May-19

Client: Souder, Miller &amp; Associates

Project: Janie Conner

Sample ID: <b>LCS-44616</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>44616</b>		RunNo: <b>59560</b>							
Prep Date: <b>4/30/2019</b>	Analysis Date: <b>5/1/2019</b>		SeqNo: <b>2008175</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.0	80	120			
Toluene	0.94	0.050	1.000	0	93.9	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.2	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.2	80	120			

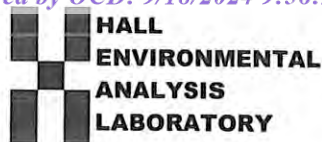
Sample ID: <b>MB-44616</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>44616</b>		RunNo: <b>59560</b>							
Prep Date: <b>4/30/2019</b>	Analysis Date: <b>5/1/2019</b>		SeqNo: <b>2008177</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.89		1.000		89.2	80	120			

### Qualifiers:

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

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

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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: **1904D89**

RcptNo: 1

Received By: **Isaiah Ortiz**

4/30/2019 9:00:00 AM

I-OK

Completed By: **Isaiah Ortiz**

4/30/2019 9:15:28 AM

I-OK

Reviewed By:

VVZ 4/30/19  
LB: ENM 4/30/19

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted?

Checked by:

### Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via:

☐ eMail☐ Phone☐ Fax☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Yes			









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

May 10, 2019

Melodie Sanjari  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL: (575) 689-8801  
FAX

RE: Janie Conner TB

OrderNo.: 1905372

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/8/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1905372  
Date Reported: 5/10/2019

CLIENT: Souder, Miller & Associates      Client Sample ID: BH2  
Project: Janie Conner TB      Collection Date: 5/5/2019 12:00:00 PM  
Lab ID: 1905372-001      Matrix: SOIL      Received Date: 5/8/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1100	59		mg/Kg	20	5/9/2019 3:07:25 PM	44826

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 Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905372

10-May-19

Client: Souder, Miller & Associates

Project: Janie Conner TB

Sample ID: <b>MB-44826</b>		SampType: <b>mblk</b>		TestCode: <b>EPA Method 300.0: Anions</b>						
Client ID: <b>PBS</b>		Batch ID: <b>44826</b>		RunNo: <b>59766</b>						
Prep Date: <b>5/9/2019</b>		Analysis Date: <b>5/9/2019</b>		SeqNo: <b>2016237</b>			Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-44826</b>		SampType: <b>lcs</b>		TestCode: <b>EPA Method 300.0: Anions</b>						
Client ID: <b>LCSS</b>		Batch ID: <b>44826</b>		RunNo: <b>59766</b>						
Prep Date: <b>5/9/2019</b>		Analysis Date: <b>5/9/2019</b>		SeqNo: <b>2016238</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

- \*

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

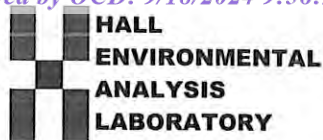
Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit



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: 1905372

RcptNo: 1

Received By: Isaiah Ortiz

5/8/2019 8:50:00 AM

Completed By: Leah Baca

5/8/2019 9:27:45 AM

Reviewed By: *LB*

Labeled by DAD 5/8/19

*IOX**Leah Baca***Chain of Custody**

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

**Log In**

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

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

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

Checked by: *DAD 5/8/19*

**Special Handling (if applicable)**

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

**17. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			





# APPENDIX E

## EXCAVATION PHOTO









# APPENDIX F

## Background Soil Data Report in the Loving/Malaga Area of Eddy County, NM



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

October 17, 2018

NMOCD District 2  
Ms. Maria Pruett  
811 S. 1st Street  
Artesia, NM 88210

SUBJECT: Background Soil Data Report around Malaga/ Loving in Eddy County, New Mexico

Dear Ms. Maria Pruett:

Souder, Miller & Associates (SMA) has prepared this Report that describes soils types and background chloride concentrations around the Loving and Malaga Area in Eddy County, New Mexico. Figure 1 illustrates the vicinity and site locations described in this report.

## **1.0 Background**

The soil types located under and around the Loving and Malaga, New Mexico area 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 soils 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 (Appendix B).

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 A). All attached third party lab results have been collected in the same area soil types that surround the irrigated river valley near the Loving and Malaga, New Mexico. The five representative baseline sample events where collected by SMA and are summarized in (Table # 1).

- Tom Walters baseline soil data shows pre-Matador oil and gas operation EPA 300 Cl- from 2300ppm- 3900ppm
- Warren baseline soil data shows pre-Matador oil and gas operation EPA 300 Cl- from 170ppm- 2400ppm
- Guitar baseline soil data shows pre-Matador oil and gas operation EPA 300 Cl- from 2200ppm- 4000ppm
- B Banker baseline soil data shows pre-Matador oil and gas operation EPA 300 Cl- from 55ppm- 3500ppm
- Janie Conner Production Pad baseline soil data shows pre-Matador oil and gas operation EPA 300 Cl- from 170ppm- 1800ppm



Site Assessment/Characterization and Closure Sampling Plan Report (2RP-3739)  
October 17, 2018

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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 Cl- from 43ppm-5300ppm
- Tiger background soil data BG1 shows non-disturbed by Matador oil and gas operations EPA 300 Cl- from 24ppm-4800ppm
- Janie Connor #221 background soil data B65 shows non-disturbed by Matador oil and gas operations EPA 300 Cl- from 79ppm-1200ppm

As outlined above, the high concentrations of neutral salts, such as sodium chloride and sodium sulfate should be found in the 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 appendix A). Four background sample locations (shown in Table #1) 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 A).

## **2.0 Soil Remediation Summary**

This report has been created to show soil types and their water-soluble salts properties around Loving and Malaga, New Mexico. Soil data from online resources from United States Department of Agriculture, Natural Resource Conservation Service indicates certain soil types in the area have a moderate to high EC which indicates saline soils. Saline soils contain sodium chloride and sodium sulfate. SMA soil sampling prior to E&P operations and background samples during remediation activities were used to show laboratory data of these soils. It is shown from the laboratory that certain soil types have exhibited a higher chloride constitution.

## **3.0 Scope and Limitations**

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing this 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.

Site Assessment/Characterization and Closure Sampling Plan Report (2RP-3739)  
October 17, 2018

Page 3 of 3

Submitted by:  
SOUDER, MILLER & ASSOCIATES

Reviewed by:

Lucas C. Middleton  
Staff Scientist

Austin Weyant  
Senior Scientist

**ATTACHMENTS:**

**Figures:**

Figure 1: Sample Location Map

**Tables:**

Table 1: Summary of Sample Results

**Appendices:**

Appendix A: Laboratory Analytical Reports (BASELINE AND BACKGROUND)

Appendix B: NRCS ELECTRICAL CONDUCTIVITY MAP

Appendix C: NRCS Custom Soil Resource Report for Eddy Area, New Mexico

# FIGURES



Sample Location Map  
Matador Locations  
Eddy County New Mexico

Figure1

Date Saved: 10/16/2018	Revisions	
	By: _____	Date: _____ Descr: _____
	By: _____	Date: _____ Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved		

Drawn	Lucas Middleton
Checked	_____
Approved	_____



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



# TABLES

Table 1

SITE	Sample Number	Sample Date	Depth (feet bgs)	Action	Nitrate mg/L	Sulfate mg/Kg	Cl- Laboratory mg/Kg
JANIE CONNER #201, PRODUCTION	P1	7/22/2016	0.5'	Baseline	--	--	170
	P2	7/22/2016	0.5'	Baseline	--	--	1600
	P3	7/22/2016	0.5'	Baseline	--	--	1800
JANIE CONNER #221, West of Location	B65	9/18/2018	1'	BackGround	--	--	1100
		9/18/2018	2'	BackGround	--	--	1200
		9/18/2018	3'	BackGround	--	--	550
		9/18/2018	4'	BackGround	--	--	840
		9/18/2018	5'	BackGround	--	--	79
		9/18/2018	6'	BackGround	--	--	110
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: 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](http://www.hallenvironmental.com)

September 28, 2018

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

RE: Janie Connol B65

OrderNo.: 1809C05

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/20/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order: 1809C05

Date Reported: 9/28/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Lab Order: 1809C05

Project: Janie Connol B65

Lab ID: 1809C05-001

Collection Date: 9/18/2018 11:00:00 AM

Client Sample ID: B65-1

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: <b>smb</b>
Chloride	1100	30		mg/Kg	20	9/26/2018 5:13:32 PM	40598

Lab ID: 1809C05-002

Collection Date: 9/18/2018 11:10:00 AM

Client Sample ID: B65-2

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: <b>smb</b>
Chloride	1300	75		mg/Kg	50	9/27/2018 10:23:02 PM	40598

Lab ID: 1809C05-003

Collection Date: 9/18/2018 11:20:00 AM

Client Sample ID: B65-3

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: <b>smb</b>
Chloride	550	30		mg/Kg	20	9/26/2018 6:03:10 PM	40598

Lab ID: 1809C05-004

Collection Date: 9/18/2018 11:30:00 AM

Client Sample ID: B65-4

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: <b>smb</b>
Chloride	840	30		mg/Kg	20	9/26/2018 6:15:34 PM	40598

Lab ID: 1809C05-005

Collection Date: 9/18/2018 11:40:00 AM

Client Sample ID: B65-5

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: <b>smb</b>
Chloride	79	30		mg/Kg	20	9/26/2018 6:27:59 PM	40598

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

Page 1 of 3

**Hall Environmental Analysis Laboratory, Inc.**

**Analytical Report**  
Lab Order: **1809C05**  
Date Reported: **9/28/2018**

<b>CLIENT:</b> Souder, Miller & Associates		<b>Lab Order:</b> 1809C05	
<b>Project:</b> Janie Connol B65			
<b>Lab ID:</b>	1809C05-006	<b>Collection Date:</b>	9/18/2018 11:50:00 AM
<b>Client Sample ID:</b>	B65-6	<b>Matrix:</b>	SOIL
<b>Analyses</b>	<b>Result</b>	<b>PQL</b>	<b>Qual Units DF Date Analyzed Batch ID</b>
<b>EPA METHOD 300.0: ANIONS</b>		Analyst: <b>smb</b>	
Chloride	110	30	mg/Kg 20 9/26/2018 6:40:24 PM 40598

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 3
	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	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809C05  
28-Sep-18

Client: Souder, Miller & Associates  
Project: Janie Connol B65

Sample ID	MB-40598	SampType:	mblk	TestCode:	EPA Method 300.0: Anions						
Client ID:	PBS	Batch ID:	40598	RunNo:	54458						
Prep Date:	9/26/2018	Analysis Date:	9/26/2018	SeqNo:	1805031	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-40598	SampType:	lcs	TestCode:	EPA Method 300.0: Anions						
Client ID:	LCSS	Batch ID:	40598	RunNo:	54458						
Prep Date:	9/26/2018	Analysis Date:	9/26/2018	SeqNo:	1805032	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

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

Page 3 of 3





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1809C05

RcptNo: 1

Received By: Erin Melendrez 9/20/2018 8:50:00 AM

Completed By: Ashley Gallegos 9/20/2018 12:42:23 PM

Reviewed By: JAB 09/20/18

labeled by ENM 9/20/18

Chain of Custody

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

Log In

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

# of preserved  
bottles checked  
for pH: 2  
( $<2$  or  $>12$  unless noted)

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

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

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information


Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good	Yes			





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

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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 light blue 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
<b>EPA METHOD 300.0: ANIONS</b>							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
<b>EPA METHOD 300.0: ANIONS</b>							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
<b>EPA METHOD 300.0: ANIONS</b>							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
<b>EPA METHOD 300.0: ANIONS</b>							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
<b>EPA METHOD 300.0: ANIONS</b>							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.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	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 2

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	Page 2 of 2
ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
R RPD outside accepted recovery limits	RL Reporting Detection Limit	
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	



Hall Environmental Analysis Laboratory  
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:

Logged By: Ashley Gallegos

11/1/2016 10:00:00 AM

Completed By: Ashley Gallegos

11/2/2016 9:49:24 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° 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?<br>(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?<br>(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](http://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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

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

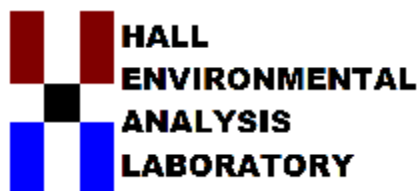
4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

[illegible]

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

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

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

Sincerely,



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.

<b>Qualifiers:</b>	*	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.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified



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

## Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 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  $6.0^{\circ}\text{C}$ ? 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:

(&lt;2 or &gt;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](http://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 - Corbado</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](http://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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 light blue 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 &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	5/9/2016 1:49:28 PM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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 &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	120	30		mg/Kg	20	5/9/2016 2:26:42 PM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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 &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	55	30		mg/Kg	20	5/9/2016 2:39:06 PM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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 &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	3500	150		mg/Kg	100	5/11/2016 3:17:06 AM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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 &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	5/9/2016 3:03:54 PM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

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

Page 7 of 10

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1605079

12-May-16

Client: Souder, Miller &amp; 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 &amp; 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.	B Analyte detected in the associated Method Blank	Page 10 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	





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 &gt;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:

(&lt;2 or &gt;12 unless noted)

12. Does paperwork match bottle labels?

Yes ☒No ☐

(Note discrepancies on chain of custody)

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?

Yes ☒No ☐

(If no, notify customer for authorization.)

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			

## Chain-of-Custody Record


**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

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

☒ Standard ☐ Rush

Project Name:

B BANKED

Project #:

MALAGUENO

Phone #:

575 684 7070

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Project Manager:

A WEYANT

Sampler:

LCA

On Ice:

☒ Yes ☐ No

Sample Temperature: 2.8

Date

Time

Matrix

Sample Request ID

Container  
Type and #Preservative  
Type

HEAL No.

4/24 12:00

gsl

BL-1

406

1605079

4/24 12:00

BL-2

-001

4/24 12:00

BL-3

-002

4/24 12:00

BL-4

-003

4/24 12:00

BL-5

-004

4/24 12:00

-005

Date

Time

Relinquished by:

Received by:

Date

Time

Remarks:

Date

Time

Relinquished by:

Received by:

Date

Time

Remarks:

Joe Boat 05/03/16 0940

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  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## 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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	43	30		mg/Kg	20	6/21/2017 11:21:24 AM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	2600	75		mg/Kg	50	6/22/2017 6:35:28 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	3000	150		mg/Kg	100	6/22/2017 6:47:52 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	5300	300		mg/Kg	200	6/22/2017 7:00:17 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	ND	30		mg/Kg	20	6/21/2017 1:00:40 PM	32409
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Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 3
	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: 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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	530	30		mg/Kg	20	6/21/2017 1:13:05 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	1500	75		mg/Kg	50	6/22/2017 7:12:42 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	2600	150		mg/Kg	100	6/22/2017 7:25:07 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	650	30		mg/Kg	20	6/21/2017 1:50:18 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	1600	75		mg/Kg	50	6/22/2017 7:37:32 PM	32409
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Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 3
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 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.

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

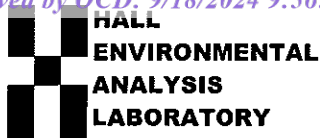
J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Page 3 of 3



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			







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

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

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

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

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

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

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



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

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

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	Page 8 of 23
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

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	Page 9 of 23
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

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

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

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



Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Project: Matador Paul 2nd

Lab ID: 1706A44-013

Client Sample ID: BGC-S

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

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

Matrix: SOIL

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

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Project: Matador Paul 2nd

Lab ID: 1706A44-016

Client Sample ID: BGC-3

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Project: Matador Paul 2nd

Lab ID: 1706A44-019

Client Sample ID: BGC-8

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

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

Matrix: SOIL

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



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

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

**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.	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 23 of 23



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  $6.0^{\circ}\text{C}$ ? 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 &amp; 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
<b>CARBON DIOXIDE</b>							Analyst: JRR
Total Carbon Dioxide	180	1.0	H	mg CO2/L	1	6/15/2017 8:49:30 PM	R43555
<b>SPECIFIC GRAVITY</b>							Analyst: JRR
Specific Gravity	1.096	0			1	6/22/2017 1:34:00 PM	R43724
<b>EPA METHOD 300.0: ANIONS</b>							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
<b>SM2320B: ALKALINITY</b>							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
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: KS
Total Dissolved Solids	164000	2000	*D	mg/L	1	6/21/2017 5:49:00 PM	32389
<b>SM4500-H+B: PH</b>							Analyst: JRR
pH	6.77		H	pH units	1	6/15/2017 8:49:30 PM	R43555
<b>EPA METHOD 200.7: METALS</b>							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	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	

**Hamlet, Robert, EMNRD**

---

**From:** Hamlet, Robert, EMNRD  
**Sent:** Friday, May 24, 2019 10:21 AM  
**To:** 'Melodie Sanjari'  
**Cc:** John Hurt; Heather Patterson; Venegas, Victoria, EMNRD; Bratcher, Mike, EMNRD  
**Subject:** Closure Approval - Matador - Janie Conner Tank Battery (2RP-5289) 2.19.19  
**Attachments:** Closure Approval - Matador - Janie Conner Tank Battery - (2RP-5289) 5.24.19.pdf

Melodie,

Baseline samples were collected prior to the construction of the Janie Conner Tank Battery. I thought we agreed to average the 3 samples and use 1,200 mg/kg? We'll give you the benefit of the doubt and go with 1,800 mg/kg, since one of the samples registered this concentration. In this particular case, having 3 samples taken from undisturbed land before the tank battery was constructed is the type of evidence the OCD needs to see with regards to back-ground samples.

Back-ground samples at other sites in this area will be taken on a "case by case" basis. In your report you discuss several soil types and soil type mixtures in the Loving and Malaga area will return high sodium chloride levels in the absence of oil and gas production activities. Chlorides are a result of poor agricultural and irrigation practices in the area over the past century. This explains why samples at different depths and different sample locations range from such low level to drastically higher. This is one reason it is unlikely that we can take a blanket approach on background samples in this area. Each site will most likely have varying soil types and soil mixtures, requiring individual interpretation.

The L3 sample at 2 feet was "hot", but the closure five point composite Base sample at BH4 is essentially in the same area and under the limit.

We have received your closure report and final C-141 for 2RP-5289 Janie Conner Tank Battery, thank you. This closure is approved.

Please let me know if you have any further questions.

Regards,

Robert J Hamlet  
State of New Mexico  
Energy, Minerals, and Natural Resources  
Oil Conservation Division  
811 S. First St., Artesia NM 88210  
(575) 840-5963  
[Robert.Hamlet@state.nm.us](mailto:Robert.Hamlet@state.nm.us)

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

**From:** Melodie Sanjari <melodie.sanjari@soudermiller.com>  
**Sent:** Wednesday, May 15, 2019 3:29 PM  
**To:** Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>  
**Cc:** John Hurt <JHurt@matadorresources.com>; Heather Patterson <heather.patterson@soudermiller.com>  
**Subject:** [EXT] RE: Janie Conner Tank Battery Closure Report 2RP-5289

Good Afternoon All,

Please find the attached Closure Report associated with 2RP-5289; the Janie Conner Tank Battery. I know we discussed this one at length in person, if you have any questions or concerns please do not hesitate to reach out.

Have a lovely rest of your week!

**Melodie Sanjari**  
Staff Scientist



**Souder, Miller & Associates**

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Incident ID	
District RP	2RP-5289
Facility ID	
Application ID	

## Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	35-40 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

### **Characterization Report Checklist:** *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.



## Oil Conservation Division

Incident ID	
District RP	2RP-5289
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: John Hurt Title: RES Specialist

Signature:  Date: 5/14/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

**OCD Only**

Received by: Robert Hamlet Date: 5/24/2019

State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	2RP-5289
Facility ID	
Application ID	

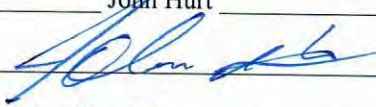
## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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Printed Name: John Hurt Title: RES Specialist  
Signature:  Date: 5/14/19  
email: JHurt@matadorresources.com Telephone: 972-371-5200

**OCD Only**

Received by: Robert Hamlet Date: 5/24/2019

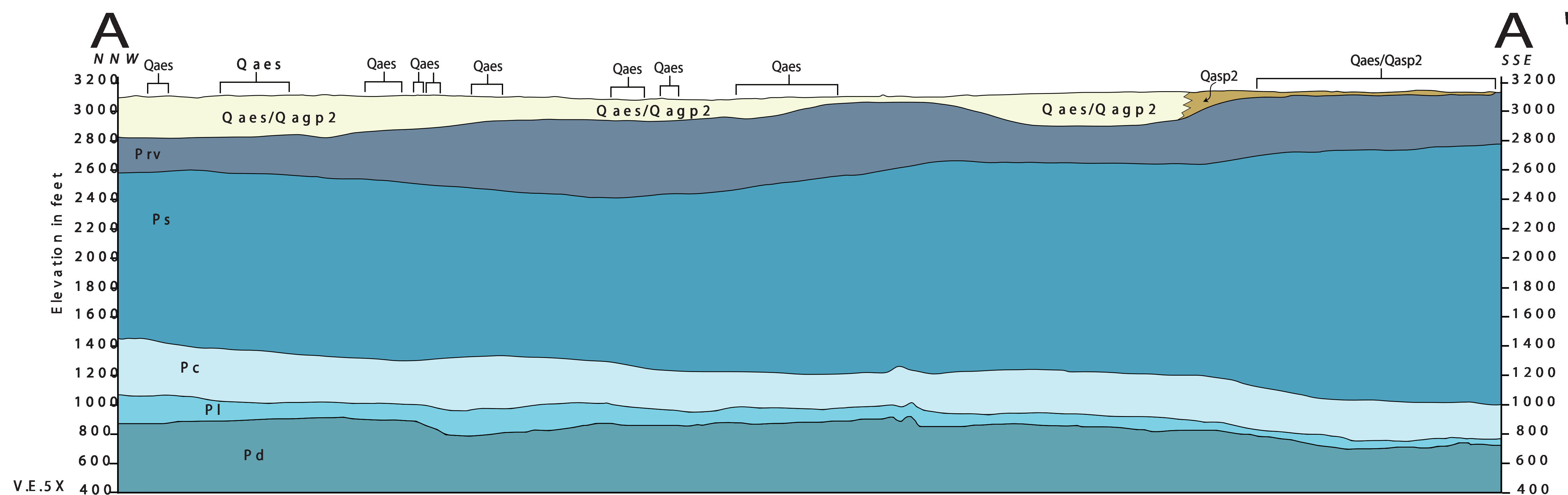
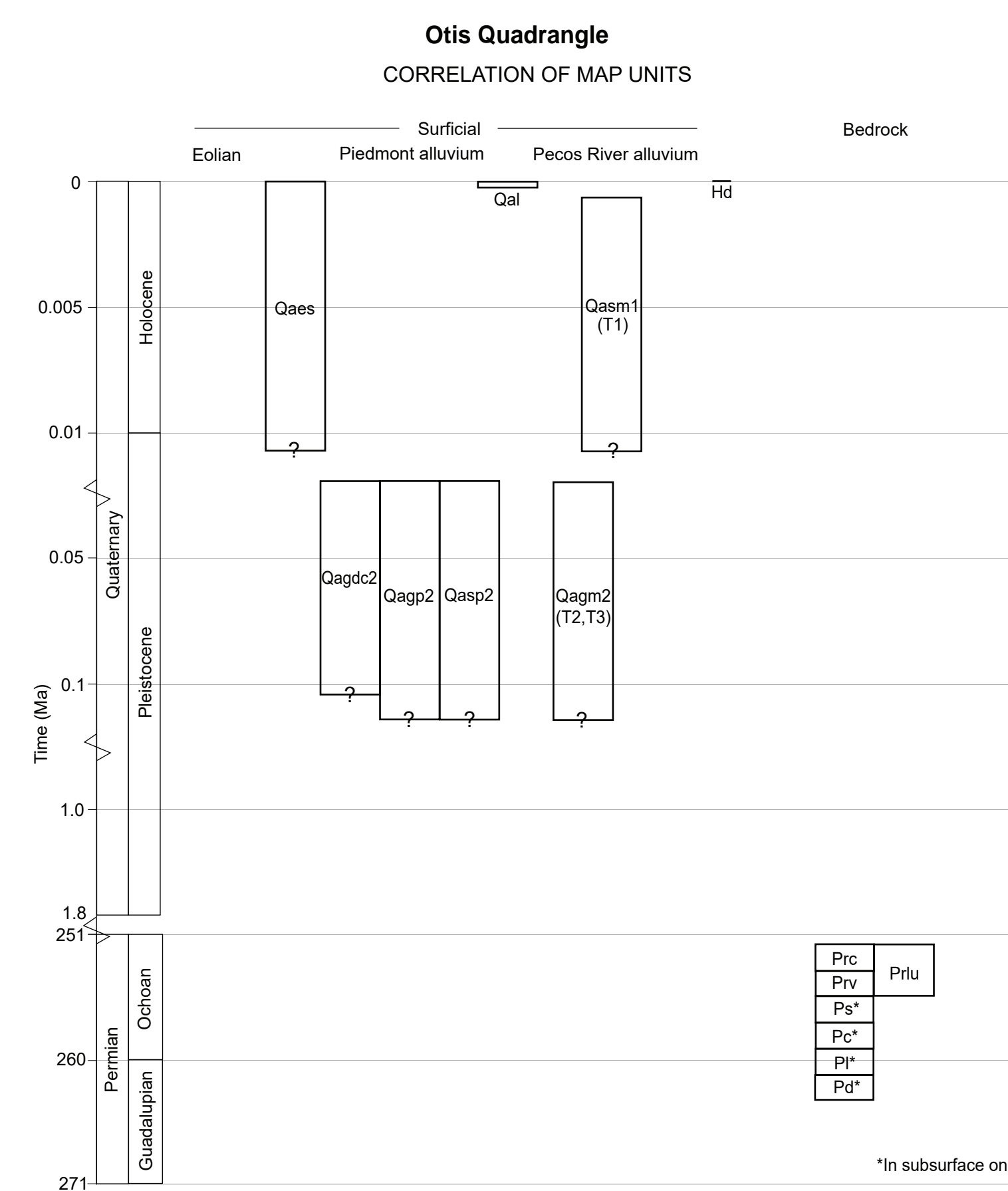
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 5/24/2019  
Printed Name: Robert Hamlet Title: Environmental Eng. Tech. III





**Pd-Permian Delaware Mountain Group, undifferentiated (Guadalupian)**—In cross section only. Sandstone, siltstone, and shale with subordinate limestone., >~150 m thick.





District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
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District III  
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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 August 8, 2011  
Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

NAB1704368889

## OPERATOR

x ☐ Initial Report ☐ Final Report

Name of Company Matador Resources Company 2289137	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

Surface Owner Fee	Mineral Owner Fee	API No. 30-015-43018
-------------------	-------------------	----------------------

## LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 359	North/South Line N	Feet from the 217	East/West Line W	County Eddy
------------------	---------------	-----------------	--------------	----------------------	-----------------------	----------------------	---------------------	----------------

Latitude 32.194817 Longitude 104.0487226

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~100BBLs	Volume Recovered 80BBLs
Source of Release pipeline	Date and Hour of Occurrence Feb 3, 2017 7am	Date and Hour of Discovery Feb 3, 2017 7:30am
Was Immediate Notice Given? Required x <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Crystal Weaver, voicemail	
By Whom? Catherine Green	Date and Hour Feb. 3 2017 12:07pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes x <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Water recycling facility at Tiger was on Emergency Shut Down. Lease operator went to Paul location that sends water to Tiger. Found that separator Shut Down Valve had failed to close. Lease operator drove right of way to Tiger and found produced water on ground at (~32°11'52", 104°2'55".179999). Well shut in to isolate line, vacuum truck called. Excavator dug down at spill sight, located pipe with hole in it. Crew replaced section of pipe. Excavated area currently fenced off. Vacuum truck removed 80 barrels of produced water. Replaced Shut Down Valve on separator.

Describe Area Affected and Cleanup Action Taken.\*

Approximately 1,165 square yards of surface impacted. ~~Remove and replace impacted soil.~~

per conversation with operator this sentence has been revised.

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: Catherine Green		OIL CONSERVATION DIVISION	
Printed Name: Catherine Green		Approved by Environmental Specialist: Crystal Weaver	
Title: Regulatory Analyst		Approval Date: 2/13/17	Expiration Date: N/A
E-mail Address: cgreen@matadorresources.com		Conditions of Approval: COA's attached	
Date: Feb 6, 2017 Phone: 575-627-2453		Attached <input checked="" type="checkbox"/>	

\* Attach Additional Sheets If Necessary

2RP-4113

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

NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141  
Revised August 8, 2011

Submit Copy to appropriate District Office in accordance with 19.15.29 NMAC.  
FEB 06 2017

RECEIVED

## Release Notification and Corrective Action

## OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Matador Resources Company	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

Surface Owner Fee	Mineral Owner Fee	API No. 30-015-43018
-------------------	-------------------	----------------------

## LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 399	North/South Line N	Feet from the 217	East/West Line W	County Eddy
------------------	---------------	-----------------	--------------	----------------------	-----------------------	----------------------	---------------------	----------------

Latitude 32.194817

Longitude -104.0487226

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~100BBLs	Volume Recovered 80BBLs
Source of Release pipeline	Date and Hour of Occurrence Feb 3, 2017 7am	Date and Hour of Discovery Feb 3, 2017 7:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Crystal Weaver, voicemail	
By Whom? Catherine Green	Date and Hour Feb. 3 2017 12:07pm	
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.\*

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Water recycling facility at Tiger was on Emergency Shut Down. Lease operator went to Paul location that sends water to Tiger. Found that separator Shut Down Valve had failed to close. Lease operator drove right of way to Tiger and found produced water on ground at (~32°11'52", 104°2'55".179999). Well shut in to isolate line, vacuum truck called. Excavator dug down at spill sight, located pipe with hole in. Crew replaced section of pipe. Excavated area currently fenced off. Vacuum truck removed 80 barrels of produced water. Replaced Shut Down Valve on separator.

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Signature: Catherine Green		OIL CONSERVATION DIVISION	
		Approved by Environmental Specialist: Crystal Weaver	
Printed Name: Catherine Green		Approval Date:	Expiration Date:
Title: Regulatory Analyst		Conditions of Approval:	
E-mail Address: cgreen@matadorresources.com		Attached <input checked="" type="checkbox"/>	
Date: Feb 6, 2017 Phone: 575-627-2453		COAs attached + delineation is required before impact can be assessed	

\* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **2/6/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number ARP-4113 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 3/21/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

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

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

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

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

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

**Jim Griswold**

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

## Weaver, Crystal, EMNRD

---

**From:** Catherine Green <CGreen@matadorresources.com>  
**Sent:** Wednesday, February 8, 2017 2:17 PM  
**To:** Weaver, Crystal, EMNRD  
**Subject:** Re: C-14120110808 Paul Pipeline Incident Feb 3 2017

Crystal,

Sorry. The plan is to remove and replace impacted soil. It has not happened yet. We have stopped the leak, and replaced the section of pipe that was leaking.

We will wait for you to approve a work plan before we touch the soil.

Hopefully this is more clear.

Thanks,

**Catherine Green**  
Regulatory Analyst  
575-627-2453 –office  
720-220-7482 - mobile  
972-629-2153 –direct fax

On Feb 8, 2017, at 1:48 PM, Weaver, Crystal, EMNRD <[Crystal.Weaver@state.nm.us](mailto:Crystal.Weaver@state.nm.us)> wrote:

Hello Catherine,

I have looked over your initial C-141 and noticed something I needed to clarify that was mentioned in the section titled "Describe Area Affected and Cleanup Action Taken" (I attached your initial C-141 with my markings on it for your reference). In that section you mentioned that your organization had found the leak in the pipeline and dug out what was presumed to be the impacted soil material and then replaced it with clean soil material. If that is misunderstood then I apologize in advance. However, unless a full delineation and sampling was already done, I must now after the fact, still request it be done. We are getting very specific directives from our superiors to move forward with things to be done in the order requested within the Conditions of Approval (COA's). Immediate response actions are not to be discouraged, but delineation is still required along with verification sampling.

Thank you very kindly madam,

**Crystal Weaver**  
Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101

Cell: 575-840-5963

Fax: 575-748-9720

---

**From:** Catherine Green [mailto:CGreen@matadorresources.com]

**Sent:** Monday, February 6, 2017 1:38 PM

**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>

**Subject:** C-14120110808 Paul Pipeline Incident Feb 3 2017

Crystal or Mike,

Please find attached the C-141 for the Paul incident that occurred Friday, Feb. 3, 2017. I left Crystal a message concerning the issue. We will file a work plan.

Kind Regards,

Catherine Green  
Regulatory Analyst  
575-627-2453-Office  
720-220-7482-Mobile

This transmission is strictly confidential. If you are not the intended recipient of this message, you may not disclose, print, copy or disseminate this information. If you have received this in error, please reply and notify the sender (only) and delete the message. Unauthorized interception of this e-mail is a violation of federal criminal law. This communication does not reflect an intention by the sender or the sender's client or principal to conduct a transaction or make any agreement by electronic means. Nothing contained in this message or in any attachment shall satisfy the requirements for a writing, and nothing contained herein shall constitute a contract or electronic signature under the Electronic Signatures in Global and National Commerce Act, any version of the Uniform Electronic Transactions Act or any other statute governing electronic transactions.

<Matador Paul 25 Initial C-141 comments.pdf>

## Weaver, Crystal, EMNRD

---

**From:** Weaver, Crystal, EMNRD  
**Sent:** Monday, February 6, 2017 3:30 PM  
**To:** Catherine Green; Bratcher, Mike, EMNRD  
**Subject:** RE: C-14120110808 Paul Pipeline Incident Feb 3 2017

Hello Madam,

Thank you Miss Catherine. I have been hopping and bopping around for the last few weeks, but I do want you to know that yes ma'am I got your voice message. Thank you for keeping us current on this one. I will get it back to you with the COA's along with it ASAP.

Sincerely,

### Crystal Weaver

Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
Cell: 575-840-5963  
Fax: 575-748-9720

---

**From:** Catherine Green [mailto:CGreen@matadorresources.com]  
**Sent:** Monday, February 6, 2017 1:38 PM  
**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>  
**Subject:** C-14120110808 Paul Pipeline Incident Feb 3 2017

Crystal or Mike,

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Kind Regards,

Catherine Green  
Regulatory Analyst  
575-627-2453-Office  
720-220-7482-Mobile

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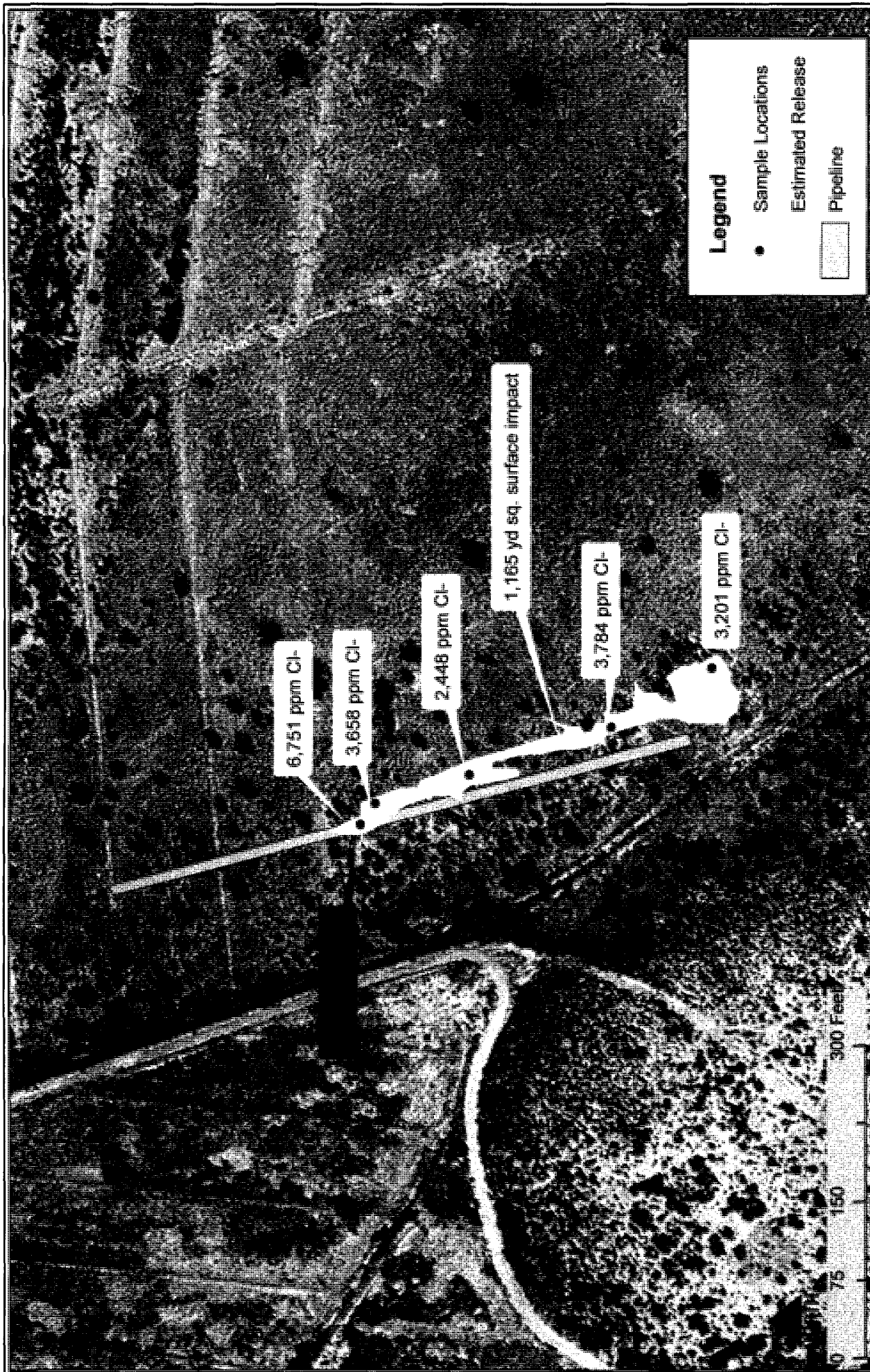


Figure 2

Detailed Site and Sample Map  
Paul 25 24S 28E RB #221H- Matador Resources  
Malaja , New Mexico

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



Lucas Middleton  
Drawn \_\_\_\_\_  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_

Revisions  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
Copyright 2015 Souder, Miller & Associates - All Rights Reserved

Date Saved: 2/9/2017

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
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State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

ARTESIA DISTRICT  
Feb 10, 2017  
RECEIVED  
Form C-141  
Revised August 8, 2011  
Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

## OPERATOR

x ☐ Initial Report ☐ Final Report

Name of Company Matador Resources Company 228437	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

Surface Owner Fee	Mineral Owner Fee	API No. 30-015-43018
-------------------	-------------------	----------------------

## LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 359	North/South Line N	Feet from the 217	East/West Line W	County Eddy
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Latitude 32.194817 Longitude -104.0487226

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~100BBLs	Volume Recovered 80BBLs
Source of Release pipeline	Date and Hour of Occurrence Feb 3, 2017 7am	Date and Hour of Discovery Feb 3, 2017 7:30am
Was Immediate Notice Given? Required x <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Crystal Weaver, voicemail	
By Whom? Catherine Green	Date and Hour Feb. 3 2017 12:07pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes x <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

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per conversation with operator this sentence has been revised.

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## OIL CONSERVATION DIVISION

Signature: Catherine Green

Printed Name: Catherine Green

Title: Regulatory Analyst

E-mail Address: cgreen@matadorresources.com

Date: Feb 6, 2017

Phone: 575-627-2453

Approved by Environmental Specialist

Approval Date: 2/13/17

Expiration Date: N/A

Conditions of Approval:

COA's attached

Attached ☒

\* Attach Additional Sheets If Necessary



District I  
1625 N. French Dr., Hobbs, NM 88240  
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State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

Form C-141  
Revised August 8, 2011

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

FEB 06 2017

RECEIVED

# Release Notification and Corrective Action

## OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Matador Resources Company	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

Surface Owner Fee	Mineral Owner Fee	API No. 30-015-43018
-------------------	-------------------	----------------------

## LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 339	North/South Line N	Feet from the 217	East/West Line W	County Eddy
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Latitude 32.194817

Longitude -104.0487226

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~100BBLs	Volume Recovered 80BBLs
Source of Release pipeline	Date and Hour of Occurrence Feb 3, 2017 7am	Date and Hour of Discovery Feb 3, 2017 7:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Crystal Weaver, voicemail	
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Water recycling facility at Tiger was on Emergency Shut Down. Lease operator went to Paul location that sends water to Tiger. Found that separator Shut Down Valve had failed to close. Lease operator drove right of way to Tiger and found produced water on ground at (~32°11'52", 104°2'55".179999). Well shut in to isolate line, vacuum truck called. Excavator dug down at spill sight, located pipe with hole 1 in. Crew replaced section of pipe. Excavated area currently fenced off. Vacuum truck removed 80 barrels of produced water. Replaced Shut Down Valve on separator.

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## OIL CONSERVATION DIVISION

Signature: Catherine Green

Printed Name: Catherine Green

Title: Regulatory Analyst

E-mail Address: cgreen@matadorresources.com

Date: Feb 6, 2017

Phone: 575-627-2453

Approved by Environmental Specialist:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☒

\* Attach Additional Sheets If Necessary

COAs attached +  
delineation is required  
before impact can be assessed

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **2/6/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number IRP-4113 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

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

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**Jim Griswold**

OCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us

**Weaver, Crystal, EMNRD**

---

**From:** Catherine Green <CGreen@matadorresources.com>  
**Sent:** Wednesday, February 8, 2017 2:17 PM  
**To:** Weaver, Crystal, EMNRD  
**Subject:** Re: C-14120110808 Paul Pipeline Incident Feb 3 2017

Crystal,

Sorry. The plan is to remove and replace impacted soil. It has not happened yet. We have stopped the leak, and replaced the section of pipe that was leaking.

We will wait for you to approve a work plan before we touch the soil.

Hopefully this is more clear.

Thanks,

**Catherine Green**  
Regulatory Analyst  
575-627-2453 –office  
720-220-7482 - mobile  
972-629-2153 –direct fax

On Feb 8, 2017, at 1:48 PM, Weaver, Crystal, EMNRD <[Crystal.Weaver@state.nm.us](mailto:Crystal.Weaver@state.nm.us)> wrote:

Hello Catherine,

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Thank you very kindly madam,

**Crystal Weaver**  
Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101

Cell: 575-840-5963

Fax: 575-748-9720

**From:** Catherine Green [mailto:CGreen@matadorresources.com]

**Sent:** Monday, February 6, 2017 1:38 PM

**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>

**Subject:** C-14120110808 Paul Pipeline Incident Feb 3 2017

Crystal or Mike,

Please find attached the C-141 for the Paul incident that occurred Friday, Feb. 3, 2017. I left Crystal a message concerning the issue. We will file a work plan.

Kind Regards,

Catherine Green

Regulatory Analyst

575-627-2453-Office

720-220-7482-Mobile

This transmission is strictly confidential. If you are not the intended recipient of this message, you may not disclose, print, copy or disseminate this information. If you have received this in error, please reply and notify the sender (only) and delete the message. Unauthorized interception of this e-mail is a violation of federal criminal law. This communication does not reflect an intention by the sender or the sender's client or principal to conduct a transaction or make any agreement by electronic means. Nothing contained in this message or in any attachment shall satisfy the requirements for a writing, and nothing contained herein shall constitute a contract or electronic signature under the Electronic Signatures in Global and National Commerce Act, any version of the Uniform Electronic Transactions Act or any other statute governing electronic transactions.

<Matador Paul 25 Initial C-141 comments.pdf>



**Weaver, Crystal, EMNRD**

---

**From:** Weaver, Crystal, EMNRD  
**Sent:** Monday, February 6, 2017 3:30 PM  
**To:** Catherine Green; Bratcher, Mike, EMNRD  
**Subject:** RE: C-14120110808 Paul Pipeline Incident Feb 3 2017

Hello Madam,

Thank you Miss Catherine. I have been hopping and bopping around for the last few weeks, but I do want you to know that yes ma'am I got your voice message. Thank you for keeping us current on this one. I will get it back to you with the COA's along with it ASAP.

Sincerely,

**Crystal Weaver**  
Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
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**Sent:** Monday, February 6, 2017 1:38 PM  
**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>  
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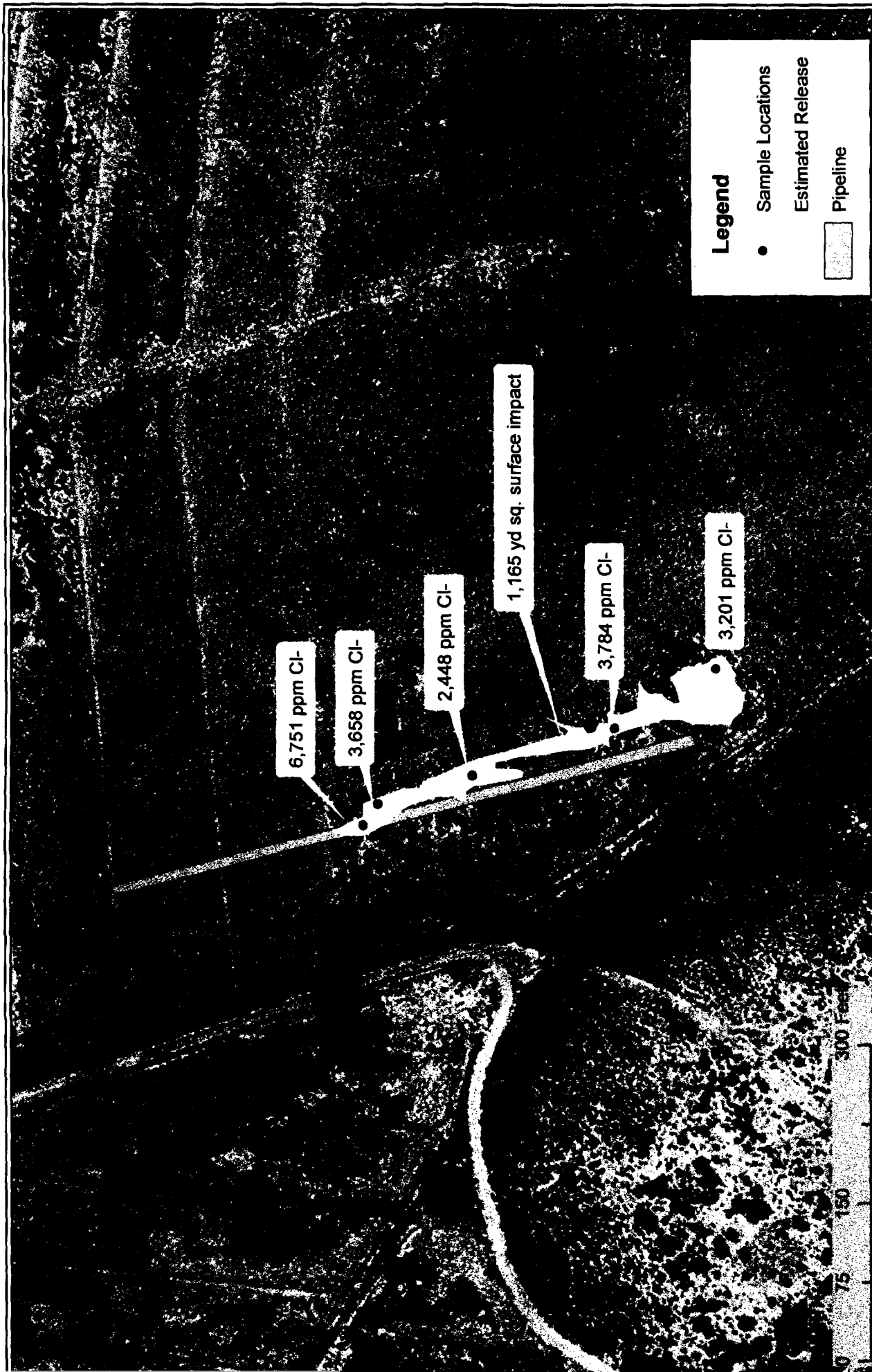
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**Legend**

• Sample Locations

Estimated Release

Pipeline

Figure 2

Detailed Site and Sample Map  
Paul 25 24S 28E RB #221H- Matador Resources  
Malaja, New Mexico

Drawn \_\_\_\_\_  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_

Revisions  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
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Date Saved: 2/9/2017



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

**From:** Lucas Middleton  
**To:** [Weaver, Crystal, EMNRD](#)  
**Subject:** New Paul Release  
**Date:** Thursday, February 9, 2017 12:11:23 PM  
**Attachments:** [image001.png](#)  
[PAUL2 Figure 2.pdf](#)

---

Hello,

I have attached the sample map for the new Matador Paul Release. Is there an RP assigned to this yet?

Lucas Middleton  
Staff Scientist  
(575) 689-5351 (mobile)

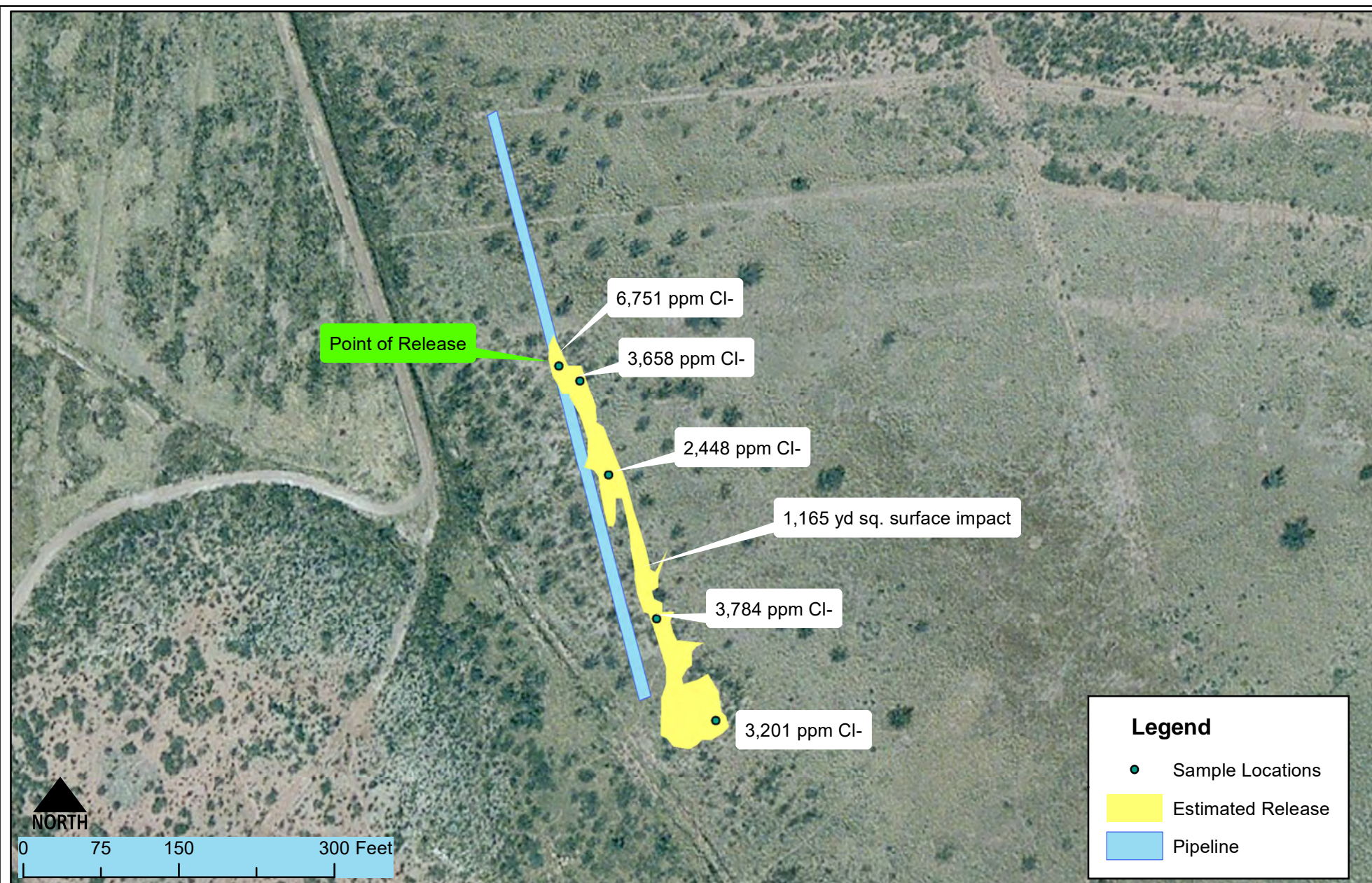


Souder, Miller & Associates  
Engineering   Environmental   Surveying  
201 S. Halagueno  
Carlsbad, NM 88220  
[www.soudermiller.com](http://www.soudermiller.com)

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Detailed Site and Sample Map  
 Paul 25 24S 28E RB #221H- Matador Resources  
 Malaja , New Mexico

Figure 2

Date Saved:  
2/9/2017

By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
 By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
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Drawn Lucas Middleton  
 Checked \_\_\_\_\_  
 Approved \_\_\_\_\_



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District II  
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District III  
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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 August 8, 2011  
Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

NAB1704368889

OPERATOR

x ☐ Initial Report ☐ Final Report

Name of Company Matador Resources Company 2289137	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

Surface Owner Fee	Mineral Owner Fee	API No. 30-015-43018
-------------------	-------------------	----------------------

## LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 359	North/South Line N	Feet from the 217	East/West Line W	County Eddy
------------------	---------------	-----------------	--------------	----------------------	-----------------------	----------------------	---------------------	----------------

Latitude 32.194817 Longitude -104.0487226

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~100BBLs	Volume Recovered 80BBLs
Source of Release pipeline	Date and Hour of Occurrence Feb 3, 2017 7am	Date and Hour of Discovery Feb 3, 2017 7:30am
Was Immediate Notice Given? Required x <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Crystal Weaver, voicemail	
By Whom? Catherine Green	Date and Hour Feb. 3 2017 12:07pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes x <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Water recycling facility at Tiger was on Emergency Shut Down. Lease operator went to Paul location that sends water to Tiger. Found that separator Shut Down Valve had failed to close. Lease operator drove right of way to Tiger and found produced water on ground at (~32°11'52", 104°2'55".179999). Well shut in to isolate line, vacuum truck called. Excavator dug down at spill sight, located pipe with hole in it. Crew replaced section of pipe. Excavated area currently fenced off. Vacuum truck removed 80 barrels of produced water. Replaced Shut Down Valve on separator.

Describe Area Affected and Cleanup Action Taken.\*

Approximately 1,165 square yards of surface impacted. ~~Remove and replace impacted soil.~~

per conversation with operator this sentence has been revised.

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Signature: Catherine Green		OIL CONSERVATION DIVISION	
Printed Name: Catherine Green		Approved by Environmental Specialist: Crystal Weaver	
Title: Regulatory Analyst		Approval Date: 2/13/17	Expiration Date: N/A
E-mail Address: cgreen@matadorresources.com		Conditions of Approval: COA's attached	
Date: Feb 6, 2017 Phone: 575-627-2453		Attached <input checked="" type="checkbox"/>	

\* Attach Additional Sheets If Necessary

2RP-4113

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NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141  
Revised August 8, 2011

Submit Copy to appropriate District Office in accordance with 19.15.29 NMAC.  
FEB 06 2017

RECEIVED

## Release Notification and Corrective Action

## OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Matador Resources Company	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

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Printed Name: Catherine Green

Title: Regulatory Analyst

E-mail Address: cgreen@matadorresources.com

Date: Feb 6, 2017

Phone: 575-627-2453

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Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☒

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OCD Environmental Bureau Chief  
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**Crystal Weaver**  
Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101

Cell: 575-840-5963

Fax: 575-748-9720

---

**From:** Catherine Green [mailto:CGreen@matadorresources.com]

**Sent:** Monday, February 6, 2017 1:38 PM

**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>

**Subject:** C-14120110808 Paul Pipeline Incident Feb 3 2017

Crystal or Mike,

Please find attached the C-141 for the Paul incident that occurred Friday, Feb. 3, 2017. I left Crystal a message concerning the issue. We will file a work plan.

Kind Regards,

Catherine Green  
Regulatory Analyst  
575-627-2453-Office  
720-220-7482-Mobile

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<Matador Paul 25 Initial C-141 comments.pdf>

## Weaver, Crystal, EMNRD

---

**From:** Weaver, Crystal, EMNRD  
**Sent:** Monday, February 6, 2017 3:30 PM  
**To:** Catherine Green; Bratcher, Mike, EMNRD  
**Subject:** RE: C-14120110808 Paul Pipeline Incident Feb 3 2017

Hello Madam,

Thank you Miss Catherine. I have been hopping and bopping around for the last few weeks, but I do want you to know that yes ma'am I got your voice message. Thank you for keeping us current on this one. I will get it back to you with the COA's along with it ASAP.

Sincerely,

### Crystal Weaver

Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
Cell: 575-840-5963  
Fax: 575-748-9720

---

**From:** Catherine Green [mailto:CGreen@matadorresources.com]  
**Sent:** Monday, February 6, 2017 1:38 PM  
**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>  
**Subject:** C-14120110808 Paul Pipeline Incident Feb 3 2017

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Please find attached the C-141 for the Paul incident that occurred Friday, Feb. 3, 2017. I left Crystal a message concerning the issue. We will file a work plan.

Kind Regards,

Catherine Green  
Regulatory Analyst  
575-627-2453-Office  
720-220-7482-Mobile

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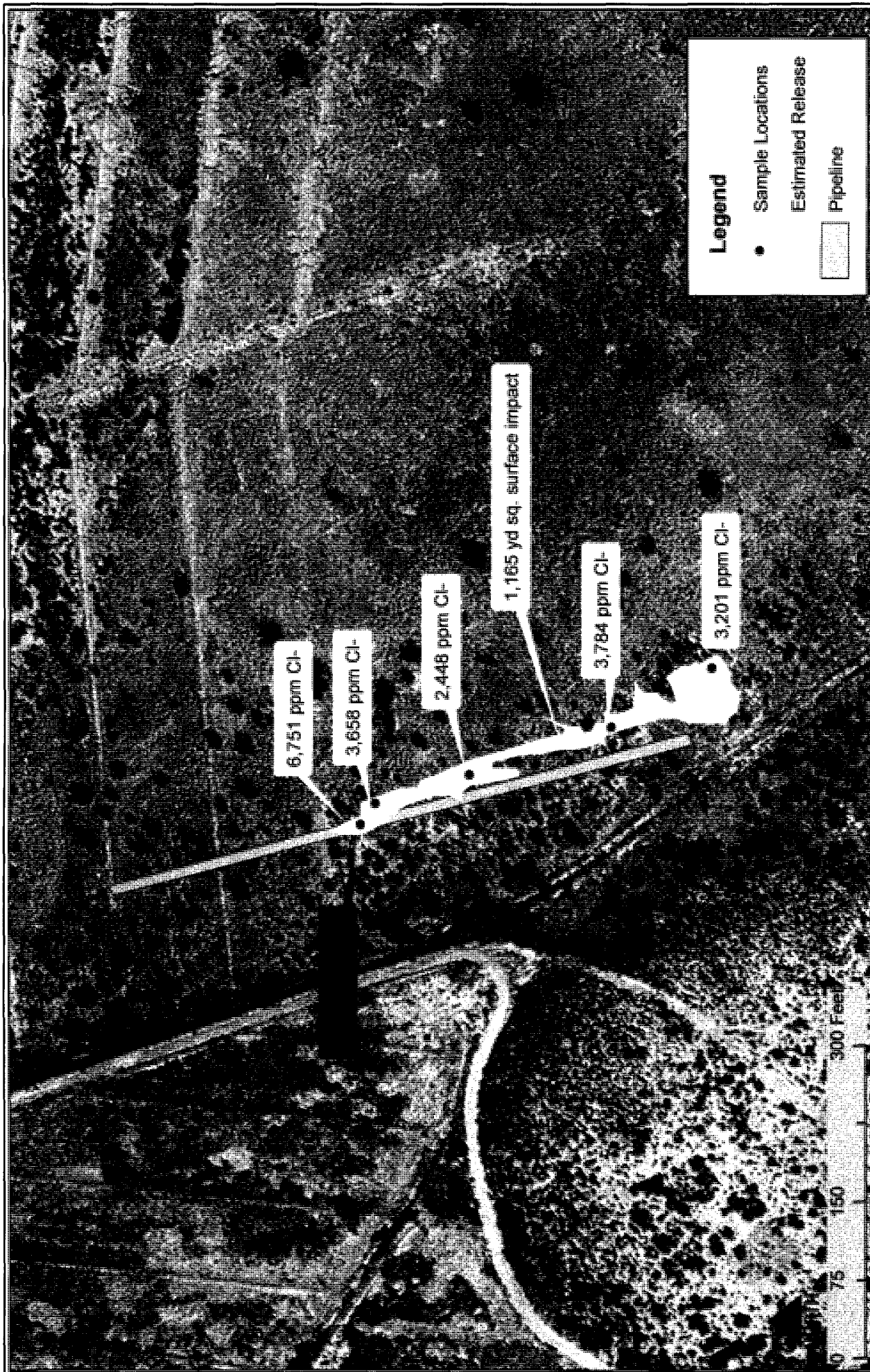


Figure 2

Detailed Site and Sample Map  
Paul 25 24S 28E RB #221H- Matador Resources  
Malaja , New Mexico

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



Lucas Middleton  
Drawn \_\_\_\_\_  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_

Revisions  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
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Date Saved: 2/9/2017

**From:** [Weaver, Crystal, EMNRD](#)  
**To:** [Catherine Green](#); [Bratcher, Mike, EMNRD](#)  
**Cc:** [Lucas Middleton](#)  
**Subject:** RE: C-14120110808 Paul Pipeline Incident Feb 3 2017  
**Date:** Wednesday, February 22, 2017 2:21:00 PM  
**Attachments:** [3. 4113 - COAs & signed C-141 intial.pdf](#)

---

RE: Matador Resources Co. \* Paul 25 24S 28E RB #221H \* 30-015-43018 \* DOR – 2/3/17 \* 2RP-4113

Catherine,

I have included a scanned copy of the signed Initial C-141 Remediation Permit along with an attached Conditions of Approval. The OCD tracking number for this event is 2RP-4113.

Thank you,

## Crystal Weaver

Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
Cell: 575-840-5963  
Fax: 575-748-9720

---

**From:** Catherine Green [mailto:CGreen@matadorresources.com]  
**Sent:** Monday, February 6, 2017 1:38 PM  
**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>  
**Subject:** C-14120110808 Paul Pipeline Incident Feb 3 2017

Crystal or Mike,

Please find attached the C-141 for the Paul incident that occurred Friday, Feb. 3, 2017. I left Crystal a message concerning the issue. We will file a work plan.

Kind Regards,

Catherine Green  
Regulatory Analyst  
575-627-2453-Office  
720-220-7482-Mobile

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**From:** Catherine Green  
**To:** [Weaver, Crystal, EMNRD](#)  
**Cc:** [Lucas Middleton](#)  
**Subject:** Paul Incident Feb 3 2RP-4113  
**Date:** Monday, March 20, 2017 3:51:48 PM  
**Attachments:** [WORK PLAN FOR INCIDENT 2RP-4113, PAUL 25 24S 28E RB 221H, v2.pdf](#)

---

Crystal,

Please find attached the Work Plan for the Paul Pipeline Incident that occurred on Feb 3, 2017 (pipeline incident #2). We look forward to clearing this incident. Thank you for your patience as the work plan was being prepared.

Kind Regards,

Catherine Green  
Regulatory Analyst  
575-627-2453-Office  
720-220-7482-Mobile

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Souder, Miller & Associates ♦ 201 S. Halagueno ♦ Carlsbad, NM 88221  
(575) 689-7040

March 6, 2017

#5E25774-BG7

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

SUBJECT: WORK PLAN FOR INCIDENT 2RP-4113, PAUL 25 24S 28E RB #221H, UNIT I SECTION 25-T24S-R28E NMPM,  
API# 30-015-43018, EDDY COUNTY, NEW MEXICO

Dear Crystal Weaver:

On behalf of Matador Production Company, Souder Miller & Associates is pleased to submit a work plan summarizing the planned soil remediation for the release site located at the Paul 25 24S 28E RB #221H in Eddy County, New Mexico. The purpose of the work plan is to obtain approval from the New Mexico Oil Conservation Division (NMOCD) for the remediation of the release that occurred on fee lands on February 3, 2017.

Souder, Miller & Associates (SMA) responded at the request of Matador, to assess and delineate the release of production water associated with the Paul 25 24S 28E RB #221H well location. The release was initially reported to NMOCD by Matador Production Company, on February 6, 2017 and was a result of Water recycling facility at Tiger was on Emergency Shut Down. Lease operator went to Paul location that sends water to Tiger. Found that separator Shut Down Valve had failed to close. The table below summarizes information regarding the release. Results of the assessment, delineation are described in the following report.

Table 1: Release information and Site Ranking					
Name	Paul 25 24S 28E RB #221H				
Company	Matador Production Company				
Location	Incident Number	API Number	Section, Township, Range		
	2RP-4113	30-015-43018	NW/NW (Unit D)	Section 25	T24S, R28E NMPM
Estimated Date of Release	February 3, 2017				
Date Reported to NMOCD	February 6, 2017				
Reported by	Catherine Green				
Land Owner	Fee				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Pipeline				



Paul 25 24S 28E RB #221H Work Plan

SMA Ref #5E25774-BG7

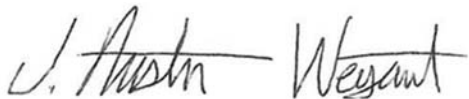
3/6/2017

Released Volume	Estimated 100 bbls
Recovered Volume	80 bbls
Nearest Waterway	Nearest surface water is 1.3 miles east of Willow Lake
Depth to Groundwater	Approximately 49' bgs
Nearest Domestic Water Source	Nearest well is 0.39 miles south of the location
NMOCD Ranking	20
SMA Response Dates	February 20, 2017
Subcontractors	TBD
Disposal Facility	Lea Land
Estimated Cubic Yards Contaminated Soil Excavated and Disposed	500

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

Submitted by:

SOUDER, MILLER &amp; ASSOCIATES



Austin Weyant  
Project Scientist

Reviewed by:



Cynthia Gray, CHMM  
Senior Scientist

Paul 25 24S 28E RB #221H Work Plan

SMA Ref #5E25774-BG7

3/6/2017

# SOIL REMEDIATION WORK PLAN FOR INCIDENT 2RP-4113

## MATADOR PRODUCTION COMPANY

PAUL 25 24S 28E RB #221H

UL D, SECTION 25, T24S R28E, NMPM

API #30-015-43018

EDDY COUNTY, NM



Prepared for:  
Matador Production Company  
PO Box 1933  
Roswell, NM 88202

Prepared by:  
Souder, Miller & Associates  
201 S. Halagueno  
Carlsbad, NM 88221  
575-689-704

March 6, 2017  
SMA Reference  
5E25774 BG7

Paul 25 24S 28E RB #221H Work Plan  
SMA Ref #5E25774-BG7  
3/6/2017

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Figure 2: Detailed Site and Sample Map

Tables:

Table 1: Release Information and Site Ranking  
Table 2: Summary Chloride Field Screening Results  
Table 3: Summary of Laboratory Analyses

Appendices:

Appendix A: Laboratory Analytical Reports  
Appendix B: Form C141 Initial  
Appendix C: NMOSE Water Column

Paul 25 24S 28E RB #221H Work Plan

SMA Ref #5E25774-BG7

3/6/2017

## 1.0 Introduction

On behalf of Matador Production Company, Souder, Miller & Associates (SMA) has prepared this report that describes the assessment, initial delineation and proposed remediation for a release associated with the Paul 25 24S 28E RB #221H location API# 30-015-43018. The site is located in Section 25, Township 24S, Range 28E NMPM, Eddy County, New Mexico, on fee lands. Figure 1 illustrates the vicinity and location of the site.

## 2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 1.3 miles east of the Willow Lake, with an elevation of approximately 2,934 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be 49 feet below ground surface (bgs).

SMA searched the New Mexico State Engineer's Office online water well database for water wells in the vicinity of the release. Two wells are located within a one mile radius of the site. Figure 1 depicts the site vicinity and Figure 2 shows the site itself. The physical location of this release is on private property and is within the jurisdiction of NMOCD.

Based on the NMOCD Guidelines Ranking Criteria, this release location has been assigned an NMOCD ranking of 20 which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 100 ppm total petroleum hydrocarbons (TPH). Table 1 illustrates the site ranking rationale.

## 3.0 Assessment and Initial Results

On February 20, 2017 after receiving 811 clearance, SMA field personnel assessed the remediated release area onsite with a gas powered auger, Photo Ionization Detector (PID), and a mobile chlorides titration kit EPA method 9045D meter. The proposed remediated release area was found to be approximately 420 feet long and 20 feet wide. The site delineation samples were taken to depths of 12 feet bgs. Specific sample locations for all samples are 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 total Chlorides using EPA Method 300.0.

## 4.0 Soil Remediation Work Plan

SMA will begin the excavation of affected soils, with approval from area utilities owners via 811 and NMOCD. SMA will continuously guide the excavation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500) and a calibrated PID. Excavation will occur to depths of two feet bgs to sufficiently remove the impacted materials to NMOCD requirements. Background chlorides for this area was previous sampled for incident 2RP-4008 and was found to be 3,000 ppm. All soil with a chloride level above the background sample will be removed. Affected soils will be removed from the area before closure samples are collected at the final depth of excavation and from the sidewalls. In the pipeline area the excavation will not occur four feet on each side of the pipeline due to pipeline safety. Excavation will occurred to two feet bgs over the pipeline. Hay then was added over pipeline to as a capillary break in the soil. Approximately 500 cubic yards of contaminated soil are projected to be removed and replaced with clean backfill material to return the surface to previous contours. The



Paul 25 24S 28E RB #221H Work Plan

SMA Ref #5E25774-BG7

3/6/2017

contaminated soil will be transported for proper disposal at Lea Land, near Carlsbad, NM, an NMOCD permitted disposal facility.

## 5.0 Conclusions and Recommendations

NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 20: 10 ppm (mg/kg) Benzene, 50 ppm total BTEX, and 100 ppm TPH

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

Soil contaminant concentrations found during the initial delineation are illustrated in Figure 2. A summary of the laboratory analyses is included in Table 2. Laboratory reports are included in Appendix A.

Photo documentation is available by request.

## 6.0 Closure and Limitations

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

If there are any questions regarding this report, please contact either Austin Weyant at 575-689-7040 or Cindy Gray at 505-325-7535.

Submitted by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant  
Project Scientist

Reviewed by:



Cynthia Gray, CHMM  
Senior Scientist

Paul 25 24S 28E RB #221H Work Plan  
SMA Ref #5E25774-BG7  
3/6/2017

**Figures:**

Figure 1: Vicinity Map

Figure 2: Detailed Site and Sample Map

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Table 2: Summary of Chloride Field Screening Results

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**Appendices:**

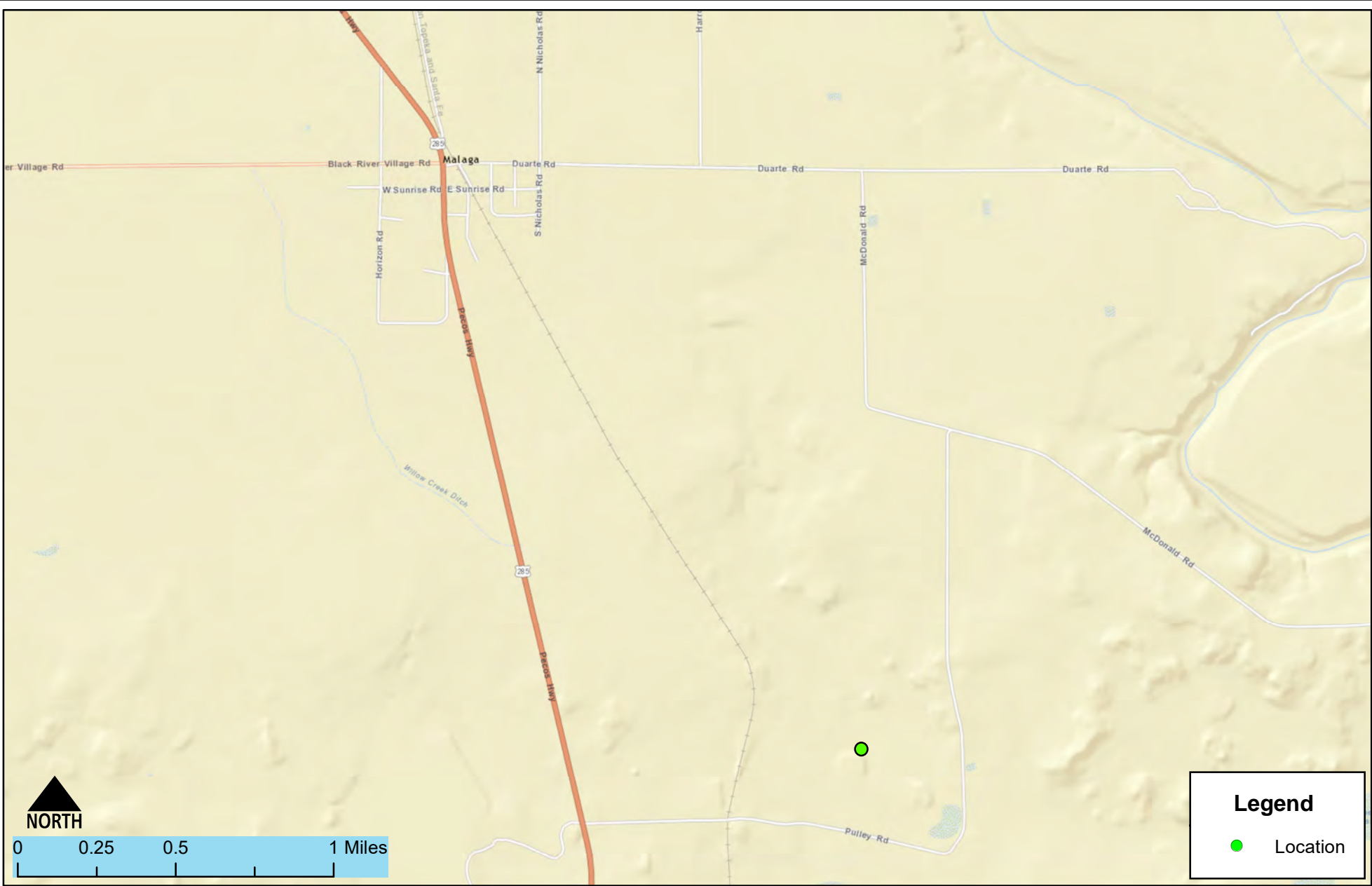
Appendix A: Laboratory Analytical Reports

Appendix B: Form C141 Initial

Appendix C: NMOSE Water Column

Paul 25 24S 28E RB #221H Work Plan  
SMA Ref #5E25774-BG7  
3/6/2017

# FIGURE 1 VICINITY MAP



Vicinity Map  
Paul 221H Matador  
Sec. 25 T24S, R28E, Eddy County, NM

Figure 1

Date Saved: 2/14/2017	By: _____	Date: _____	Revisions	Descr: _____
	By: _____	Date: _____		Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved				

Drawn	Lucas Middleton
Checked	_____
Approved	_____



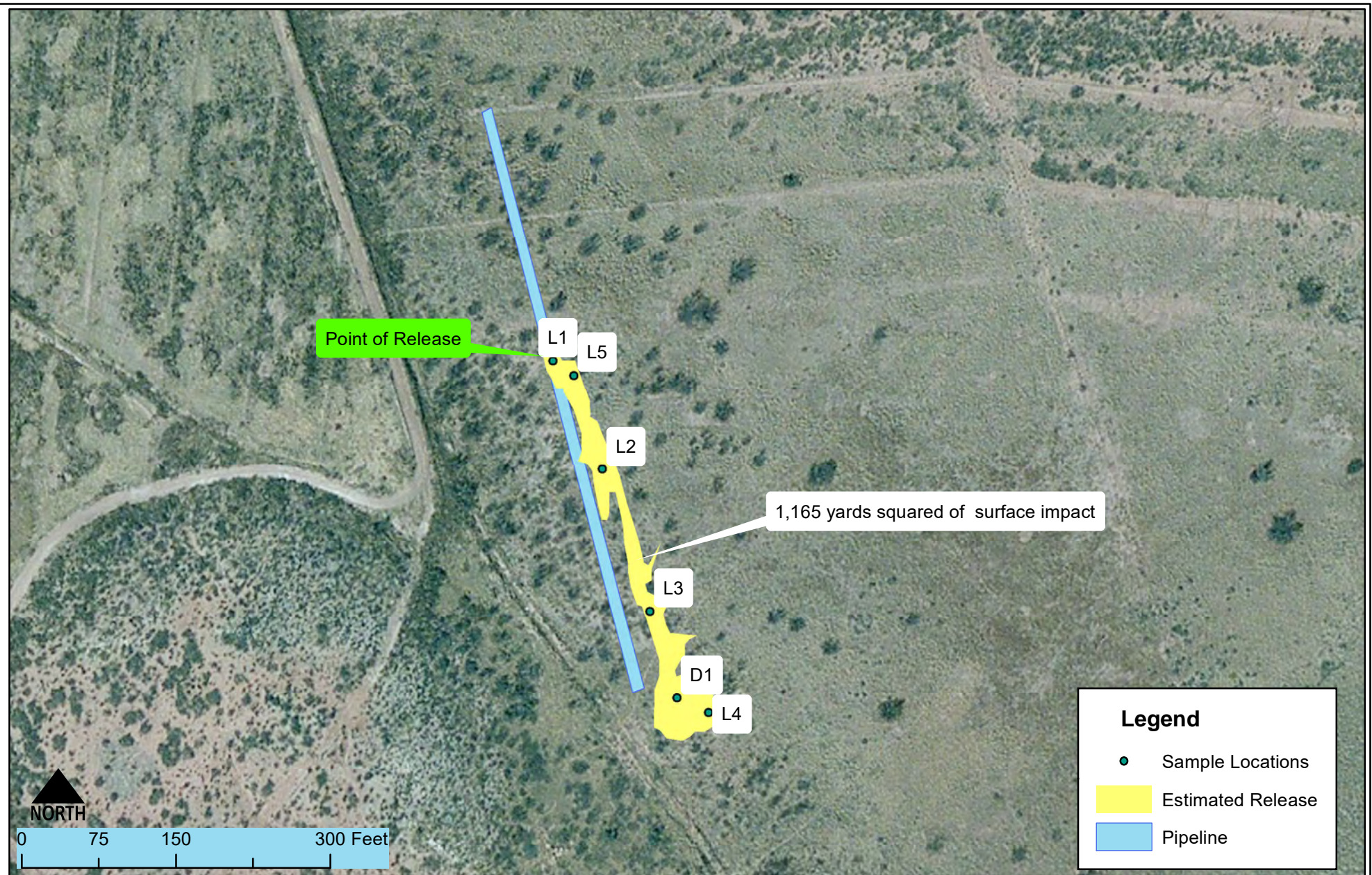
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SMA Ref #5E25774-BG7  
3/6/2017

# FIGURE 2

## DETAILED SITE AND SAMPLE MAP





Detailed Site and Sample Map  
 Paul 25 24S 28E RB #221H- Matador Resources  
 Malaja , New Mexico

Figure 2

Date Saved:  
3/6/2017

By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
 By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
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Drawn Lucas Middleton  
 Checked \_\_\_\_\_  
 Approved \_\_\_\_\_



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Paul 25 24S 28E RB #221H Work Plan

SMA Ref #5E25774-BG7

3/6/2017

# TABLE 1

## RELEASE INFORMATION AND SITE RANKING

Table 1: Release information and Site Ranking					
Name	Paul 25 24S 28E RB #221H				
Company	Matador Production Company				
Location	Incident Number	API Number	Section, Township, Range		
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Estimated Date of Release	February 3, 2017				
Date Reported to NMOCD	February 6, 2017				
Reported by	Catherine Green				
Land Owner	Private				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Pipeline				
Released Material	Produced water				
Released Volume	Estimated 100 bbls				
Recovered Volume	80 bbls				
Nearest Waterway	Nearest surface water is 1.3 miles east of Willow Lake				
Depth to Groundwater	Approximately 49' bgs				
Nearest Domestic Water Source	Nearest well is 0.39 miles south of the location				
NMOCD Ranking	20				
SMA Response Dates	February 20, 2017				
Subcontractors	TBD				
Disposal Facility	Lea Lad				
Estimated Cubic Yards Contaminated Soil Excavated and Disposed	500				

Paul 25 24S 28E RB #221H Work Plan  
SMA Ref #5E25774-BG7  
3/6/2017

# TABLE 2

## SUMMARY OF CHLORIDE FIELD SCREENING RESULTS

Table 2: Summary of Chloride Field Screening Results

Paul 25 24S 28E RB #221H

Sample Event

2/5/17, 2/20/17

FIELD SCREENING RESULTS SUMMARY					
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	Chlorides Results	Lab Sample Collected Y/N
2/5/2017	2:00	L1	Surface	6,025	N
2/5/2017	2:00	L2	Surface	3,600	N
2/5/2017	2:00	L3	Surface	3,205	N
2/5/2017	2:00	L4	Surface	3,650	N
2/5/2017	2:00	L5	Surface	2,976	N
2/20/2017	1:00	D1-2	2'	1,000	Y
2/20/2017	1:00	D1-12	12'	1,182	Y



Paul 25 24S 28E RB #221H Work Plan  
SMA Ref #5E25774-BG7  
3/6/2017

# TABLE 3

## SUMMARY OF LABORATORY ANALYSES

Table 3: Summary of Laboratory Analyses

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1702A45-001	L2-2	2/20/2017	2'	N/A	N/A	N/A	N/A	1100
1702A45-002	L2-12	2/20/2017	12'	N/A	N/A	N/A	N/A	1200



Paul 25 24S 28E RB #221H Work Plan  
SMA Ref #5E25774-BG7  
3/6/2017

# APPENDIX A

## LABORATORY ANALYTICAL REPORTS



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

March 02, 2017

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

RE: Paul 2

OrderNo.: 1702A45

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/23/2017 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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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: 1702A45

Date Reported: 3/2/2017

## Hall Environmental Analysis Laboratory, Inc.

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

**Lab Order:** 1702A45**Lab ID:** 1702A45-001**Collection Date:** 2/20/2017 1:00:00 PM**Client Sample ID:** D1-2**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	-----	------	-------	----	---------------	----------

**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	1100	30		mg/Kg	20	2/28/2017 6:17:00 PM	30454
----------	------	----	--	-------	----	----------------------	-------

**Lab ID:** 1702A45-002**Collection Date:** 2/20/2017 1:00:00 PM**Client Sample ID:** D1-12**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	-----	------	-------	----	---------------	----------

**EPA METHOD 300.0: ANIONS**

Analyst: LGT

Chloride	1200	75		mg/Kg	50	3/1/2017 10:47:51 PM	30454
----------	------	----	--	-------	----	----------------------	-------

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 1 of 2
	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#: 1702A45  
02-Mar-17

Client: Souder, Miller & Associates  
Project: Paul 2

Sample ID	MB-30454	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	30454	RunNo:	41047					
Prep Date:	2/28/2017	Analysis Date:	2/28/2017	SeqNo:	1286795	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-30454	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	30454	RunNo:	41047					
Prep Date:	2/28/2017	Analysis Date:	2/28/2017	SeqNo:	1286796	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.4	90	110			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

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

Page 2 of 2



Hall Environmental Analysis Laboratory  
 4900 Mancoske NE  
 Albuquerque, NM 87105  
 TEL: 505-345-3975 FAX: 505-345-4167  
 Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: SMA-CARLSRAD

Work Order Number: 1702A45

Rep/No: 1

Received by/date:

LM

02/23/17

Logged By: Andy Jansson

2/23/2017 9:20:00 AM

Completed By:

Andy Jansson 02/23/17

Reviewed By:

[Signature]

02/24/17

### Chain of Custody

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

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 ☐ # of preserved bottles checked for pH: ( $<2$  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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

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

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

[illegible]

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.



Paul 25 24S 28E RB #221H Work Plan  
SMA Ref #5E25774-BG7  
3/3/2017

# APPENDIX B

## FORM C141 INITIAL

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

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

Form C-141  
Revised August 8, 2011  
Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

NAB1704368889

OPERATOR

x ☐ Initial Report ☐ Final Report

Name of Company Matador Resources Company 2289137	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

Surface Owner Fee	Mineral Owner Fee	API No. 30-015-43018
-------------------	-------------------	----------------------

## LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 359	North/South Line N	Feet from the 217	East/West Line W	County Eddy
------------------	---------------	-----------------	--------------	----------------------	-----------------------	----------------------	---------------------	----------------

Latitude 32.194817 Longitude 104.0487226

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~100BBLs	Volume Recovered 80BBLs
Source of Release pipeline	Date and Hour of Occurrence Feb 3, 2017 7am	Date and Hour of Discovery Feb 3, 2017 7:30am
Was Immediate Notice Given? Required x <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Crystal Weaver, voicemail	
By Whom? Catherine Green	Date and Hour Feb. 3 2017 12:07pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes x <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Water recycling facility at Tiger was on Emergency Shut Down. Lease operator went to Paul location that sends water to Tiger. Found that separator Shut Down Valve had failed to close. Lease operator drove right of way to Tiger and found produced water on ground at (~32°11'52", 104°2'55".179999). Well shut in to isolate line, vacuum truck called. Excavator dug down at spill sight, located pipe with hole in it. Crew replaced section of pipe. Excavated area currently fenced off. Vacuum truck removed 80 barrels of produced water. Replaced Shut Down Valve on separator.

Describe Area Affected and Cleanup Action Taken.\*

Approximately 1,165 square yards of surface impacted. ~~Remove and replace impacted soil.~~

per conversation with operator this sentence has been revised.

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: Catherine Green		OIL CONSERVATION DIVISION	
Printed Name: Catherine Green		Approved by Environmental Specialist: Crystal Weaver	
Title: Regulatory Analyst		Approval Date: 2/13/17	Expiration Date: N/A
E-mail Address: cgreen@matadorresources.com		Conditions of Approval: COA's attached	
Date: Feb 6, 2017 Phone: 575-627-2453		Attached <input checked="" type="checkbox"/>	

\* Attach Additional Sheets If Necessary

2RP-4113

Paul 25 24S 28E RB #221H Work Plan  
SMA Ref #5E25774-BG7  
3/3/2017

# APPENDIX C

## OSE WATER COLUMN DATA



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">C 03833 POD1</a>	C	ED		2	1	2	26	24S	28E	589014	3562545	660	96	55	41
<a href="#">C 03358 POD1</a>	C	ED		1	4	1	26	24S	28E	588416	3562116	1287	135		

Average Depth to Water: **55 feet**

Minimum Depth: **55 feet**

Maximum Depth: **55 feet**

Record Count: 2

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 589664.55

**Northing (Y):** 3562429.4

**Radius:** 1500

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.

12/2/16 12:05 PM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

**From:** Lucas Middleton  
**To:** [Weaver, Crystal, EMNRD](#); [Bratcher, Mike, EMNRD](#)  
**Subject:** Paul Updates  
**Date:** Monday, April 24, 2017 9:16:02 AM  
**Attachments:** [image003.png](#)

---

Good Morning,

May I please get an update on the Matador Paul 25 24S 28E RB #221 (2RP-4113) work plan? We finished up the Paul Pad (2RP- 4051) and are waiting on lab results and will send you the closure when its done.

Lucas Middleton  
Staff Scientist  
(575) 689-5351 (mobile)



Souder, Miller & Associates  
Engineering   Environmental   Surveying  
201 S. Halagueno  
Carlsbad, NM 88220  
[www.soudermiller.com](http://www.soudermiller.com)

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**From:** [Weaver, Crystal, EMNRD](#)  
**To:** [Lucas Middleton](#); [Bratcher, Mike, EMNRD](#)  
**Cc:** [Austin Weyant](#); [Heather Patterson](#)  
**Subject:** RE: Paul Updates  
**Date:** Monday, April 24, 2017 10:42:00 AM  
**Attachments:** [image001.png](#)

---

Hello all,

As I had indicated to Heather, and I believe Lucas as well, over the phone I am having some trouble reading thru the sampling label system and chronology of the closure report for 2RP-4008 (DOR-11/22/16). Also my understanding of why we agreed upon 3000ppm as background for this original site is also something I am currently having some trouble with. I was a very new employee at the time of this release and the process we went about to determine this was not well documented on OCD's end so I am now having trouble remembering exactly how we decided upon this figure. Was sample name D-2 from your second updated work plan sent to OCD on 12/15/16 what you changed to your background sample? Cause I am confused. Mike and I attempted to review all of the documents sent in to us to try and get it ironed out but we just are having a really hard time due to the sampling label system.

Currently, you are continuing to site that same background sample, that I am unclear on and have mentioned above, on your work plan report for an additional release that also happened at the Matador Paul 25 24S 28E RB 221H site on 2/3/17. You have asked for an update on this work plan, however, prior to issuing any further authorizations, I am at the point where I am needing to request an in person audience with you all in order to get the details of this worked out in my head. If you all could please let me know when would be best for you to accommodate this request I would very much appreciate it.

Thank you,

## Crystal Weaver

Environmental Specialist

OCD – Artesia District II

811 S. 1<sup>st</sup> Street

Artesia, NM 88210

Office: 575-748-1283 ext. 101

Cell: 575-840-5963

Fax: 575-748-9720

---

**From:** Lucas Middleton [mailto:[lucas.middleton@soudermiller.com](mailto:lucas.middleton@soudermiller.com)]

**Sent:** Monday, April 24, 2017 9:16 AM

**To:** Weaver, Crystal, EMNRD <[Crystal.Weaver@state.nm.us](mailto:Crystal.Weaver@state.nm.us)>; Bratcher, Mike, EMNRD



<mike.bratcher@state.nm.us>

**Subject:** Paul Updates

Good Morning,

May I please get an update on the Matador Paul 25 24S 28E RB #221 (2RP-4113) work plan? We finished up the Paul Pad (2RP- 4051) and are waiting on lab results and will send you the closure when its done.

Lucas Middleton

Staff Scientist

(575) 689-5351 (mobile)



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201 S. Halagueno

Carlsbad, NM 88220

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**From:** Lucas Middleton  
**To:** [Weaver, Crystal, EMNRD](#)  
**Subject:** RE: Paul Closure Report 2RP-4008  
**Date:** Monday, April 24, 2017 2:43:28 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)

---

Mid morning untill 4 will work

---

**From:** Weaver, Crystal, EMNRD [<mailto:Crystal.Weaver@state.nm.us>]  
**Sent:** Monday, April 24, 2017 2:38 PM  
**To:** Lucas Middleton <[lucas.middleton@soudermiller.com](mailto:lucas.middleton@soudermiller.com)>; Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>  
**Cc:** Austin Weyant <[austin.veyant@soudermiller.com](mailto:austin.veyant@soudermiller.com)>; Catherine Green <[CGreen@matadorresources.com](mailto:CGreen@matadorresources.com)>; Heather Patterson <[heather.patterson@soudermiller.com](mailto:heather.patterson@soudermiller.com)>  
**Subject:** RE: Paul Closure Report 2RP-4008

Thank you for the request Lucas.

Tomorrow could be doable, however, Mike is not in the office today to confirm that thought, so I will need to ask him tomorrow morning when he gets back. What time are you thinking for tomorrow?

---

**From:** Lucas Middleton [<mailto:lucas.middleton@soudermiller.com>]  
**Sent:** Monday, April 24, 2017 12:15 PM  
**To:** Weaver, Crystal, EMNRD <[Crystal.Weaver@state.nm.us](mailto:Crystal.Weaver@state.nm.us)>; Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>  
**Cc:** Austin Weyant <[austin.veyant@soudermiller.com](mailto:austin.veyant@soudermiller.com)>; Catherine Green <[CGreen@matadorresources.com](mailto:CGreen@matadorresources.com)>; Heather Patterson <[heather.patterson@soudermiller.com](mailto:heather.patterson@soudermiller.com)>  
**Subject:** Paul Closure Report 2RP-4008

Hello,

I would like to set up a meeting about the Matador Paul 25 24S 28E RB #221 (2RP-4008) so we can review the large amount of data submitted. If you can please allow additional time for the Matador Paul 25 24S 28E RB #221 2RP-4113. At your earliest, I am available tomorrow.

Thanks

Lucas Middleton  
Staff Scientist  
(575) 689-5351 (mobile)



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201 S. Halagueno

Carlsbad, NM 88220

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---

**From:** Weaver, Crystal, EMNRD [<mailto:Crystal.Weaver@state.nm.us>]

**Sent:** Monday, April 24, 2017 10:43 AM

**To:** Lucas Middleton <[lucas.middleton@soudermiller.com](mailto:lucas.middleton@soudermiller.com)>; Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>

**Cc:** Austin Weyant <[austin.veyant@soudermiller.com](mailto:austin.veyant@soudermiller.com)>; Heather Patterson <[heather.patterson@soudermiller.com](mailto:heather.patterson@soudermiller.com)>

**Subject:** RE: Paul Updates

Hello all,

As I had indicated to Heather, and I believe Lucas as well, over the phone I am having some trouble reading thru the sampling label system and chronology of the closure report for 2RP-4008 (DOR-11/22/16). Also my understanding of why we agreed upon 3000ppm as background for this original site is also something I am currently having some trouble with. I was a very new employee at the time of this release and the process we went about to determine this was not well documented on OCD's end so I am now having trouble remembering exactly how we decided upon this figure. Was sample name D-2 from your second updated work plan sent to OCD on 12/15/16 what you changed to your background sample? Cause I am confused. Mike and I attempted to review all of the documents sent in to us to try and get it ironed out but we just are having a really hard time due to the sampling label system.

Currently, you are continuing to site that same background sample, that I am unclear on and have mentioned above, on your work plan report for an additional release that also happened at the Matador Paul 25 24S 28E RB 221H site on 2/3/17. You have asked for an update on this work plan, however, prior to issuing any further authorizations, I am at the point where I am needing to request an in person audience with you all in order to get the details of this worked out in my head. If you all could please let me know when would be best for you to accommodate this request I would very much appreciate it.

Thank you,

**Crystal Weaver**

Environmental Specialist

OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
Cell: 575-840-5963  
Fax: 575-748-9720

---

**From:** Lucas Middleton [<mailto:lucas.middleton@soudermiller.com>]  
**Sent:** Monday, April 24, 2017 9:16 AM  
**To:** Weaver, Crystal, EMNRD <[Crystal.Weaver@state.nm.us](mailto:Crystal.Weaver@state.nm.us)>; Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>  
**Subject:** Paul Updates

Good Morning,  
May I please get an update on the Matador Paul 25 24S 28E RB #221 (2RP-4113) work plan? We finished up the Paul Pad (2RP- 4051) and are waiting on lab results and will send you the closure when its done.

Lucas Middleton  
Staff Scientist  
(575) 689-5351 (mobile)



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**From:** [Weaver, Crystal, EMNRD](#)  
**To:** ["Catherine Green"](#)  
**Cc:** [Lucas Middleton](#); [Bratcher, Mike, EMNRD](#)  
**Subject:** RE: Paul Incident Feb 3 2RP-4113  
**Date:** Monday, May 15, 2017 11:08:00 AM  
**Attachments:** [RE Paul Updates .msg](#)  
[Added to Amended Matador Paul 25 24S 28E RB #221 \(2RP-4008\) .msg](#)

---

Hello Catherine,

Both release incident 2RP-4008 (DOR 11/22/16) and this current release incident 2RP-4113 (DOR 2/3/17) occurred from an issue with the same pipeline that connects to the Paul 25 24S 28E RB #221H facility (30-015-43018).

A meeting occurred on 4/25/17, between OCD representatives Mike Bratcher and Crystal Weaver & SMA representatives Heather Patterson and Lucas Middleton, regarding some clarification requests OCD had with the documents received pertaining to the 2RP-4008 incident. During that meeting it was stated that OCD was requesting an additional background sample at like depth (6 ft.).

The original background sample (D-2) (which started out as a delineation attempt) received OCD verbal authorization to be used as a background sample. However, based on lab sample results of the delineation conducted next to the actual point of release (D-1), it is now OCD's request that a second background sample at like depth of 6' be collected and sent to the lab. OCD notes the background sample obtained (D-2) shows lab results of higher chloride numbers then the sample taken at the point of release (D-1) at like depth.

Also, since this current release cites that same background sample (D-2) tied to the first release 2RP-4008 I will state that this work plan for 2RP-4113 is approved based on the same stipulation that the second background sample at like depth be collected and sent to the lab. Please advise once remedial activities have been scheduled.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact Mike Bratcher and/or myself in the District II Office.

Thank you,

**Crystal Weaver**

Environmental Specialist

OCD – Artesia District II

811 S. 1<sup>st</sup> Street

Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
Cell: 575-840-5963  
Fax: 575-748-9720

---

**From:** Catherine Green [mailto:CGreen@matadorresources.com]  
**Sent:** Monday, March 20, 2017 3:51 PM  
**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>  
**Cc:** Lucas Middleton <lucas.middleton@soudermiller.com>  
**Subject:** Paul Incident Feb 3 2RP-4113

Crystal,

Please find attached the Work Plan for the Paul Pipeline Incident that occurred on Feb 3, 2017 (pipeline incident #2). We look forward to clearing this incident. Thank you for your patience as the work plan was being prepared.

Kind Regards,

Catherine Green  
Regulatory Analyst  
575-627-2453-Office  
720-220-7482-Mobile

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**Bratcher, Mike, EMNRD**

---

**From:** Lucas Middleton <lucas.middleton@soudermiller.com>  
**Sent:** Wednesday, June 28, 2017 1:40 PM  
**To:** Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD  
**Subject:** Back Fill Request Paul #221 2RP-4113  
**Attachments:** Paul ocd 6-28-17.pdf

Good afternoon,

This email is regarding the Matador Paul 25 24S 28E RB #221 (2RP-4113). I would like to get a backfill approval on this site so we may finish up the job and get equipment off location. Attached is a Table with Sidewall and bottom hole sulfate data compared to background. We spoke about using the sulfates to track the release. Also a map and the laboratory results include.

Please call with any questions or comments

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



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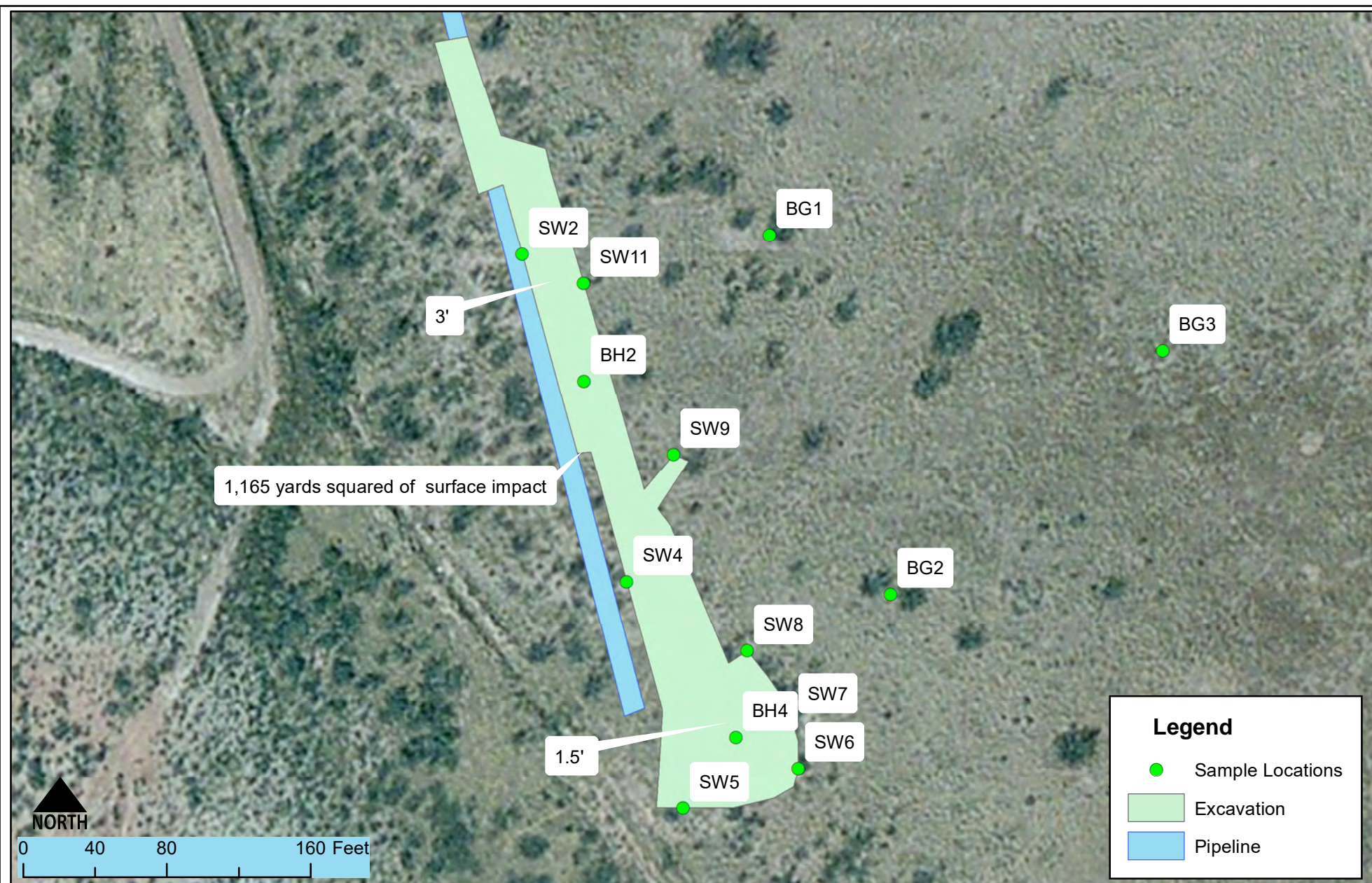
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## Summary of Sulfate Results compared to Background<sup>1</sup>

Sample Number on Figure 2 Map	Depth	Sulfate mg/Kg	Background <sup>2</sup>
SW2	1.5'	6400	8850
SW4	1'	5800	7700
SW5	1'	5400	7700
SW6	1'	5300	7700
SW7	1'	5100	7700
SW8	1'	5100	7700
SW9	0.5'	5100	6250
SW11	1.5'	5300	8850
BH2	3'	4100	7800
BH2	5.5	7500	7400
BH2	10'	6300	7200
BH4	1.5	5600	8850

<sup>1</sup>SMA determined that the comparison of Nitrate Background data to Nitrate Excavation data are a Null Hypothesis

<sup>2</sup>Background numbers are an average of the 2 nearest delineation samples that is representing the soil horizon at given depth



Detailed Site and Sample Map  
 Paul 25 24S 28E RB #221H- Matador Resources  
 Malaja , New Mexico

Figure 2

Date Saved:  
6/28/2017

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

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Drawn	Lucas Middleton
Checked	
Approved	



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

Analytical Report

Lab Order 1706A44

Date Reported:

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	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 1706A44

Date Reported:

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	140	75		mg/Kg	50	6/27/2017 4:49:02 AM	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	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 1706A44

Date Reported:

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	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 1706A44

Date Reported:

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	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 1706A44

Date Reported:

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	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 1706A44

Date Reported:

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	Page 6 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported:

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	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 1706A44

Date Reported:

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	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 1706A44

Date Reported:

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	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 1706A44

Date Reported:

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

Analytical Report

Lab Order 1706A44

Date Reported:

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported:

CLIENT: Souder, Miller & Associates  
Project: Matador Paul 2nd  
Lab ID: 1706A44-012

Client Sample ID: BH 4-1.5  
Collection Date: 6/12/2017 10:30:00 AM  
Received Date: 6/20/2017 10:15:00 AM

Matrix: SOIL

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:

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

Analytical Report

Lab Order 1706A44

Date Reported:

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

Hall Environmental Analysis Laboratory, Inc.					Analytical Report		
					Lab Order 1706A44		
					Date Reported:		
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					Received Date: 6/20/2017 10:15:00 AM		
Matrix: SOIL							
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



Analytical Report

Lab Order 1706A44

Date Reported:

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

Analytical Report

Lab Order 1706A44

Date Reported:

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

Analytical Report

Lab Order 1706A44

Date Reported:

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

Analytical Report

Lab Order 1706A44

Date Reported:

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

Analytical Report

Lab Order 1706A44

Date Reported:

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

Analytical Report

Lab Order 1706A44

Date Reported:

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



## Bratcher, Mike, EMNRD

---

**From:** Bratcher, Mike, EMNRD  
**Sent:** Thursday, June 29, 2017 6:44 AM  
**To:** 'Lucas Middleton'; Weaver, Crystal, EMNRD  
**Subject:** RE: Back Fill Request Paul #221 2RP-4113

RE: Matador Production \* 2RP-4113

Lucas,

Your request to backfill is approved.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

Mike Bratcher  
NMOCD District 2  
811 S. First St.  
Artesia NM 88210  
575-748-1283 Ext 108  
mike.bratcher@state.nm.us

---

**From:** Lucas Middleton [mailto:lucas.middleton@soudermiller.com]  
**Sent:** Wednesday, June 28, 2017 1:40 PM  
**To:** Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>  
**Subject:** Back Fill Request Paul #221 2RP-4113

Good afternoon,

This email is regarding the Matador Paul 25 24S 28E RB #221 (2RP-4113). I would like to get a backfill approval on this site so we may finish up the job and get equipment off location. Attached is a Table with Sidewall and bottom hole sulfate data compared to background. We spoke about using the sulfates to track the release. Also a map and the laboratory results include.

Please call with any questions or comments

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



Souder, Miller & Associates

Engineering ☐ Environmental ☐ Surveying

201 S. Halagueno

Carlsbad, NM 88220

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

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**Bratcher, Mike, EMNRD**

---

**From:** Lucas Middleton <lucas.middleton@soudermiller.com>  
**Sent:** Tuesday, July 18, 2017 9:14 AM  
**To:** Bratcher, Mike, EMNRD  
**Cc:** Csnow (Csnow@matadorresources.com); Weaver, Crystal, EMNRD  
**Subject:** FINAL CLOSURE REPORT FOR INCIDENT 2RP-4113, Paul 25 24S 28E RB #221H, UNIT D SECTION 25-T24S-R28E NMPM, API# 30-015-43018, EDDY COUNTY, NEW MEXICO  
**Attachments:** FINAL CLOSURE REPORT FOR INCIDENT 2RP-4113, Paul 25 24S 28E RB #221H, UNIT D SECTION 25-T24S-R28E NMPM, API# 30-015-43018, EDDY COUNTY, NEW MEXICO.PDF

Mike Bratcher,

Oh behalf of Matador Resources I am requesting an approved closure for INCIDENT 2RP- 4113, Paul 25 24S 28E RB #221H, UNIT D SECTION 25-T24S-R28E NMPM, API# 30-015-43018. I have attached a final closure report to this email.

Lucas Middleton  
Staff Scientist  
(575) 689-5351 (mobile)



Souder, Miller & Associates  
Engineering ☐ Environmental ☐ Surveying  
201 S. Halagueno  
Carlsbad, NM 88220  
[www.soudermiller.com](http://www.soudermiller.com)

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

July 12, 2017

#5B24624-BG24

Mike Bratcher  
Environmental Specialist  
NMOCD District II  
1301 W Grand Ave  
Artesia, NM 88210

SUBJECT: FINAL CLOSURE REPORT FOR INCIDENT 2RP-4113, Paul 25 24S 28E RB #221H, UNIT D SECTION 25-T24S-R28E NMPM, API# 30-015-43018, EDDY COUNTY, NEW MEXICO

Dear Mr. Bratcher:

On behalf of Matador Production Company, Souder, Miller & Associates (SMA) has prepared this CLOSURE REPORT that describes the initial characterization and remediation for a release (2RP-4113) associated with the Paul 25 24S 28E RB #221H. The site is in UNIT D, SECTION 25, TOWNSHIP 24S, RANGE 28E, NMPM, Eddy County, New Mexico, on fee 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	Paul 25 24S 28E RB #221H
Company	Matador Production Company
Incident Number	2RP-4113
API Number	30-015-43018
Location	32.198747° -104.049118°
Estimated Date of Release	February 3, 2017
Date Reported to NMOCD	February 6, 2017
Land Owner	Fee
Reported To	Crystal Weaver
Source of Release	Buried pipeline
Released Material	Produced water
Released Volume	100 BBL
Recovered Volume	80 BBL
Net Release	20 BBL
Nearest Waterway	Nearest surface water is 1.3 miles east of Willow Lake
Depth to Groundwater	Estimated to be 49 feet
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	20
SMA Response Dates	02/20/2017

Paul 25 #221H Closure  
July 12, 2017

Page 2 of 3

## **1.0 Background**

A pipeline leak occurred along the buried pipeline located north of the Paul 25 #221H. The cause of this leak is unknown, releasing 100 bbl of produced water within the right of way and adjacent pasture. SMA characterized the release and proposed further excavation in the Workplan dated March 6, 2017. The surface impact was determined to be approximately 420 feet long by 20 feet wide.

## **2.0 Site Ranking and Land Jurisdiction**

Willow Lake is approximately 1.3 miles east of the release location. The elevation of the release site is approximately 2,934 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 100 feet below ground surface (bgs). The New Mexico Office of the State Engineer (NMOSE) Database indicates one well, C 03833, in the vicinity with a recorded depth to water of 55 feet. When correlated with relative elevation of the release site, the depth to water is 49 feet.

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.

<b>Soil Remediation Standards</b>	<b>0 to 9</b>	<b>10 to 19</b>	<b>&gt;19</b>
<b>Benzene</b>	<b>10 PPM</b>	<b>10 PPM</b>	<b>10 PPM</b>
<b>BTEX</b>	<b>50 PPM</b>	<b>50 PPM</b>	<b>50 PPM</b>
<b>TPH</b>	<b>5000 PPM</b>	<b>1000 PPM</b>	<b>100 PPM</b>

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

Paul 25 #221H Closure  
July 12, 2017

Page 3 of 3

### **3.0 Release Characterization**

On February 20, 2017 after receiving 811 clearance, SMA field personnel assessed the remediated release area onsite with a backhoe and a mobile chlorides titration kit EPA method 9045D meter. The remediated release area was found to be approximately 420 feet long and 20 feet wide. The site delineation samples were taken to depths of 12 feet bgs. Specific sample locations for all samples are 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**

On June 7, 2017, with approval from area utilities owners via 811, SMA oversaw further excavation of the affected soils. Excavation occurred to depths of approximately 6 feet bgs at the point of the release, 2 feet bgs in the right of way and 1.5 feet bgs in the pasture to sufficiently remove the impacted materials to NMOCD requirements. In the pipeline area, excavation occurred only outside four feet horizontally from the pipeline due to pipeline safety concerns. SMA continuously guided the excavation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500) and sulfates testing from the laboratory. Approximately 600 additional cubic yards of contaminated soil were removed. Backfilling of the excavation occurred after the approval from NMOCD on 6/29/2017. Clean backfill material was used to return the surface to previous contours. The contaminated soil was transported for proper disposal at Lea Land, an NMOCD permitted disposal facility. Closure samples were collected at the final depth of excavation and from the excavation sidewalls. The closure samples taken were tested for sulfates. Sulfates were used as a reference criterion on this release due to the high background chlorides from previous agricultural activities, as discussed with the Environmental Specialist at NMOCD. Three background sample locations were used to establish the background level of sulfates in the area. The closure samples tested for sulfates were 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 for sulfates. All closure samples were below NMOCD RRAL's for this site.



Paul 25 #221H Closure  
July 12, 2017

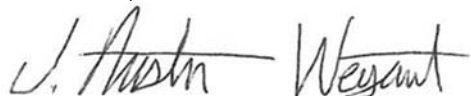
Page 4 of 4

## **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:



Cynthia Gray, CHMM  
Senior Scientist

## **ATTACHMENTS:**

### **Figures:**

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

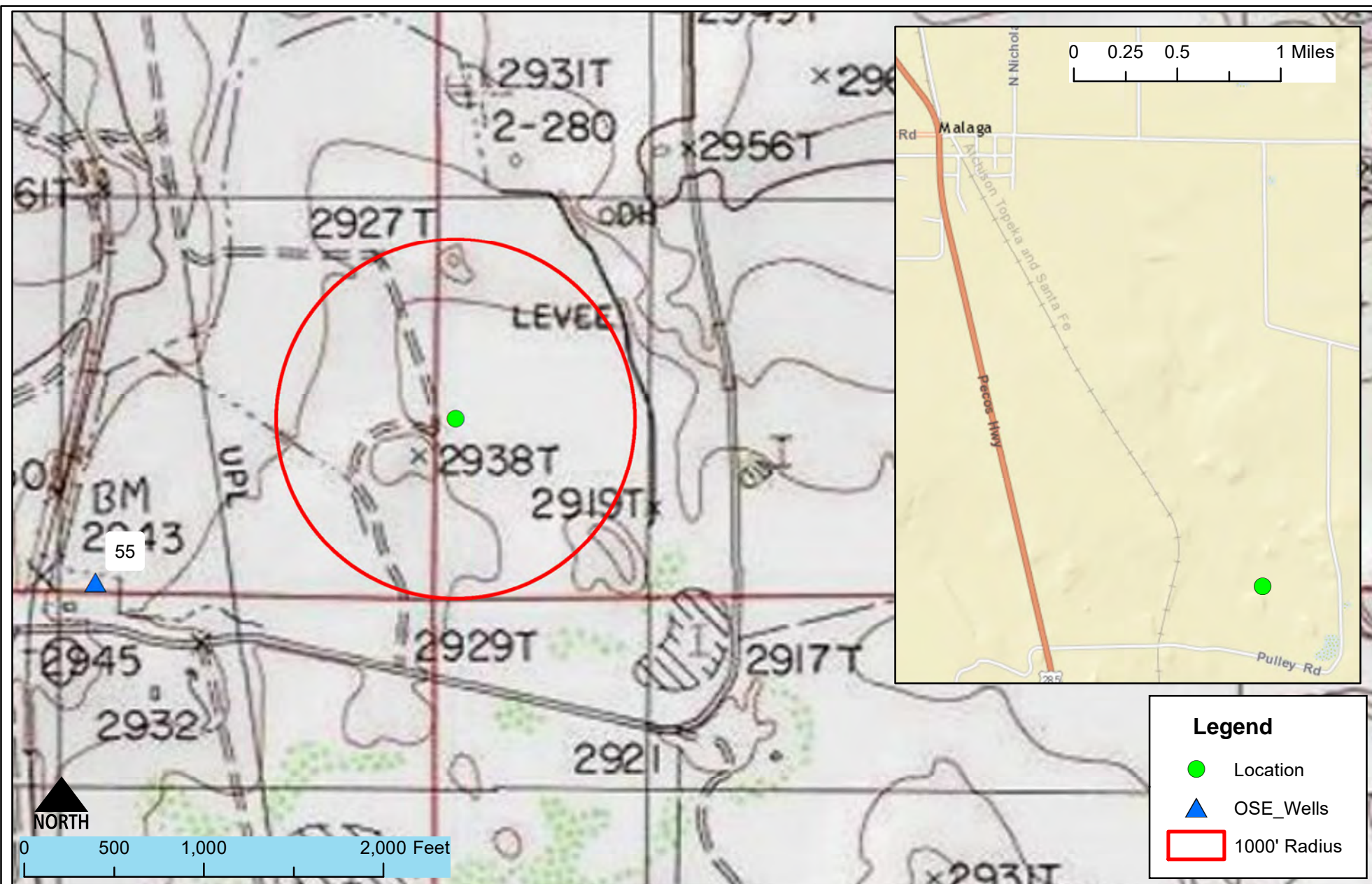
### **Tables:**

Table 3: Summary of Sample Results

### **Appendices:**

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

# FIGURE 1 VICINITY AND NMOSE DATA MAP



Vicinity and Well Head Protection Map  
 Paul 25 24S 28E RB #221H- Matador Resources  
 S: 25 T 24S, R28 E, Eddy County, New Mexico

Figure 1

Date Saved:  
7/11/2017

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

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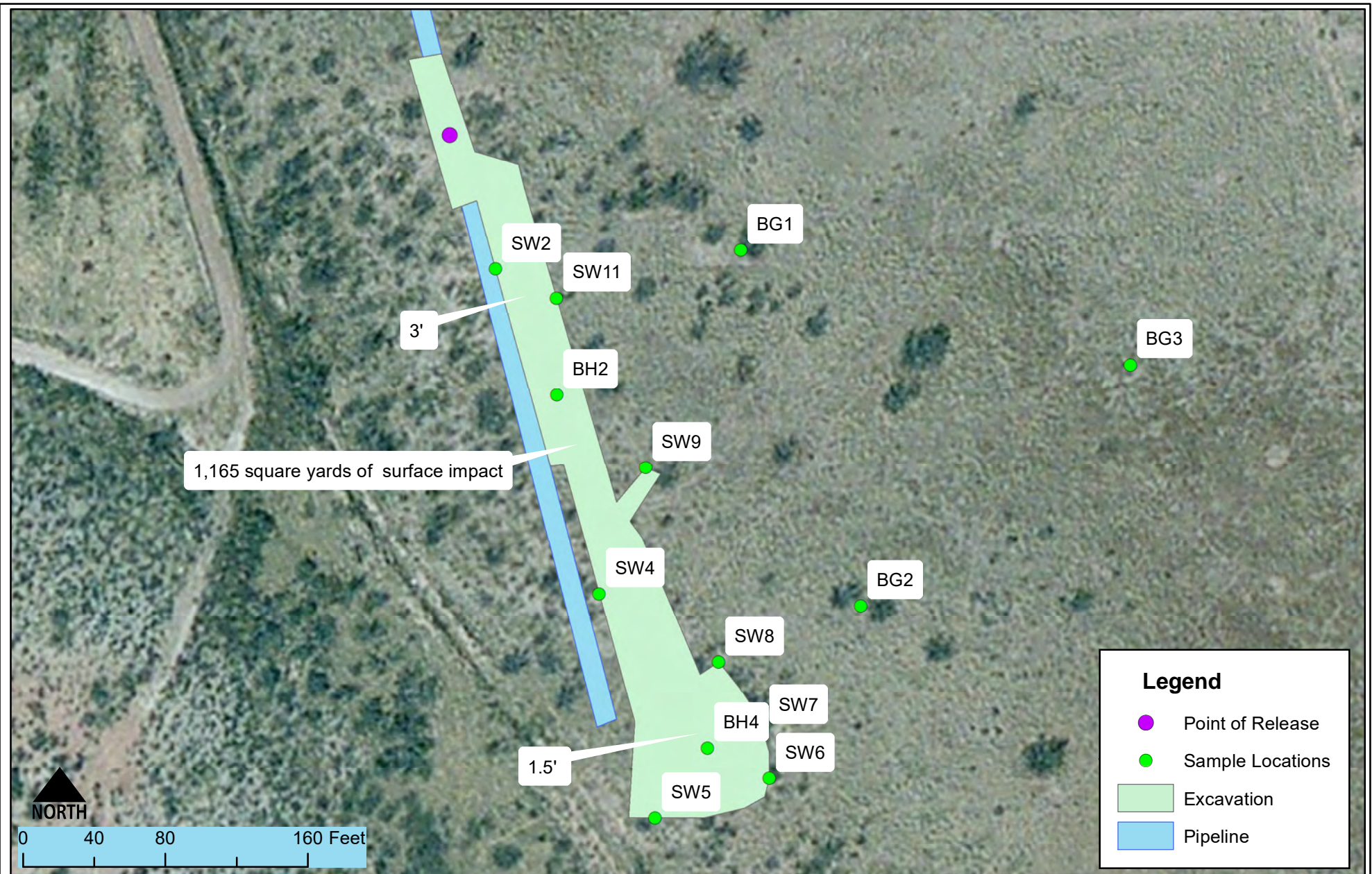
Drawn	Lucas Middleton
Checked	_____
Approved	_____



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# FIGURE 2 SITE AND SAMPLE LOCATION MAP





Detailed Site and Sample Map  
 Paul 25 24S 28E RB #221H- Matador Resources  
 S: 25 T 24S, R28 E, Eddy County, New Mexico

Figure 2

Document: C:\Users\lcm\OneDrive\GIS DATA\MAPS\PAUL2 Figure 2.mxd  
 Date Saved: 7/17/2017

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

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Drawn	Lucas Middleton
Checked	_____
Approved	_____



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# TABLE 3

## SUMMARY SAMPLE RESULTS



## Summary of Sample Results<sup>1</sup>

Sample Number on Figure 2 Map	Depth	Sulfate mg/Kg	Background <sup>2</sup>
SW2	1.5'	6400	8850
SW4	1'	5800	7700
SW5	1'	5400	7700
SW6	1'	5300	7700
SW7	1'	5100	7700
SW8	1'	5100	7700
SW9	0.5'	5100	6250
SW11	1.5'	5300	8850
BH2	3'	4100	7800
BH2	5.5'	7500	7400
BH2	10'	6300	7200
BH4	1.5'	5600	8850

<sup>1</sup>SMA determined that the comparison of Nitrate Background data to Nitrate Excavation data are a Null Hypothesis

<sup>2</sup>Background numbers are an average of the 2 nearest delineation samples that is representing the soil horizon at given depth

# 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 August 8, 2011

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

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Matador Resources Company	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

Surface Owner Fee	Mineral Owner Fee	API No. 30-015-43018
-------------------	-------------------	----------------------

### LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 359	North/South Line N	Feet from the 217	East/West Line W	County Eddy
------------------	---------------	-----------------	--------------	----------------------	-----------------------	----------------------	---------------------	----------------

Latitude 32.194817 Longitude 104.0487226

### NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~100BBLs	Volume Recovered 80BBLs
Source of Release pipeline	Date and Hour of Occurrence Feb 3, 2017 7am	Date and Hour of Discovery Feb 3, 2017 7:30am
Was Immediate Notice Given? Required x <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Crystal Weaver, voicemail	
By Whom? Catherine Green	Date and Hour Feb. 3 2017 12:07pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes x <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Water recycling facility at Tiger was on Emergency Shut Down. Lease operator went to Paul location that sends water to Tiger. Found that separator Shut Down Valve had failed to close. Lease operator drove right of way to Tiger and found produced water on ground at (~32°11'52", 104°2'55".179999). Well shut in to isolate line, vacuum truck called. Excavator dug down at spill sight, located pipe with hole in it. Crew replaced section of pipe. Excavated area currently fenced off. Vacuum truck removed 80 barrels of produced water. Replaced Shut Down Valve on separator.

Describe Area Affected and Cleanup Action Taken.\*

Approximately 1,165 square yards of surface impacted. Remove and replace impacted soil.

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: <i>Catherine Green</i>		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <i>Catherine Green</i>		Approved by Environmental Specialist:	
Title: <i>Regulatory Analyst</i>		Approval Date:	Expiration Date:
E-mail Address: <i>cgreen@matadorresources.com</i>		Conditions of Approval:	
Date: <i>Feb 6, 2017</i>		Attached <input type="checkbox"/>	

\* 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
<a href="#">C 03833 POD1</a>	C	ED		2	1	2	26	24S	28E	589014	3562545	660	96	55	41
<a href="#">C 03358 POD1</a>	C	ED		1	4	1	26	24S	28E	588416	3562116	1287	135		

Average Depth to Water: **55 feet**

Minimum Depth: **55 feet**

Maximum Depth: **55 feet**

Record Count: 2

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 589664.55

**Northing (Y):** 3562429.4

**Radius:** 1500

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.

12/2/16 12:05 PM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

# APPENDIX C

## LABORATORY ANALYTICAL REPORTS





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

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

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

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

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

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	Page 4 of 23
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

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



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

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

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	Page 9 of 23
	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: 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

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



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

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

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

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

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



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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1706A44

30-Jun-17

Client: Souder, Miller &amp; 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

Page 22 of 23

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

Page 23 of 23





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

*Sophia Campuzano*

Completed By: Richie Eriacho

6/20/2017 10:54:47 AM

*Richie Eriacho*

Reviewed By:

*Re las*

6/20/17

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	6.0	Good				





Chain-of-Custody Record	
Client: SMA - Carlsbad	<div> <input type="checkbox"/> Standard           <input checked="" type="checkbox"/> Rush 5 day (net40)         </div>
Turn-Around Time:	

☐ Standard ☒ Rush 5 day (master)

Matador: Paul 2<sup>nd</sup>..

---

Project Manager: \_\_\_\_\_

AUCH-Wert mit

Austin Weyant

Sampler: LCM ✓

On Ice:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
---------	---	-----------------------------

Sample Temperature: 6.0

Container Type and #	Preservative Type	HEAL N
----------------------	-------------------	--------

1706A		
-------	--	--

117	117	-013	-4
-----	-----	------	----

	-014	-6
--	------	----

		-0.15	-0.15
		-0.11	-0.11

				-0 7 -
--	--	--	--	--------

	-018-6
--	--------

		-0/9 -6
--	--	---------

-021	-	-
-020	-	-

Received by: \_\_\_\_\_ Date: 11/11/11 Time: \_\_\_\_\_

Received by: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

neoplasms, 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

BTEX + MTBE + TMBs (8021)
BTEX + MTBE + TPH (Gas only)
TPH 8015B (GRO / DRO / MRO)
TPH (Method 418.1)
EDB (Method 504.1)
PAH's (8310 or 8270 SIMS)
PCRA 8 Metals
Anions ( $F^-$ , $Cl^-$ , $NO_3^-$ , $NO_2^-$ , $PO_4^{3-}$ , $SO_4^{2-}$ )
8081 Pesticides / 8082 PCB's
8260B (VOA)
8270 (Semi-VOA)
Air Bubbles (Y or N)

Project Manager: Austin Weyant

Sampler: LCM

On Ice: ☒ Yes ☐ No

Sample Temperature: 6.0	Container Type and #	Preservative Type	HEAL No. 1706446A
-------------------------	----------------------	-------------------	----------------------

107	100	-013	-004
		-014	-002
		-015	-003
		-016	-004
		-017	-005
		-018	-006
		-019	-007
		-020	-008
		-021	-009

Remarks-

received by:	Date	Time
<i>[Signature]</i>	6/19/17	0800
received by:	Date	Time
<i>[Signature]</i>	06/20/17	1015

**Bratcher, Mike, EMNRD**

---

**From:** Bratcher, Mike, EMNRD  
**Sent:** Thursday, October 12, 2017 11:06 AM  
**To:** Lucas Middleton  
**Cc:** Csnow (Csnow@matadorresources.com); Weaver, Crystal, EMNRD  
**Subject:** RE: FINAL CLOSURE REPORT FOR INCIDENT 2RP-4113, Paul 25 24S 28E RB #221H, UNIT D SECTION 25-T24S-R28E NMPM, API# 30-015-43018, EDDY COUNTY, NEW MEXICO

RE: Matador Resources \* Paul 25 24S 28E RB 221H \* **2RP-4113** \* DOR: 2/3/17

Lucas,

Your request for closure of the above referenced release is approved.

Thank you,

Mike Bratcher  
NMOCD District 2  
811 South First Street  
Artesia, NM 88210  
575-748-1283 Ext 108

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

---

**From:** Lucas Middleton [mailto:lucas.middleton@soudermiller.com]  
**Sent:** Tuesday, July 18, 2017 9:14 AM  
**To:** Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>  
**Cc:** Csnow (Csnow@matadorresources.com) <Csnow@matadorresources.com>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>  
**Subject:** FINAL CLOSURE REPORT FOR INCIDENT 2RP-4113, Paul 25 24S 28E RB #221H, UNIT D SECTION 25-T24S-R28E NMPM, API# 30-015-43018, EDDY COUNTY, NEW MEXICO

Mike Bratcher,

Oh behalf of Matador Resources I am requesting an approved closure for INCIDENT 2RP- 4113, Paul 25 24S 28E RB #221H, UNIT D SECTION 25-T24S-R28E NMPM, API# 30-015-43018. I have attached a final closure report to this email.

Lucas Middleton  
Staff Scientist  
(575) 689-5351 (mobile)



Souder, Miller & Associates  
Engineering ☐ Environmental ☐ Surveying  
201 S. Halagueno  
Carlsbad, NM 88220  
[www.soudermiller.com](http://www.soudermiller.com)

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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

NMOCD Dist 2

Form C-141  
Revised August 8, 2011

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

## Release Notification and Corrective Action

nAB1704368889

## OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Matador Resources Company	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB #221H	Facility Type Oil

Surface Owner Fee	Mineral Owner Fee	API No. 30-015-43018
-------------------	-------------------	----------------------

## LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 359	North/South Line N	Feet from the 217	East/West Line W	County Eddy
------------------	---------------	-----------------	--------------	----------------------	-----------------------	----------------------	---------------------	----------------

Latitude 32.194817

Longitude -104.0487226

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~100BBLs	Volume Recovered 80BBLs
Source of Release pipeline	Date and Hour of Occurrence Feb 3, 2017 7am	Date and Hour of Discovery Feb 3, 2017 7:30am
Was Immediate Notice Given? Required x <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Crystal Weaver, voicemail	
By Whom? Catherine Green	Date and Hour Feb. 3 2017 12:07pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes x <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*



Describe Cause of Problem and Remedial Action Taken.\*

Water recycling facility at Tiger was on Emergency Shut Down. Lease operator went to Paul location that sends water to Tiger. Found that separator Shut Down Valve had failed to close. Lease operator drove right of way to Tiger and found produced water on ground at (~32°11'52", 104°2'55".179999). Well shut in to isolate line, vacuum truck called. Excavator dug down at spill sight, located pipe with hole in it. Crew replaced section of pipe. Excavated area currently fenced off. Vacuum truck removed 80 barrels of produced water. Replaced Shut Down Valve on separator.

Describe Area Affected and Cleanup Action Taken.\*

Approximately 1,165 square yards of surface impacted. Remove and replace impacted soil.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Catherine Green CASEY SNOW		Approved by Environmental Specialist: 	
Title: Regulatory Analyst MONAGLE RES CSNOV		Approval Date: 10/12/17	Expiration Date: N/A
E-mail Address: cgreen@matadorresources.com		Conditions of Approval: N/A	
Date: Feb 6, 2017 7-18-17 Phone: 575-627-2453 972.371.5439		Attached <input type="checkbox"/>	
FINAL			

\* Attach Additional Sheets If Necessary

2RP-4113



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

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

Form C-141  
Revised August 8, 2011

DEC 28 2016 Submit Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

### Release Notification and Corrective Action

NAB1700438103

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Matador Resources 228937	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB 221H	Facility Type Production Battery

Surface Owner Fee	Mineral Owner Fee	API No.30-015-43018
-------------------	-------------------	---------------------

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	25	24S	28E	359	FNL	217	FWL	Eddy

Latitude 32.19484171 Longitude -104.0487226

#### NATURE OF RELEASE

Type of Release Oil	Volume of Release ~40BBLs	Volume Recovered ~2BBLs
Source of Release Hauler left thief hatch open on oil tank	Date and Hour of Occurrence Dec 25 2016 8:00am	Date and Hour of Discovery Dec 25 2016 8:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Telephoned Artesia NMOCD hotline. Left message	
By Whom? Jason Thibodeaux	Date and Hour Dec 25 2016 8:45 sm	
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.\*

Oil Hauler did not properly close hatch. Lease operator discovered open hatch, closed it, called for vacuum truck to vacuum up excess fluid on production pad.

Describe Area Affected and Cleanup Action Taken.\*

Oil spilled on ground. Soil will be sampled for contaminants. Contaminated soil will be removed and replaced.

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.

#### OIL CONSERVATION DIVISION

Signature: Catherine Green

Printed Name: Catherine Green

Title: Regulatory Analyst

E-mail Address: cgreen@matadorresources.com

Date: Dec. 25, 2016

Phone: 575-627-2453

Approved by Environmental Specialist

Approval Date: 1/4/17

Expiration Date: N/A

Conditions of Approval:

see attached

Attached

2

\* Attach Additional Sheets If Necessary

2RP-4051

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **12/28/16** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number ARP-4051 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 2/3/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

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

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

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

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

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

**Jim Griswold**

OCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us

## Weaver, Crystal, EMNRD

---

**From:** Catherine Green <CGreen@matadorresources.com>  
**Sent:** Wednesday, December 28, 2016 11:23 AM  
**To:** Weaver, Crystal, EMNRD  
**Subject:** Fwd: Document  
**Attachments:** Paul Spill C141 Dec 25 2016.doc

Crystal,

I hope this is on one page!

Catherine

Begin forwarded message:

>  
>

This transmission is strictly confidential. If you are not the intended recipient of this message, you may not disclose, print, copy or disseminate this information. If you have received this in error, please reply and notify the sender (only) and delete the message. Unauthorized interception of this e-mail is a violation of federal criminal law. This communication does not reflect an intention by the sender or the sender's client or principal to conduct a transaction or make any agreement by electronic means. Nothing contained in this message or in any attachment shall satisfy the requirements for a writing, and nothing contained herein shall constitute a contract or electronic signature under the Electronic Signatures in Global and National Commerce Act, any version of the Uniform Electronic Transactions Act or any other statute governing electronic transactions.

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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

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

Form C-141  
Revised August 8, 2011

DEC 28 2016 Submit Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

### Release Notification and Corrective Action

NAB1708850091

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Matador Resources	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB 221H	Facility Type Production Battery

Surface Owner Fee	Mineral Owner Fee	API No. 30-015-43018
-------------------	-------------------	----------------------

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	25	24S	28E	359	FNL	217	FWL	Eddy

Latitude 32.19484171 Longitude -104.0487226

#### NATURE OF RELEASE

Type of Release Oil	Volume of Release ~40BBLs	Volume Recovered ~2BBLs
Source of Release Hauler left thief hatch open on oil tank	Date and Hour of Occurrence Dec 25 2016 8:00am	Date and Hour of Discovery Dec 25 2016 8:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Telephoned Artesia NMOCD hotline. Left message	
By Whom? Jason Thibodeaux	Date and Hour Dec 25 2016 8:45 sm	
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.\*

Oil Hauler did not properly close hatch. Lease operator discovered open hatch, closed it, called for vacuum truck to vacuum up excess fluid on production pad.

Describe Area Affected and Cleanup Action Taken.\*

Oil spilled on ground. Soil will be sampled for contaminants. Contaminated soil will be removed and replaced.

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: Catherine Green		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Catherine Green		Approved by Environmental Specialist <i>Catherine Green</i>	
Title: Regulatory Analyst		Approval Date: 11/4/17	Expiration Date: N/A
E-mail Address: cgreen@matadorresources.com		Conditions of Approval: see attached	Attached <i>2</i>
Date: Dec. 25, 2016 Phone: 575-627-2453			

\* Attach Additional Sheets If Necessary

2RP-4051

**Operator/Responsible Party,**

The OCD has received the form C-141 you provided on **12/28/16** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4051 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 2/3/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted



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

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

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

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

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

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

**Weaver, Crystal, EMNRD**

---

**From:** Catherine Green <CGreen@matadorresources.com>  
**Sent:** Wednesday, December 28, 2016 11:23 AM  
**To:** Weaver, Crystal, EMNRD  
**Subject:** Fwd: Document  
**Attachments:** Paul Spill C141 Dec 25 2016.doc

Crystal,

I hope this is on one page!

Catherine

Begin forwarded message:

>  
>

This transmission is strictly confidential. If you are not the intended recipient of this message, you may not disclose, print, copy or disseminate this information. If you have received this in error, please reply and notify the sender (only) and delete the message. *Unauthorized interception of this e-mail is a violation of federal criminal law. This communication does not reflect an intention by the sender or the sender's client or principal to conduct a transaction or make any agreement by electronic means. Nothing contained in this message or in any attachment shall satisfy the requirements for a writing, and nothing contained herein shall constitute a contract or electronic signature under the Electronic Signatures in Global and National Commerce Act, any version of the Uniform Electronic Transactions Act or any other statute governing electronic transactions.*

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

## NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141  
Revised August 8, 2011

MAR 21 2017

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

RECEIVED

Release Notification and Corrective Action **AMENDED\***

NAB1708850091

OPERATOR

x ☐ Initial Report ☐ Final Report

Name of Company Matador Resources	228937	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201		Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB 221H		Facility Type Production Battery

Surface Owner Fee	Mineral Owner Fee	API No.30-015-43018
-------------------	-------------------	---------------------

## LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 359	North/South Line FNL	Feet from the 217	East/West Line FWL	County Eddy
------------------	---------------	-----------------	--------------	----------------------	-------------------------	----------------------	-----------------------	----------------

Latitude 32.19484171 Longitude -104.0487226

## NATURE OF RELEASE

Type of Release Oil	Volume of Release ~5BBLs *	Volume Recovered ~2BBLs
Source of Release Hauler left thief hatch open on oil tank	Date and Hour of Occurrence Dec 25 2016 8:00am	Date and Hour of Discovery Dec 25 2016 8:30am
Was Immediate Notice Given? x <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Telephoned Artesia NMOCD hotline. Left message	
By Whom? Jason Thibodeaux	Date and Hour Dec 25 2016 8:45 sm	
Was a Watercourse Reached? <input type="checkbox"/> Yes x <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Oil Hauler did not properly close hatch. Lease operator discovered open hatch, closed it, called for vacuum truck to vacuum up excess fluid on production pad.

Describe Area Affected and Cleanup Action Taken.\*

Oil spilled on ground. Soil will be sampled for contaminants. Contaminated soil will be removed and replaced after work plan is approved.

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.

## OIL CONSERVATION DIVISION

Signature: Catherine Green

Printed Name: Catherine Green

Approved by Environmental Specialist

Signed By

Title: Regulatory Analyst

Approval Date: 3/21/17

Expiration Date: N/A

E-mail Address: cgreen@matadorresources.com

Conditions of Approval: Original Initial

Attached ☐

Date: March 9, 2017

Phone: 575-627-2453

C-141 has CoA's & initial  
correspondence scanned  
with it.

2RP-4051

\* Attach Additional Sheets If Necessary

**From:** Catherine Green  
**To:** Weaver, Crystal, EMNRD; Bratcher, Mike, EMNRD  
**Cc:** Lucas Middleton  
**Subject:** Paul Spill C141 Dec 25 2016 (002) Revised March 9 2017  
**Date:** Thursday, March 9, 2017 10:22:45 AM  
**Attachments:** Paul Spill C141 Dec 25 2016 (002) Revised March 9 2017.doc

---

Crystal and Mike ,

In January we discussed how to calculate volume of fluid spilled on the ground. Based on that discussion and learning experience please find attached a revised C-141 concerning an incident that occurred on Dec. 25 ,2016 on Matador's Paul well production pad.

Thank you for your assistance in updating this C-141,

Catherine Green  
Regulatory Analyst  
575-627-2453-Office  
720-220-7482-Mobile

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**From:** Weaver, Crystal, EMNRD  
**To:** "Catherine Green"; Bratcher, Mike, EMNRD  
**Cc:** Lucas Middleton  
**Subject:** RE: Paul Spill C141 Dec 25 2016 (002) Revised March 9 2017  
**Date:** Tuesday, March 21, 2017 12:17:00 PM  
**Attachments:** 3.AMMENDED Initial C-141.pdf

---

Hello Catherine,

I have attached the amended Initial C-141 which I signed and updated in the system.

If you have any further questions please let us know.

Sincerely,

## Crystal Weaver

Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
Cell: 575-840-5963  
Fax: 575-748-9720

**From:** Catherine Green [mailto:CGreen@matadorresources.com]  
**Sent:** Thursday, March 9, 2017 10:23 AM  
**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>  
**Cc:** Lucas Middleton <lucas.middleton@soudermiller.com>  
**Subject:** Paul Spill C141 Dec 25 2016 (002) Revised March 9 2017

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Catherine Green

Regulatory Analyst  
575-627-2453-Office  
720-220-7482-Mobile

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**From:** Catherine Green  
**To:** [Bratcher, Mike, EMNRD](#)  
**Subject:** Emailing - WORK PLAN FOR INCIDENT 2RP-4051 Paul 25 24S 28E RB 221H API 30-015-4301....pdf  
**Date:** Friday, March 31, 2017 3:13:57 PM  
**Attachments:** [WORK PLAN FOR INCIDENT 2RP-4051 Paul 25 24S 28E RB 221H API 30-015-4301....pdf](#)

---

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Souder, Miller & Associates ♦ 201 S. Halagueno ♦ Carlsbad, NM 88221  
(575) 689-7040

March 21, 2017

#5B24624-BG33

Crystal Weaver  
Environmental Specialist  
NMOCD District II  
811 South First St  
Artesia, NM 88210

SUBJECT: WORK PLAN FOR INCIDENT 2RP-4051, Paul 25 24S 28E RB #221H, UNIT D SECTION 25-T24S-R28E NMPM,  
API# 30-015-43018, EDDY COUNTY, NEW MEXICO

Dear Crystal Weaver:

On behalf of Matador Resources Company (Matador), Souder Miller & Associates (SMA) is pleased to submit a work plan summarizing the planned soil remediation for the release site located at the Paul 25 24S 28E RB #221H in Eddy County, New Mexico. The purpose of the work plan is to obtain approval from the New Mexico Oil Conservation Division (NMOCD) for the remediation of the release that occurred on the production pad on December 25, 2016.

SMA responded at the request of Matador Resources Company, to assess and delineate the release of production fluids associated with Paul 25 24S 28E RB #221H well location. The release was initially reported to NMOCD by Matador Resources Company, on December 25, 2016 and was a result of human error. The table below summarizes information regarding the release. Results of the assessment, delineation are described in the following report.

Table 1: Release information and Site Ranking					
Name	Paul 25 24S 28E RB #221H				
Location	Incident Number	API Number	Section, Township, Range		
	2RP-4051	30-015-43018	NW/NE (Unit D)	Section 25	T24S, R28E NMPM
Estimated Date of Release	December 25, 2016				
Date Reported to NMOCD	December 25, 2016, March 9, 2017				
Reported by	Catherine Green				
Land Owner	Private				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Human Error				
Released Material	Crude Oil				
Released Volume	~5 bbls Crude Oil				
Recovered Volume	2 bbls Crude Oil				
Net Release	3 bbls Crude Oil				



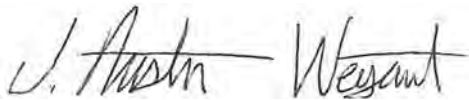
Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

Nearest Waterway	1.4 miles north of the location
Depth to Groundwater	Estimated to be 39 feet
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	20
SMA Response Dates	Initial: 12/27/2016
Subcontractors	Diamondback
Disposal Facility	Lea Land
Estimated Yd3 Contaminated Soil Excavated and Disposed	30

A copy of the C-141 Initial is attached in Appendix B. For questions or comments pertaining to the release or the attached work plan, please feel free to contact either of us.

Submitted by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant  
Project Scientist

Reviewed by:



Cynthia Gray, CHMM  
Senior Scientist

Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

# SOIL REMEDIATION WORK PLAN FOR INCIDENT 2RP-4051

## MATADOR RESOURCES COMPANY

PAUL 25 24S 28E RB #221H  
UL D, SECTION 25, T24S R28E, NMPM  
API #30-015-43018  
EDDY COUNTY, NM



Prepared for:  
Matador Resources Company  
PO Box 1933,  
Roswell, NM 88202

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

March 21, 2017  
SMA Reference  
5B24624 BG33

Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

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Figure 2: Detailed Site and Sample Location Map

Tables:

Table 1: Release Information and Site Ranking

Table 2: Summary Chloride Field Screening Results

Table 3: Summary of Laboratory Analyses

Appendices:

Appendix A: Laboratory Analytical Reports

Appendix B: Form C141 Initial

Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

## 1.0 Introduction

On behalf of Matador Resources Company, Souder, Miller & Associates (SMA) has prepared this report that describes the assessment, initial delineation and proposed remediation for a release associated with the Paul 25 24S 28E RB #221H location API# 30-015-43018. The site is in Section 25, Township 24S, Range 28E NMPM, Eddy County, New Mexico, on private property. Figure 1 illustrates the vicinity and location of the site.

## 2.0 Site Ranking, Land Status, and Jurisdiction

The release site is located approximately 1.3 miles east of the Willow Lake, with an elevation of approximately 2,947 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be 39 feet below ground surface (bgs).

SMA searched the New Mexico State Engineer's Office online water well database for water wells in the vicinity of the release. Two wells are located within a one mile radius of the site. Figure 1 depicts the site vicinity and Figure 2 shows the site itself. The physical location of this release is on private property and is within the jurisdiction of NMOCD.

Based on the NMOCD Guidelines Ranking Criteria, this release location has been assigned an NMOCD ranking of 20 which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 100 ppm total petroleum hydrocarbons (TPH). Table 1 illustrates the site ranking rationale.

## 3.0 Assessment and Initial Results

On December 27, 2016, SMA field personnel were on site to assess the release area using a Photo Ionization Detector (PID), and a mobile chlorides titration kit EPA method 9045D meter. The potentially affected area was found to be approximately 250 feet long and 35 to 3 feet wide. The site delineation samples were at surface initially. Following a four-inch scrape of the effected area, on December 30, 2016, further delineation occurred. Specific sample locations for all samples are depicted on Figure 2 (Site and Sample Location Map). Field screening sample results are detailed in Table 2. On 1/13/2017 further samples were collected for lab confirmation. 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 Soil Remediation Work Plan

SMA will begin the excavation of affected soils, with approval from area utilities owners via 811 and NMOCD. SMA will continuously guide the excavation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500) and a calibrated PID. Excavation will occur to depths of up to 1 foot bgs sufficient to remove the impacted materials to NMOCD requirements as indicated by the sample results in Table 2. Affected soils will be removed from these areas before closure samples are collected at the final depth of excavation and from the sidewalls. Approximately 30 cubic yards of contaminated soil are projected to be removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil will be transported for proper disposal at Lea Land, near Carlsbad, NM, an NMOCD permitted disposal facility.



Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

## **5.0 Conclusions and Recommendations**

NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 20: 10 ppm (mg/kg) Benzene, 50 ppm total BTEX, and 100 ppm TPH.

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

Soil contaminant concentrations found during the initial delineation are illustrated in Figure 2. A summary of the field analyses is included in Table 2. Laboratory reports are included in Appendix A.

## **6.0 Closure and Limitations**

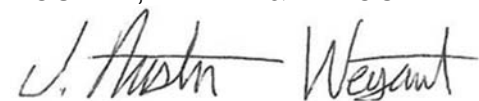
The scope of our services consisted of the performance of release assessment, initial delineation sampling and field screening, verification of release stabilization, regulatory liaison, and preparation of this work plan. All work has been performed in accordance with generally accepted professional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

If there are any questions regarding this report, please contact either Austin Weyant at 575-689-7040 or Cindy Gray at 505-325-7535.

Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant  
Project Scientist



Cynthia Gray, CHMM  
Senior Scientist

### **Figures:**

Figure 1: Vicinity Map

Figure 2: Detailed Site and Sample Location Map

### **Tables:**

Table 1: Release Information and Site Ranking

Table 2: Summary of Chloride Field Screening Results

Table 3: Summary of Laboratory Analyses

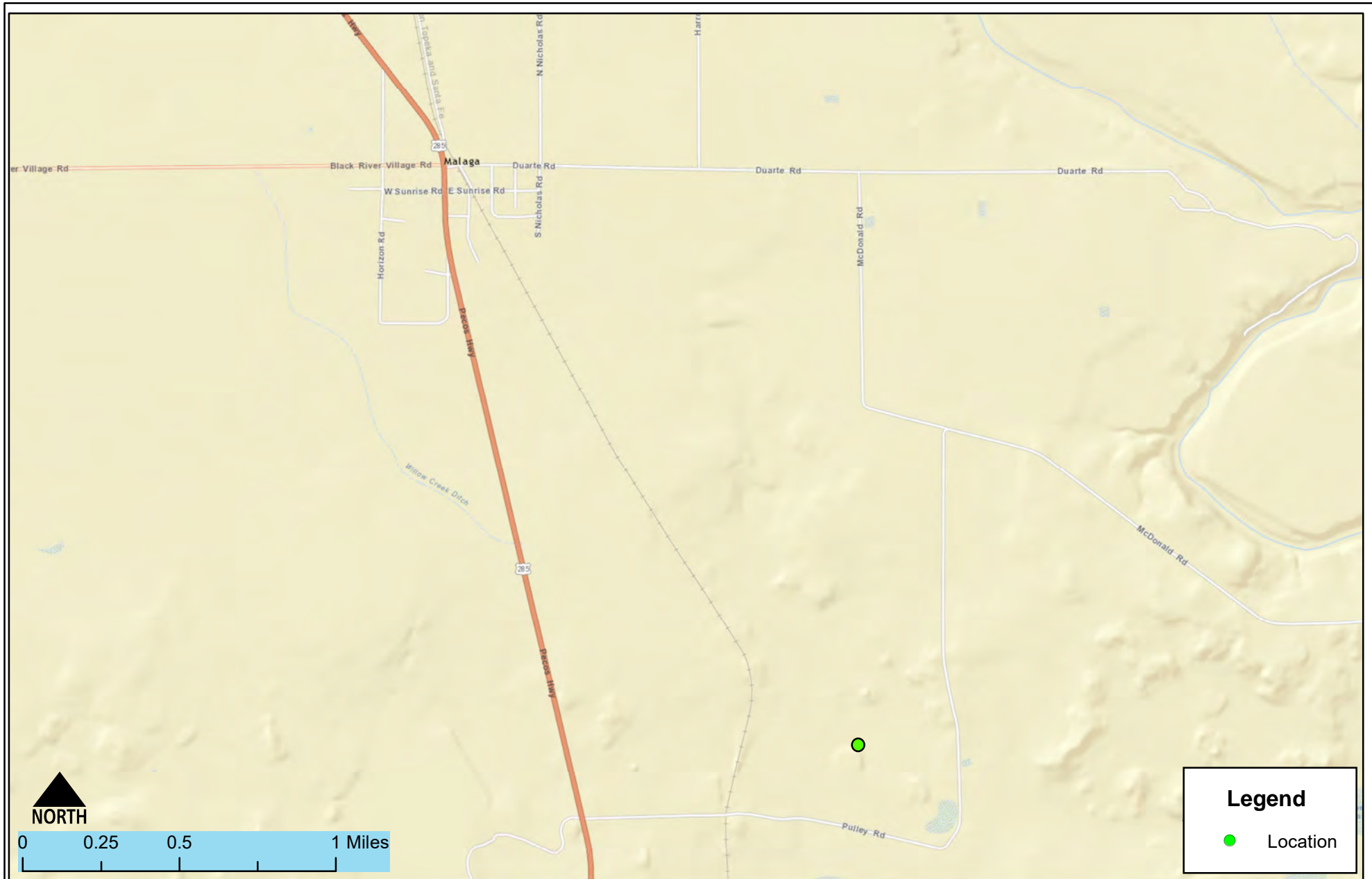
### **Appendices:**

Appendix A: Laboratory Analytical Reports

Appendix B: Form C141 Initial

Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

# FIGURE 1 VICINITY MAP



Detailed Site and Sample Map  
Paul 221H- Matador  
Malaga, New Mexico

Figure 1

Date Saved: 12/5/2016	By: _____	Date: _____	Revisions	Descr: _____
	By: _____	Date: _____		Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved				

Drawn	Lucas Middleton
Checked	_____
Approved	_____



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

Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

# FIGURE 2

## DETAILED SITE AND SAMPLE LOCATION MAP





Detailed Site and Sample Map  
 Paul #221H- Matador Resources  
 Malaja , New Mexico

Figure 2

Date Saved:  
 12/28/2016

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

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



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SMA Ref #5B24624-BG33  
3/21/2017

# TABLE 1

## RELEASE INFORMATION AND SITE RANKING



Table 1: Release information and Site Ranking					
Name	Paul 25 24S 28E RB #221H				
Location	Incident Number	API Number	Section, Township, Range		
	2RP-4051	30-015-43018	NW/NE (Unit D)	Section 25	T24S, R28E NMPM
Estimated Date of Release	December 25, 2016				
Date Reported to NMOCD	December 25, 2016				
Reported by	Catherine Green				
Land Owner	Private				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Human Error				
Released Material	Crude Oil				
Released Volume	~5 bbls Crude Oil				
Recovered Volume	~2 bbls Crude Oil				
Net Release	3 bbls Crude Oil				
Nearest Waterway	1.4 miles north of the location				
Depth to Groundwater	Estimated to be 39 feet				
Nearest Domestic Water Source	Greater than 1,000 feet				
NMOCD Ranking	20				
SMA Response Dates	Initial: 12/27/16				
Subcontractors	TBD				
Disposal Facility	Lea Land				
Estimated Yd3 Contaminated Soil Excavated and Disposed	~30				

Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

## TABLE 2

# SUMMARY OF CHLORIDE FIELD SCREENING RESULTS

Table 1: Summary of Field Screening Results

Paul Production Pad

Release

12/25/16, 2/20/17

FIELD SCREENING RESULTS SUMMARY					
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	Chlorides Results	PID Results
12/27/2016	9:00	L1	Surface	2185	1,200
12/27/2016	9:00	L2	Surface	1876	1,600
12/27/2016	9:00	L3	Surface	1968	1,200
12/27/2016	9:00	L4	Surface	1785	1,300
2/20/2017	10:00	L2-2	2'	>200	BDL
2/20/2017	10:00	L2-12	12'	1682	BDL



Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

# TABLE 3

## SUMMARY OF LABORATORY ANALYSES

**Table 3: Summary of Laboratory Analyses**

Analytical Report- 1701739	Sample Number on Figure 2 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	Cl- mg/Kg
1701739-001	L1	1/13/2017	Surface	N/A	N/A	2600	17000	150
1701739-002	L2	1/13/2017	Surface	88	1.2	5700	28000	320
1701739-003	L3	1/13/2017	Surface	N/A	N/A	4900	28000	330
1701739-004	L4	1/13/2017	Surface	140	1.7	7400	29000	130
1702A52-001	L2-2	2/20/2017	2'	>0.024	>0.094	>4.7	36	56
1702A52-002	L2-12	2/20/2017	12'	>0.023	>0.094	>4.7	>10	1600

Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

# APPENDIX A

## LABORATORY ANALYTICAL REPORTS





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

March 02, 2017

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

RE: Paul Pad

OrderNo.: 1702A52

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/23/2017 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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 1702A52

Date Reported: 3/2/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L2-2

Project: Paul Pad

Collection Date: 2/20/2017 10:00:00 AM

Lab ID: 1702A52-001

Matrix: SOIL

Received Date: 2/23/2017 9:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	56	30		mg/Kg	20	2/28/2017 10:50:01 PM	30454
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	36	9.6		mg/Kg	1	3/1/2017 11:01:16 AM	30399
Surr: DNOP	93.0	70-130		%Rec	1	3/1/2017 11:01:16 AM	30399
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/28/2017 12:03:22 AM	30385
Surr: BFB	85.3	54-150		%Rec	1	2/28/2017 12:03:22 AM	30385
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	2/28/2017 12:03:22 AM	30385
Toluene	ND	0.047		mg/Kg	1	2/28/2017 12:03:22 AM	30385
Ethylbenzene	ND	0.047		mg/Kg	1	2/28/2017 12:03:22 AM	30385
Xylenes, Total	ND	0.094		mg/Kg	1	2/28/2017 12:03:22 AM	30385
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	2/28/2017 12:03:22 AM	30385

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 6
	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	

Analytical Report

Lab Order 1702A52

Date Reported: 3/2/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L2-12

Project: Paul Pad

Collection Date: 2/20/2017 10:00:00 AM

Lab ID: 1702A52-002

Matrix: SOIL

Received Date: 2/23/2017 9:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	1600	75		mg/Kg	50	3/2/2017 12:02:19 AM	30454
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/28/2017 1:49:46 PM	30399
Surr: DNOP	103	70-130		%Rec	1	2/28/2017 1:49:46 PM	30399
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/28/2017 12:29:40 AM	30385
Surr: BFB	90.5	54-150		%Rec	1	2/28/2017 12:29:40 AM	30385
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	2/28/2017 12:29:40 AM	30385
Toluene	ND	0.047		mg/Kg	1	2/28/2017 12:29:40 AM	30385
Ethylbenzene	ND	0.047		mg/Kg	1	2/28/2017 12:29:40 AM	30385
Xylenes, Total	ND	0.094		mg/Kg	1	2/28/2017 12:29:40 AM	30385
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	2/28/2017 12:29:40 AM	30385

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 6
	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#: 1702A52  
02-Mar-17

Client: Souder, Miller & Associates  
Project: Paul Pad

Sample ID	MB-30454	SampType:	mblk	TestCode:	EPA Method 300.0: Anions						
Client ID:	PBS	Batch ID:	30454	RunNo:	41047						
Prep Date:	2/28/2017	Analysis Date:	2/28/2017	SeqNo:	1286795	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-30454	SampType:	lcs	TestCode:	EPA Method 300.0: Anions						
Client ID:	LCSS	Batch ID:	30454	RunNo:	41047						
Prep Date:	2/28/2017	Analysis Date:	2/28/2017	SeqNo:	1286796	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	14	1.5	15.00	0	92.4	90	110				

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

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

Page 3 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1702A52  
02-Mar-17

Client: Souder, Miller & Associates  
Project: Paul Pad

Sample ID	LCS-30399	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	30399	RunNo:	41033					
Prep Date:	2/27/2017	Analysis Date:	2/28/2017	SeqNo:	1285372	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.2	63.8	116			
Surr: DNOP	4.7		5.000		93.9	70	130			

Sample ID	MB-30399	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	30399	RunNo:	41033					
Prep Date:	2/27/2017	Analysis Date:	2/28/2017	SeqNo:	1285373	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	11		10.00		108	70	130			

Sample ID	LCS-30440	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	30440	RunNo:	41070					
Prep Date:	2/28/2017	Analysis Date:	3/1/2017	SeqNo:	1286611	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		98.6	70	130			

Sample ID	MB-30440	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	30440	RunNo:	41070					
Prep Date:	2/28/2017	Analysis Date:	3/1/2017	SeqNo:	1286612	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		106	70	130			

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1702A52  
02-Mar-17

Client: Souder, Miller & Associates  
Project: Paul Pad

Sample ID	MB-30385	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	30385	RunNo:	41013					
Prep Date:	2/24/2017	Analysis Date:	2/27/2017	SeqNo:	1284702	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	830		1000		82.5	54	150			

Sample ID	LCS-30385	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	30385	RunNo:	41013					
Prep Date:	2/24/2017	Analysis Date:	2/27/2017	SeqNo:	1284703	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	112	76.4	125			
Surr: BFB	1000		1000		103	54	150			

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 6



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

WO#: 1702A52

02-Mar-17

**Client:** Souder, Miller & Associates**Project:** Paul Pad

Sample ID	MB-30385		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 30385		RunNo: 41013					
Prep Date:	2/24/2017		Analysis Date: 2/27/2017		SeqNo: 1284760		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.89		1.000		89.0	80	120			

Sample ID	LCS-30385			SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS			Batch ID:	30385		RunNo:	41013			
Prep Date:	2/24/2017			Analysis Date:	2/27/2017		SeqNo:	1284761		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.96	0.025	1.000	0	96.5	75.2	115				
Toluene	0.99	0.050	1.000	0	99.4	80.7	112				
Ethylbenzene	0.98	0.050	1.000	0	98.3	78.9	117				
Xylenes, Total	3.0	0.10	3.000	0	100	79.2	115				
Surr: 4-Bromofluorobenzene	0.84		1.000		84.4	80	120				

**Qualifiers:**

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

Page 6 of 6



Hall Environmental Analysis Laboratory  
 2903 Hawkins SE  
 Albuquerque, NM 87105  
 TEL: 505-345-3975 FAX: 505-345-4167  
 Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1702A52

RcptNo: 1

Received by/date: LM 02/23/17

Logged By: Andy Jansson 2/23/2017 9:20:00 AM

Completed By: Andy Jansson 02/23/17

Reviewed By: [Signature] 02/24/17

### Chain of Custody

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

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $5.0^{\circ}\text{C}$ ? 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 ☐ # of preserved bottles checked for pH:  ( $<2$  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	2.8	Good	Yes			



Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

# APPENDIX B

## FORM C141 INITIAL



Page 679 of 874  
Received by OGD: 9/18/2024 9:56:21 AM  
Released to Imaging: 10/1/2024 11:13:49 AM

District I  
625 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

*Ammended Initial C-141 - for date stamp please see original Initial C-141*  
Form C-141  
Revised August 8, 2011  
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Matador Resources	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No. 575-623-6601
Facility Name Paul 25 24S 28E RB 221H	Facility Type Production Battery

Surface Owner Fee	Mineral Owner Fee	API No.30-015-43018
-------------------	-------------------	---------------------

#### LOCATION OF RELEASE

Unit Letter D	Section 25	Township 24S	Range 28E	Feet from the 359	North/South Line FNL	Feet from the 217	East/West Line FWL	County Eddy
------------------	---------------	-----------------	--------------	----------------------	-------------------------	----------------------	-----------------------	----------------

Latitude 32.19484171 Longitude -104.0487226

#### NATURE OF RELEASE

Type of Release Oil	Volume of Release ~5BBLs	Volume Recovered ~2BBLs
Source of Release Hauler left thief hatch open on oil tank	Date and Hour of Occurrence Dec 25 2016 8:00am	Date and Hour of Discovery Dec 25 2016 8:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Telephoned Artesia NMOCD hotline. Left message	
By Whom? Jason Thibodeaux	Date and Hour Dec 25 2016 8:45 sm	
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.\*

Oil Hauler did not properly close hatch. Lease operator discovered open hatch, closed it, called for vacuum truck to vacuum up excess fluid on production pad.

Describe Area Affected and Cleanup Action Taken.\*

Oil spilled on ground. Soil will be sampled for contaminants. Contaminated soil will be removed and replaced after work plan is approved.

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.

#### OIL CONSERVATION DIVISION

Signature: Catherine Green

Printed Name: Catherine Green

Title: Regulatory Analyst

E-mail Address: cgreen@matadorresources.com

Date: March 9, 2017

Phone: 575-627-2453

Attach Additional Sheets If Necessary

Approved by Environmental Specialist

Approval Date: 3/21/17

Expiration Date:

Conditions of Approval: This is an ammended Initial C-141. Operator recalculated

Attached ☐

spill volume. System entry will be updated accordingly.

*Original Initial C-141 has COA's + initial correspondence scanned with it.*

Paul #221H Work Plan  
SMA Ref #5B24624-BG33  
3/21/2017

# APPENDIX C

## OSE DATA





# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">C 03833 POD1</a>	C	ED		2	1	2	26	24S	28E	589014	3562545	660	96	55	41
<a href="#">C 03358 POD1</a>	C	ED		1	4	1	26	24S	28E	588416	3562116	1287	135		

Average Depth to Water: **55 feet**

Minimum Depth: **55 feet**

Maximum Depth: **55 feet**

Record Count: 2

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 589664.55

**Northing (Y):** 3562429.4

**Radius:** 1500

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.

12/2/16 12:05 PM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

**From:** [Bratcher, Mike, EMNRD](#)  
**To:** ["Catherine Green"](#)  
**Cc:** [Weaver, Crystal, EMNRD](#)  
**Subject:** RE: Emailing - WORK PLAN FOR INCIDENT 2RP-4051 Paul 25 24S 28E RB 221H API 30-015-4301....pdf  
**Date:** Friday, March 31, 2017 5:36:00 PM

---

RE: Matador Production Co. \* Paul 25 24S 28E RB 221H \* 2RP-4051 \* DOR: 12/25/16

Catherine,

Thank you for the phone call earlier. I appreciate your comments and hope I was able to answer your questions and concerns satisfactorily.

At this time, your proposal for remediation of the above referenced release is approved with the following comments and conditions of approval:

- It is OCD's understanding that the spill occurred on the well site pad. Please advise if this incorrect. It would be extremely helpful to have a site diagram that depicts the spill in relation to current conditions at the spill site. The well was recently drilled and facilities recently constructed, so the image submitted shows the spill in an open field. In this instance, an updated site diagram needs to be submitted showing the spill in relation to the well and production equipment.
- The proposal states the area will be excavated up to 1' in depth. Sample data shows analytical values at surface, and then at a 2' interval. I am unable to determine at what depth the acceptable remediation level is reached. The proposal does outline the acceptable remediation limits, and based on data presented, it should be noted that excavation may be required beyond the proposed 1' interval.
- Composite samples, as proposed, are **not** approved.
- Chloride levels do not appear to be an issue in this case, but data provided shows a spike at 12'. Being an oil only release, and a new well site, it is highly unlikely the spike is related to operations, but that should be explained, or background data obtained, for clarification. I am not requesting a background sample for this spill since it is a relatively new site and I am somewhat familiar with the area. Just be aware that this may not always be the case.
- It is OCD's understanding that sidewall confirmation samples will be obtained for lateral definition.

Please proceed on your schedule, but advise once remedial operations have been scheduled.

If you have any questions or concerns, and for notification, please contact me.

Thank you,

Mike Bratcher  
NMOCD District 2  
811 S. First St.  
Artesia NM 88210  
575-748-1283 Ext 108

mike.bratcher@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

<end>

---

**From:** Catherine Green [mailto:CGreen@matadorresources.com]

**Sent:** Friday, March 31, 2017 3:14 PM

**To:** Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>

**Subject:** Emailing - WORK PLAN FOR INCIDENT 2RP-4051 Paul 25 24S 28E RB 221H API 30-015-4301....pdf

This transmission is strictly confidential. If you are not the intended recipient of this message, you may not disclose, print, copy or disseminate this information. If you have received this in error, please reply and notify the sender (only) and delete the message. Unauthorized interception of this e-mail is a violation of federal criminal law. This communication does not reflect an intention by the sender or the sender's client or principal to conduct a transaction or make any agreement by electronic means. Nothing contained in this message or in any attachment shall satisfy the requirements for a writing, and nothing contained herein shall constitute a contract or electronic signature under the Electronic Signatures in Global and National Commerce Act, any version of the Uniform Electronic Transactions Act or any other statute governing electronic transactions.

**From:** [Bratcher, Mike, EMNRD](#)  
**To:** ["Catherine Green"](#)  
**Cc:** [Weaver, Crystal, EMNRD](#)  
**Subject:** RE: Emailing - WORK PLAN FOR INCIDENT 2RP-4051 Paul 25 24S 28E RB 221H API 30-015-4301....pdf  
**Date:** Monday, April 3, 2017 6:37:00 AM

---

Catherine,

SMA may need to confirm, but I believe the deeper sample was obtained to meet the COA requirements. Thought of that after sending the approval. It was late and it was Friday.

Thanks,

Mike Bratcher  
NMOCD District 2  
811 South First Street  
Artesia NM 88210  
575-748-1283 Ext 108  
[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)

---

**From:** Bratcher, Mike, EMNRD  
**Sent:** Friday, March 31, 2017 5:37 PM  
**To:** 'Catherine Green' <CGreen@matadorresources.com>  
**Cc:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>  
**Subject:** RE: Emailing - WORK PLAN FOR INCIDENT 2RP-4051 Paul 25 24S 28E RB 221H API 30-015-4301....pdf

RE: Matador Production Co. \* Paul 25 24S 28E RB 221H \* 2RP-4051 \* DOR: 12/25/16

Catherine,

Thank you for the phone call earlier. I appreciate your comments and hope I was able to answer your questions and concerns satisfactorily.

At this time, your proposal for remediation of the above referenced release is approved with the following comments and conditions of approval:

- It is OCD's understanding that the spill occurred on the well site pad. Please advise if this incorrect. It would be extremely helpful to have a site diagram that depicts the spill in relation to current conditions at the spill site. The well was recently drilled and facilities recently constructed, so the image submitted shows the spill in an open field. In this instance, an updated site diagram needs to be submitted showing the spill in relation to the well and production equipment.
- The proposal states the area will be excavated up to 1' in depth. Sample data shows analytical values at surface, and then at a 2' interval. I am unable to determine at what depth the acceptable remediation level is reached. The proposal does outline the acceptable

remediation limits, and based on data presented, it should be noted that excavation may be required beyond the proposed 1' interval.

- Composite samples, as proposed, are **not** approved.
- Chloride levels do not appear to be an issue in this case, but data provided shows a spike at 12'. Being an oil only release, and a new well site, it is highly unlikely the spike is related to operations, but that should be explained, or background data obtained, for clarification. I am not requesting a background sample for this spill since it is a relatively new site and I am somewhat familiar with the area. Just be aware that this may not always be the case.
- It is OCD's understanding that sidewall confirmation samples will be obtained for lateral definition.

Please proceed on your schedule, but advise once remedial operations have been scheduled.

If you have any questions or concerns, and for notification, please contact me.

Thank you,

Mike Bratcher  
NMOCD District 2  
811 S. First St.  
Artesia NM 88210  
575-748-1283 Ext 108  
[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

<end>

---

**From:** Catherine Green [<mailto:CGreen@matadorresources.com>]

**Sent:** Friday, March 31, 2017 3:14 PM

**To:** Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>

**Subject:** Emailing - WORK PLAN FOR INCIDENT 2RP-4051 Paul 25 24S 28E RB 221H API 30-015-4301....pdf

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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  
March 29, 2017

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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

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

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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
<b>Benzene</b>	<b>10 PPM</b>	<b>10 PPM</b>	<b>10 PPM</b>
<b>BTEX</b>	<b>50 PPM</b>	<b>50 PPM</b>	<b>50 PPM</b>
<b>TPH</b>	<b>5000 PPM</b>	<b>1000 PPM</b>	<b>100 PPM</b>

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
<b>Total Site Ranking</b>	<b>20</b>

## **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

Closure 2RP-4290 Tiger 14-24S-28E-RB  
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 30<sup>th</sup> 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 30<sup>th</sup> 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

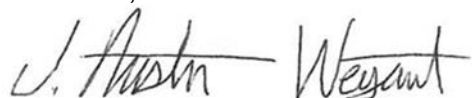
Page 5 of 5

## **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:**

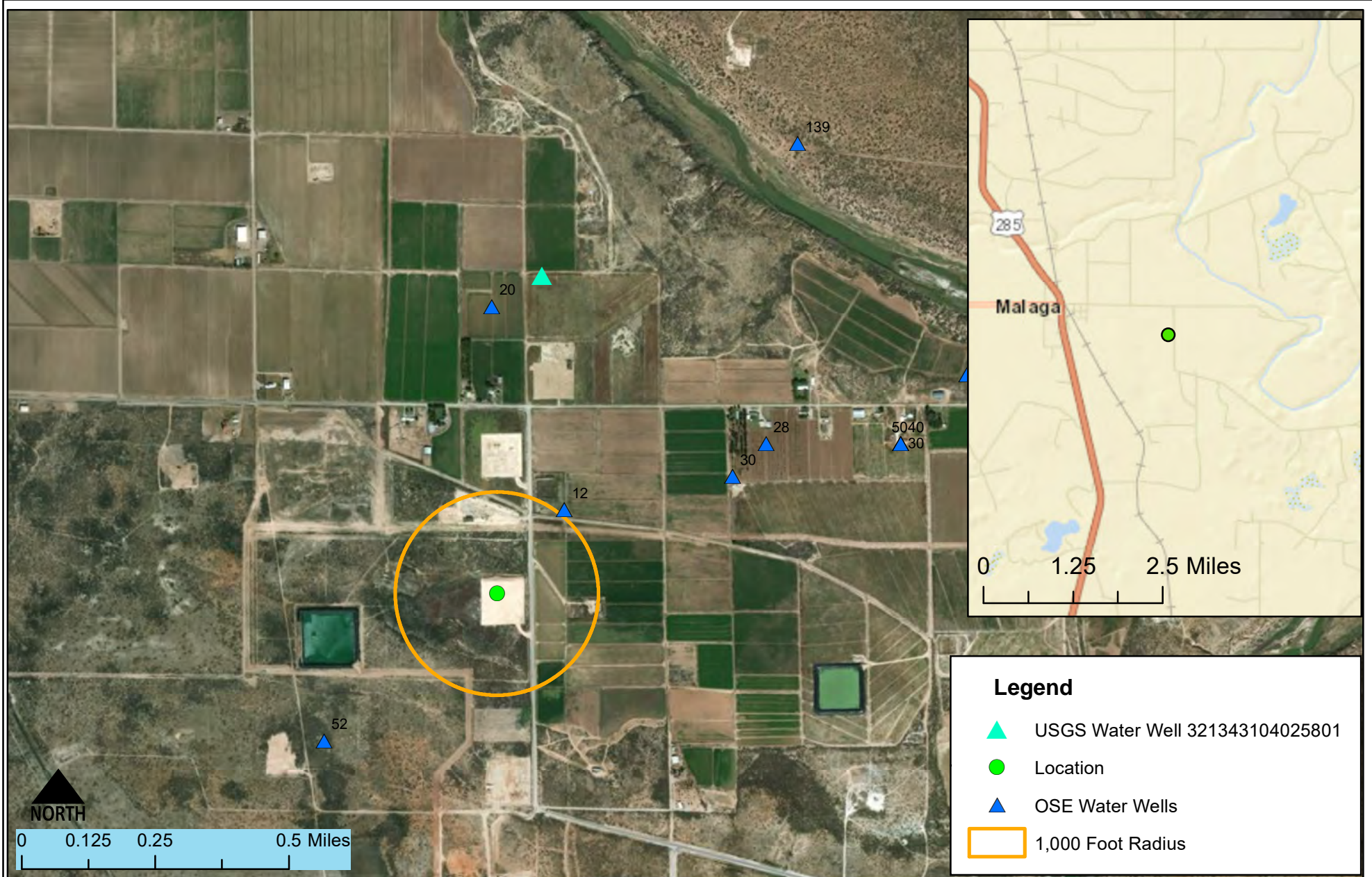
Table 3: Summary of Sample Results  
Table 4: Summary of Baseline and Background Sample Results

### **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  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
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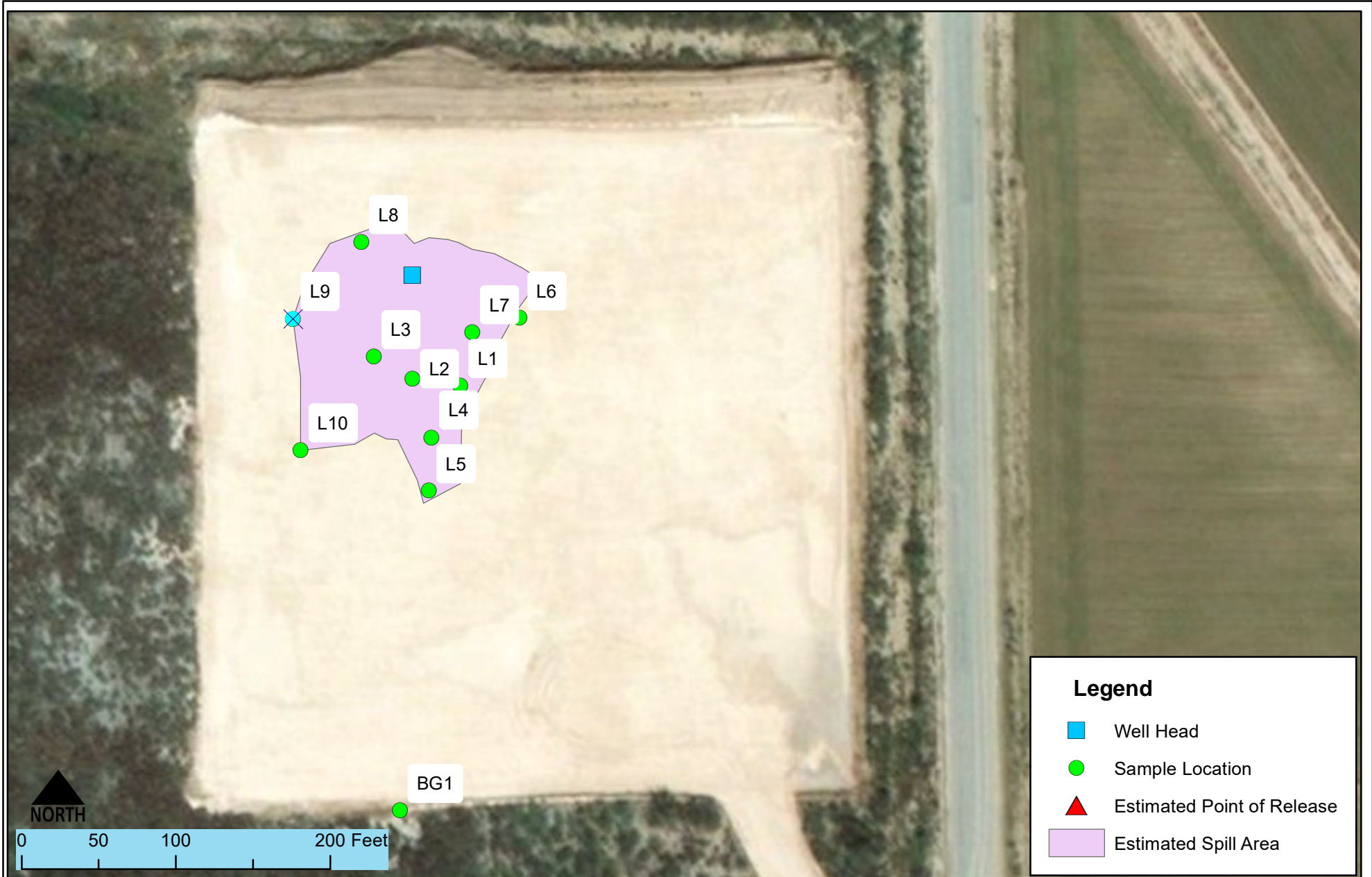
Drawn Lucas Middleton  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_



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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

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

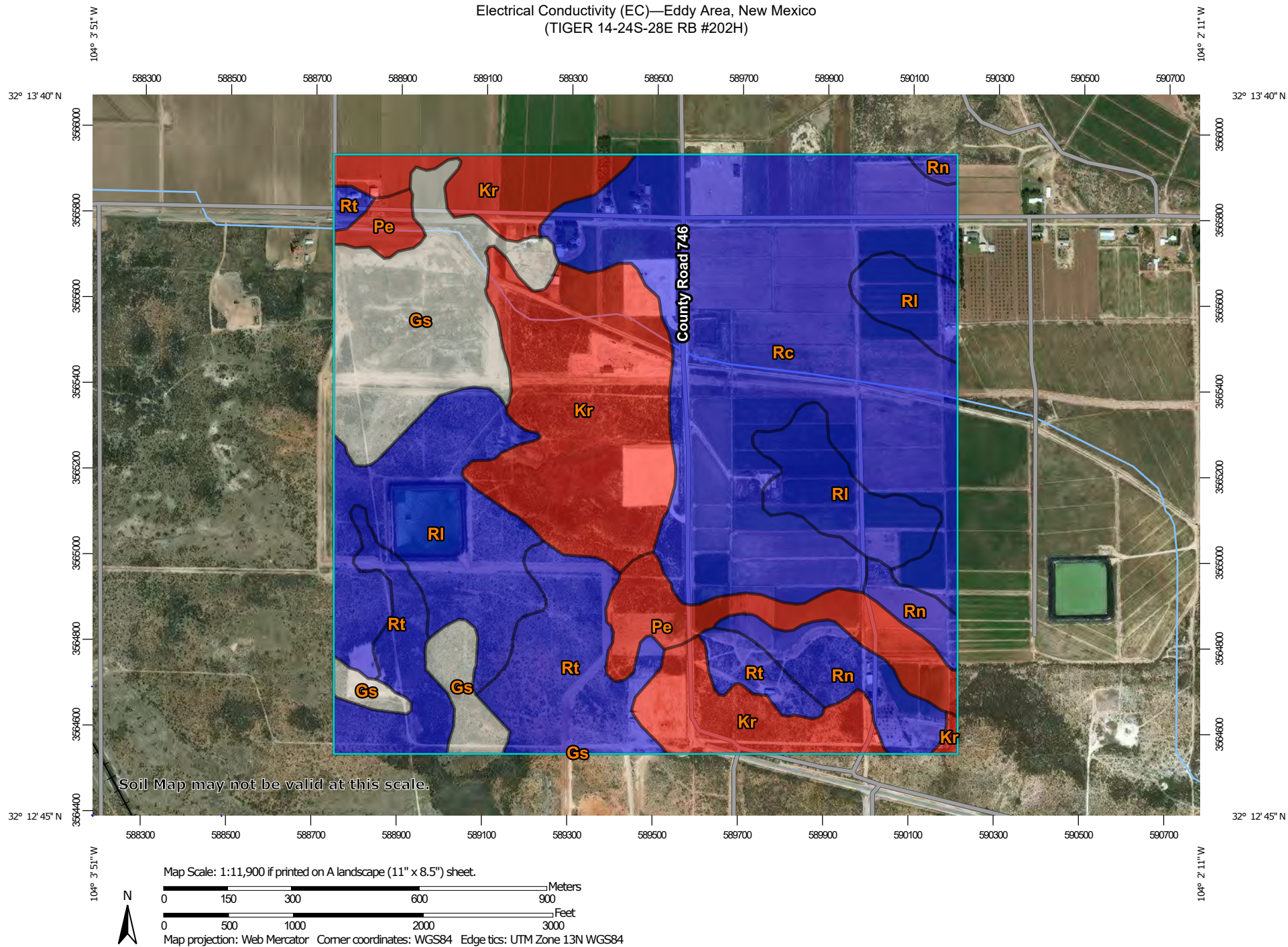


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Document: C:\Users\lcm.CBO\Documents\GIS DATA\MAPS\Tiger Figure 2.mxd

FIGURE 3:  
NRCS ELECTRICAL  
CONDUCTIVITY MAP




Electrical Conductivity (EC)—Eddy Area, New Mexico  
(TIGER 14-24S-28E RB #202H)Natural Resources  
Conservation ServiceWeb Soil Survey  
National Cooperative Soil Survey3/28/2018  
Page 1 of 5

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

  $\leq 2.0$   
  $> 2.0$  and  $\leq 5.0$   
 Not rated or not available


#### Soil Rating Lines

  $\leq 2.0$   
  $> 2.0$  and  $\leq 5.0$   
 Not rated or not available






#### Soil Rating Points

  $\leq 2.0$   
  $> 2.0$  and  $\leq 5.0$   
 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%
Rl	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
------------------	---------------	-----------------	--------------	-----------------------	-----------------------	----------------------	---------------------	----------------

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: 	<b>OIL CONSERVATION DIVISION</b>	
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
<a href="#">C 00738</a>			ED	3	1	1	13	24S	28E	589673	3565472*	320	125	12	113
<a href="#">C 02057</a>	C		ED		1	4	14	24S	28E	588956	3564774*	682	126	52	74
<a href="#">C 00903</a>	C		ED		2	1	13	24S	28E	590178	3565575*	791	57	30	27
<a href="#">C 00574</a>			ED	2	4	4	11	24S	28E	589452	3566081*	854	200	20	180
<a href="#">C 00464</a>			ED	2	2	1	13	24S	28E	590277	3565674*	925	111	28	83
<a href="#">C 00329</a>	C		ED	2	1	2	13	24S	28E	590682	3565677*	1295	95	30	65
<a href="#">C 00684</a>			ED	2	1	2	13	24S	28E	590682	3565677*	1295	95	40	55
<a href="#">C 01154</a>	C		ED	2	1	2	13	24S	28E	590682	3565677*	1295	95	50	45
<a href="#">C 00353</a>	C	C	ED		3	4	13	24S	28E	590603	3564367*	1424	2726		
<a href="#">C 00750</a>			ED	1	2	4	13	24S	28E	590898	3564871*	1474	110		
<a href="#">C 00618</a>	C		ED	3	4	4	12	24S	28E	590880	3565885*	1558	80	40	40
<a href="#">C 01082</a>			ED	3	3	2	11	24S	28E	588832	3566693*	1597	120		
<a href="#">C 01747</a>			ED				12	24S	28E	590367	3566577*	1622	176	139	37
<a href="#">C 02524 POD2</a>	C		ED	2	2	2	15	24S	28E	587814	3565690*	1716	90	11	79
<a href="#">C 00983</a>	C		ED	4	4	4	12	24S	28E	591080	3565885*	1742	92	40	52
<a href="#">C 00354</a>	C	C	ED		4	4	13	24S	28E	591005	3564367*	1762	2739		
<a href="#">C 00346</a>	C		ED		2	2	15	24S	28E	587715	3565591*	1789	90	32	58
<a href="#">C 03132</a>	C		ED	1	2	4	15	24S	28E	587616	3564877*	1883	90	19	71
<a href="#">C 00349</a>	C	CUB	ED		1	3	18	24S	29E	591401	3564773*	1986	2734		
<a href="#">C 00488</a>	C		ED	2	1	2	15	24S	28E	587412	3565688*	2105	64	8	56
<a href="#">C 03862 POD5</a>		CUB	ED	4	3	3	01	24S	28E	589785	3567458	2254	17	10	7
<a href="#">C 03862 POD4</a>		CUB	ED	3	3	3	01	24S	28E	589705	3567490	2276	30	10	20
<a href="#">C 02713</a>	C		ED	4	4	1	16	24S	29E	591633	3565944	2282	230	18	212
<a href="#">C 03862 POD3</a>		CUB	ED	3	3	3	01	24S	28E	589685	3567500	2284	60	10	50
<a href="#">C 03862 POD1</a>		CUB	ED	3	3	3	01	24S	28E	589672	3567505	2287	17	10	7
<a href="#">C 03862 POD2</a>		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
<a href="#">C 00890</a>			ED	3	3	4	10	24S	28E	587211	3565897*	2353	50		
<a href="#">C 00381</a>	C	C	ED	3	2	3	07	24S	29E	591682	3566297*	2460	2797		
<a href="#">C 02184</a>		C	ED	2	4	3	01	24S	28E	590248	3567700*	2593	87	60	27
<a href="#">C 02244</a>		C	LE	3	1	2	22	24S	28E	587224	3563865*	2623	260		
<a href="#">C 03833 POD1</a>		C	ED	2	1	2	26	24S	28E	589014	3562545	2719	96	55	41
<a href="#">C 01442</a>		C	ED		1	2	10	24S	28E	587298	3567199*	2931	100		
<a href="#">C 00511</a>		C	ED		2	3	02	24S	28E	588518	3568001*	2931	268	140	128
<a href="#">C 04026 POD1</a>		CUB	ED	3	2	1	25	24S	28E	590148	3562290	3014	190	90	100
<a href="#">C 00962</a>		C	ED		3	3	10	24S	28E	586505	3565992*	3059	63	9	54
<a href="#">C 01237</a>		C	ED	1	1	2	10	24S	28E	587197	3567298*	3072	123		
<a href="#">C 00764</a>			ED	3	1	3	10	24S	28E	586399	3566292*	3247	118	25	93
<a href="#">C 03358 POD1</a>		C	ED	1	4	1	26	24S	28E	588416	3562116	3283	135		
<a href="#">C 02836</a>		C	ED	2	2	2	16	24S	28E	586203	3565676*	3294		15	
<a href="#">C 02186</a>		C	ED			2	02	24S	28E	589128	3568606*	3396	100	55	45
<a href="#">C 02198</a>		C	ED			1	01	24S	28E	589940	3568611*	3417	78		
<a href="#">C 00570</a>		C	ED		1	1	10	24S	28E	586490	3567195*	3568	100	28	72
<a href="#">C 03824 POD1</a>		CUB	ED	4	1	2	16	24S	28E	585770	3565578	3713	290	60	230
<a href="#">C 03615 POD1</a>		CUB	ED	1	3	2	06	24S	29E	591964	3568500	4116	60	36	24
<a href="#">C 03615 POD2</a>		CUB	ED	4	2	4	06	24S	29E	592661	3568013	4239	60	26	34
<a href="#">C 00573</a>			ED	2	2	4	04	24S	28E	586188	3568087*	4350	250	35	215
<a href="#">C 00318</a>		C	ED	2	4	4	34	23S	28E	587811	3569298*	4394	150		
<a href="#">C 00857</a>			ED	3	1	4	30	24S	29E	592135	3561440*	4632	306		
<a href="#">C 03703 POD1</a>		C	ED	1	2	1	09	24S	28E	585259	3567225	4658	74	15	59
<a href="#">C 00856</a>			ED	1	2	4	30	24S	29E	592538	3561644*	4719	380		
<a href="#">C 00862</a>			ED	1	2	4	30	24S	29E	592538	3561644*	4719	155		
<a href="#">C 00513 S</a>		C	ED	1	3	3	16	24S	28E	584802	3564432	4732	161	42	119
<a href="#">C 00709</a>		C	ED	3	3	3	16	24S	28E	584802	3564232*	4769			
<a href="#">C 00648</a>		C	ED	2	2	2	17	24S	28E	584593	3565644*	4891	96	58	38
<a href="#">C 02306</a>		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																
Sub-																
Q Q Q																
Depth Depth Water																
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y	Distance	Well	Water	Column	
<a href="#">C 00463</a>	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



# APPENDIX C

## LABORATORY ANALYTICAL REPORTS

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710098

Date Reported:

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	



Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 6 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710098

Date Reported:

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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 10 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710098

Date Reported:

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	Page 11 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	



Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 12 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 13 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 14 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 15 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 16 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	

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	Page 17 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	



Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 18 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	

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

CLIENT: Souder, Miller & Associates  
Project: Tiger  
Lab ID: 1710098-020

Client Sample ID: L2-3  
Collection Date: 8/30/2017  
Received Date: 10/3/2017 9:25:00 AM

Matrix: SOIL

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	Page 20 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 21 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710098

Date Reported:

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	Page 22 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 23 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	



Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1710098  
Date Reported:

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	Page 24 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	

# 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](http://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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 light blue 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
<b>EPA METHOD 300.0: ANIONS</b>							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
<b>EPA METHOD 300.0: ANIONS</b>							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
<b>EPA METHOD 300.0: ANIONS</b>							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
<b>EPA METHOD 300.0: ANIONS</b>							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
<b>EPA METHOD 300.0: ANIONS</b>							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.

<b>Qualifiers:</b>	* 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.

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

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: 1611165

RcptNo: 1

Received by/date:

*AG*

*11/01/16*

Logged By: Ashley Gallegos

11/1/2016 10:00:00 AM

*AG*

Completed By: Ashley Gallegos

11/2/2016 9:49:24 PM

*AG*

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?<br>(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?<br>(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			



Environmental, social, and governance related to U.S. Environmental may be interconnected to other associated labor/practices. This serves as notice of this possibility. Any sub-contracted data will be clearly marked 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](http://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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## 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.
- 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 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.	B Analyte detected in the associated Method Blank	Page 2 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	
PQL Practical Quantitative Limit	R RPD outside accepted recovery limits	
RL Reporting Detection Limit	S % Recovery outside of range due to dilution or matrix	



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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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	2.6	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	
Mailing Address:		Project Name: Warner	
Phone #:		Project #:	
email or Fax#:		Project Manager: Austin Weyant	
QA/QC Package:		Sampler: LCM	
<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Accreditation:		Sample Temperature: 2-6°C	
<input type="checkbox"/> NELAP <input type="checkbox"/> Other		HEAL No. 1700268	
<input type="checkbox"/> EDD (Type)		Preservative Type	
Date	Time	Matrix	Sample Request ID
5/2/17	11 am	Soil	L1
5/2/17	11 am	Soil	L2
5/2/17	11 am	Soil	L3
5/2/17	11 am	Soil	L4
Date		Time	Matrix
6/5/17	2:00		
6/5/17	1:00		

BTEX + MTBE + TMBs (8021)  
 BTEX + MTBE + TPH (Gas only)  
 TPH Method 8015B (Gas/Diesel)  
 TPH (Method 418.1)  
 EDB (Method 504.1)  
 8310 (PNA or PAH)  
 RCRA 8 Metals  
 Anions (F, Cl, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)  
 8081 Pesticides / 8082 PCBs  
 8260B (VOA)  
 8270 (Semi-VOA)

Remarks:

Received by: [Signature] Date: 6/5/17 Time: 1400  
 Received by: [Signature] Date: 6/6/17 Time: 1015

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  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,



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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	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.

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

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  $6.0^{\circ}\text{C}$ ? 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](http://www.hallenvironmental.com)

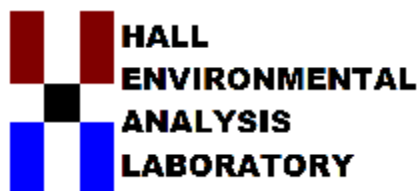
4901 Hawkins NE - Albuquerque, NM 87109

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:					
<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)					
Accreditation					
<input type="checkbox"/> NELAP <input type="checkbox"/> Other					
<input type="checkbox"/> EDD (Type)		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Sample Temperature: <u>3.0 - 10.0F</u> <u>-2.0°C</u> 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>11/8/17</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](http://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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 white background.

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 &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	5/9/2016 1:49:28 PM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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 &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	120	30		mg/Kg	20	5/9/2016 2:26:42 PM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

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

Lab Order 1605079

Date Reported: 5/12/2016

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	55	30		mg/Kg	20	5/9/2016 2:39:06 PM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

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

Lab Order 1605079

Date Reported: 5/12/2016

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	3500	150		mg/Kg	100	5/11/2016 3:17:06 AM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

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

Lab Order 1605079

Date Reported: 5/12/2016

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	5/9/2016 3:03:54 PM	25197
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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	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	
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 6 of 10
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 &amp; 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.  
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 <b>MB-25130</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>25130</b>		RunNo: <b>33977</b>							
Prep Date: <b>5/3/2016</b>	Analysis Date: <b>5/4/2016</b>		SeqNo: <b>1047281</b>		Units: <b>mg/Kg</b>					
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 <b>LCS-25130</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>25130</b>		RunNo: <b>33977</b>							
Prep Date: <b>5/3/2016</b>	Analysis Date: <b>5/4/2016</b>		SeqNo: <b>1047282</b>		Units: <b>mg/Kg</b>					
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 <b>1605079-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BL-1</b>	Batch ID: <b>25130</b>		RunNo: <b>33977</b>							
Prep Date: <b>5/3/2016</b>	Analysis Date: <b>5/4/2016</b>		SeqNo: <b>1047284</b>		Units: <b>mg/Kg</b>					
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 <b>1605079-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BL-1</b>	Batch ID: <b>25130</b>		RunNo: <b>33977</b>							
Prep Date: <b>5/3/2016</b>	Analysis Date: <b>5/4/2016</b>		SeqNo: <b>1047285</b>		Units: <b>mg/Kg</b>					
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 &amp; 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.	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: 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 &gt;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:

(&lt;2 or &gt;12 unless noted)

12. Does paperwork match bottle labels?

Yes ☒No ☐

(Note discrepancies on chain of custody)

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?

Yes ☒No ☐

(If no, notify customer for authorization.)

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			



## Chain-of-Custody Record

Client: SMTA

Mailing Address: 201 S

PALABUENO

Phone #: 575 684 7050

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other☐ EDD (Type)

Date Time Matrix Sample Request ID

4/24 12:00 BL-1  
 4/24 12:00 BL-2  
 4/24 12:00 BL-3  
 4/24 12:00 BL-4  
 4/24 12:00 BL-5

☒ Standard ☐ Rush

Project Name:

B BANKED

Project #:

Project Manager:

A WEYANT

Sampler:

LCA

On Ice:

☒ Yes ☐ No

Sample Temperature: 2.8

Container Type and #

406

Preservative Type

HEAL No.

1605079

-001

-002

-003

-004

-005



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

BTEX + MTBE + TMB's (8021)

BTEX + MTBE + TPH (Gas only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Remarks:

Received by:

Date Time

Joe Boat 05/03/16 0940

Received by:

Date Time

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  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## 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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	43	30		mg/Kg	20	6/21/2017 11:21:24 AM	32409

**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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	2600	75		mg/Kg	50	6/22/2017 6:35:28 PM	32409

**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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	3000	150		mg/Kg	100	6/22/2017 6:47:52 PM	32409

**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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	5300	300		mg/Kg	200	6/22/2017 7:00:17 PM	32409

**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
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	6/21/2017 1:00:40 PM	32409

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 3
	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: 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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	530	30		mg/Kg	20	6/21/2017 1:13:05 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	1500	75		mg/Kg	50	6/22/2017 7:12:42 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	2600	150		mg/Kg	100	6/22/2017 7:25:07 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	650	30		mg/Kg	20	6/21/2017 1:50:18 PM	32409
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**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
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**EPA METHOD 300.0: ANIONS**

Analyst: MRA

Chloride	1600	75		mg/Kg	50	6/22/2017 7:37:32 PM	32409
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Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 3
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 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.

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

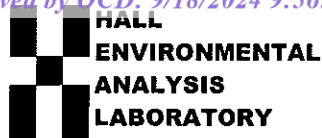
J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Page 3 of 3



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			





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

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

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	Page 1 of 23
	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: 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



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

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	Page 4 of 23
	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: 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

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	Page 6 of 23
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A44

Date Reported: 6/30/2017

CLIENT: Souder, Miller & Associates

Project: Matador Paul 2nd

Lab ID: 1706A44-007

Client Sample ID: SW9

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

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

Matrix: SOIL

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

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	Page 8 of 23
	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: 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	Page 9 of 23
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	



Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

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

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

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

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

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



Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1706A44  
Date Reported: 6/30/2017

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

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

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

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1706A44

30-Jun-17

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 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

Page 23 of 23





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° 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	6.0	Good				







Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706875

Date Reported:

CLIENT: Souder, Miller & Associates

Project: Tiger W1

Lab ID: 1706875-001

Client Sample ID: Tiger W1

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

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

Matrix: AQUEOUS

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	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	



ARTESIA DISTRICT

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

State of New Mexico  
Energy Minerals and Natural Resources

FEB 19 2018

Form C-141  
Revised April 3, 2017

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

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

## Release Notification and Corrective Action

*NAB1805132291* OPERATOR ☒ Initial Report ☐ Final Report


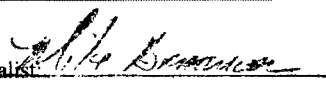
Name of Company Matador Resources Company <i>228937</i>	Contact Casey Snow
Address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	Telephone No. (972) 371-5439
Facility Name TOM MATTHEWS 10 24S 28E RB #203H	Facility Type Oil well
Surface Owner Private	Mineral Owner Private
API No. 30-015-44561	

## LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	10	24S	28E	1659	South	349	West	Eddy

Latitude 32.229673° Longitude -104.083370° NAD83

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 193 bbl	Volume Recovered 45 bbl
Source of Release Equipment Failure	Date and Hour of Occurrence 1/31/18 ~8:00	Date and Hour of Discovery 2/1/18 ~8:00a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Lucas Middleton( SMA)	Date and Hour 2/1/18 12:00	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*  N/A		
Describe Cause of Problem and Remedial Action Taken.* Transfer Pump failed causing a release onto the pad. The pump was isolated and a vacuum truck and backhoe was on site vacuuming all standing fluids		
Describe Area Affected and Cleanup Action Taken.*  The release occurred on the pad around the tank battery. SMA will delineate and submit a work plan for approval of remediation actions.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Casey Snow	Approved by Environmental Specialist: 	
Title: Manager Regulatory, Environmental, & Safety	Approval Date: <i>2/19/18</i>	Expiration Date: <i>N/A</i>
E-mail Address: csnow@matadorresources.com	Conditions of Approval: <i>See attached</i>	
Date: _____ Phone: (972) 371-5439	Attached <input type="checkbox"/> <i>228937-44029</i>	

\* Attach Additional Sheets If Necessary



Operator/Responsible Party,

The OCD has received the form C-141 you provided on 2/19/2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RD-4029 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 3/19/2018. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted



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

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

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

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

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

**Jim Griswold**

OCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us

## Bratcher, Mike, EMNRD

---

**From:** Lucas Middleton <lucas.middleton@soudermiller.com>  
**Sent:** Monday, February 19, 2018 10:02 AM  
**To:** Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD  
**Subject:** Tom Mathews C141 Initial  
**Attachments:** tom Mathews c141.pdf

Hello,  
I am submitting a C141 Initial for Matador Resources for Tom Mathews 10 24S28E RB #203H which occurred on 1/31/18.

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



Souder, Miller & Associates  
Engineering ▪ Environmental ▪ Surveying  
201 S. Halagueno  
Carlsbad, NM 88220  
[www.soudermiller.com](http://www.soudermiller.com)

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## Weaver, Crystal, EMNRD

---

**From:** Lucas Middleton <lucas.middleton@soudermiller.com>  
**Sent:** Thursday, February 1, 2018 12:02 PM  
**To:** Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD  
**Cc:** Csnow (Csnow@matadorresources.com)  
**Subject:** Immediate notification

Matador Resources  
Tom Mathews #203H  
30-15-44561

Release stayed on pad  
Approximately 50 bbls was released  
Approximately 48 bbls was recovered

We will submit a C141 Initial asap.

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



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**From:** [Weaver, Crystal, EMNRD](#)  
**To:** ["Lucas Middleton"; Bratcher, Mike, EMNRD](#)  
**Cc:** [Csnow \(Csnow@matadorresources.com\)](mailto:Csnow@matadorresources.com)  
**Subject:** RE: Tom Mathews C141 Initial  
**Date:** Monday, April 2, 2018 1:56:00 PM  
**Attachments:** [image002.png](#)  
[1. 4629 - COAs and signed C-141 Initial.pdf](#)

---

RE: Matador \* Tom Matthews 10 24S 28E RB #203H \* 30-015-44561 \* 2RP-4629

Casey/Lucas,

I have included a scanned copy of the signed Initial C-141 Remediation Permit along with an attached Conditions of Approval (COA). The OCD tracking number for this event is 2RP-4629, please refer to this tracking number on any and all submissions sent in to the OCD. Please remit a site characterization plan (see COA document included in attachment) or advise OCD of plan of action immediately since this one has a due date of 3/19/18 and that has passed.

Thank you,

**Crystal Weaver**

Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
Cell: 575-840-5963  
Fax: 575-748-9720

---

**From:** Lucas Middleton [mailto:lucas.middleton@soudermiller.com]  
**Sent:** Monday, February 19, 2018 10:02 AM  
**To:** Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>  
**Subject:** Tom Mathews C141 Initial

Hello,

I am submitting a C141 Initial for Matador Resources for Tom Mathews 10 24S28E RB #203H which occurred on 1/31/18.

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



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**From:** Lucas Middleton  
**To:** [Bratcher, Mike, EMNRD](#); [Weaver, Crystal, EMNRD](#)  
**Cc:** [John Hurt](#); [Csnow \(Csnow@matadorresources.com\)](mailto:Csnow@matadorresources.com)  
**Subject:** SOIL REMEDIATION WORK PLAN FOR THE TOM MATTHEWS #203H RELEASE (2RP-4629) API # 30-015- 44561  
**Date:** Wednesday, March 7, 2018 10:52:32 AM  
**Attachments:** [image003.png](#)  
[SOIL REMEDIATION WORK PLAN FOR THE TOM MATTHEWS #203H RELEASE \(2RP-.pdf\)](#)

---

Good Morning,

On behalf of Matador Resources, SMA is submitting a soil remediation work plan for TOM MATTHEWS #203H. 2RP-4629, API # 30-015- 44561.

Thank you and have a great day

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



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

February 27, 2018

#5E26816- BG3

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

SUBJECT: SOIL REMEDIATION WORK PLAN FOR THE TOM MATTHEWS #203H RELEASE (2RP-4629), EDDY COUNTY, NEW MEXICO

Dear Mr. Bratcher,

On behalf of Matador Resources, Souder, Miller & Associates (SMA) has prepared this WORK PLAN that describes the assessment, initial delineation and proposed remediation for a release associated with the TOM MATTHEWS 10 24S 28E RB #203H. The site is located in UNIT I, SECTION 10, 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	TOM MATTHEWS 10 24S 28E RB #203H
Company	Matador Resources
RP Number	2RP-4629
API Number	30-015-44561
Location	32.229673°, -104.083370°
Estimated Date of Release	1/31/18
Date Reported to NMOCD	2/1/18
Land Owner	Private
Reported To	NM OCD Artesia District Office
Source of Release	Equipment Failure
Released Material	Produced Water
Released Volume	193 bbls
Recovered Volume	45 bbls
Net Release	148 bbls
Nearest Waterway	0.33 Miles from Black River
Depth to Groundwater	25'
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	20
SMA Response Dates	January 31 and February 6, 2018



Soil Remediation Workplan (2RP-4629) TOM MATTHEWS #203H  
of 4  
February 27, 2018

Page 2

## **1.0 Background**

On January 31, 2018, a transfer Pump failed causing a release onto the Tom Matthews #203H pad. The pump was isolated, and a vacuum truck and backhoe was on site vacuuming all standing fluids. The release occurred on the pad around the tank battery and impacted an estimated impact 2,221 square yards of unlined surface area. The release is illustrated on Figure 2.

## **2.0 Site Ranking and Land Jurisdiction**

The release site is located approximately 0.33 miles south of the Black River, with an elevation of approximately 3,020 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. Two wells are located within a 1,000 foot radius of the site. Neither of these two wells are domestic. Well ID #C00764 is the nearest, with a depth-to-groundwater of 25 feet. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be 25 feet below ground surface (bgs).

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

Table 2.

Soil Remediation Standards	0 to 9	10 to 19	>19
<b>Benzene</b>	<b>10 PPM</b>	<b>10 PPM</b>	<b>10 PPM</b>
<b>BTEX</b>	<b>50 PPM</b>	<b>50 PPM</b>	<b>50 PPM</b>
<b>TPH</b>	<b>5000 PPM</b>	<b>1000 PPM</b>	<b>100 PPM</b>

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
<b>Total Site Ranking</b>	<b>20</b>

Soil Remediation Workplan (2RP-4629) TOM MATTHEWS #203H  
of 4  
February 27, 2018

Page 3

### **3.0 Release Characterization**

On January 31, 2018 and February 6, 2018, a SMA representative was on site for an initial site evaluation the extent of the release. Soil samples were field-screened using an EC meter and processed according to NMOCD soil sampling procedures. 7 sample locations were collected including backgrounds. Samples occurred between 0.5 feet to 3 feet bgs. The sample was sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analyses of chlorides by Method 300.0. A surface sample from location L3 was analyzed for volatile organics (BTEX) by Method 8021B, and MRO, DRO, and GRO by EPA Method 8015D. The sample location are depicted on Figure 2. Field screening and laboratory results are summarized in Table 3. Laboratory reports are included in Appendix C.

### **4.0 Soil Remediation Workplan**

SMA proposes excavation and removal of contaminated soil, as illustrated in Figure 2. The release area will be excavated to 1.5 feet bgs. SMA will continuously guide the excavation and delineation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500). The release area will be excavated to the NMOCD Standards in Table 2 above. Confirmation samples will be collected from within the excavation. Approximately 1,225 cubic yards of contaminated soil is projected to be removed and replaced with clean backfill material in order to return the surface to previous contours. The contaminated soil will be transported for proper disposal at Lea Land, near Carlsbad, NM, an NMOCD permitted disposal facility.

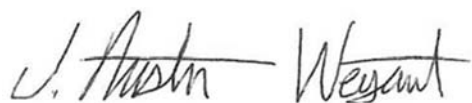
### **5.0 Scope and Limitations**

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

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

Submitted by:  
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Austin Weyant  
Project Scientist



Shawna Chubbuck  
Senior Scientist

Soil Remediation Workplan (2RP-4629) TOM MATTHEWS #203H  
of 4  
February 27, 2018

Page 4

**ATTACHMENTS:**

**Figures:**

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Site and Sample Location Map

**Tables:**

Table 3: Summary of Sample Results

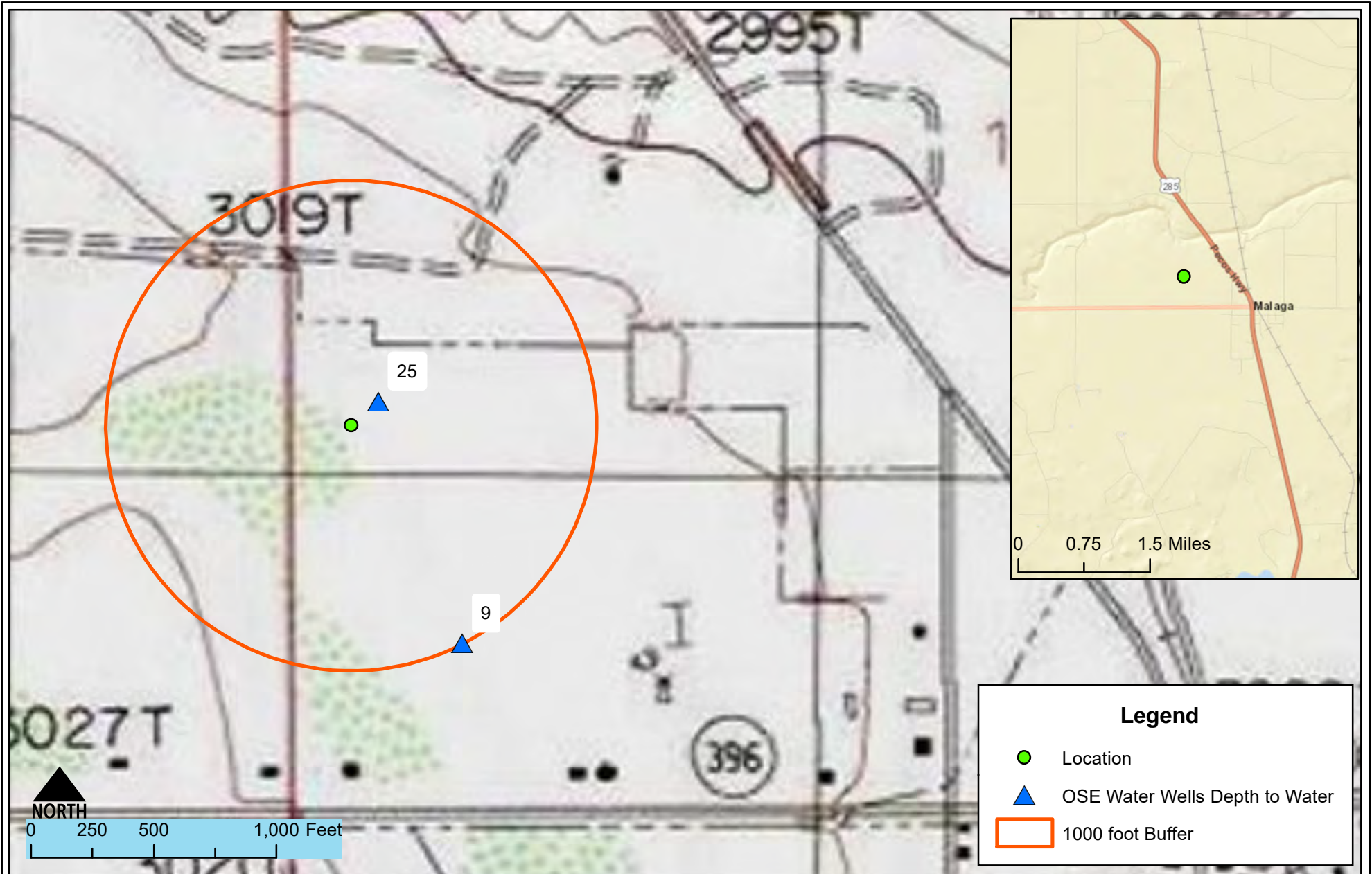
**Appendices:**

Appendix A: Form C141 Initial

Appendix B: NMOSE Wells Report

Appendix C: Laboratory Analytical Reports

# FIGURE 1 VICINITY AND NMOSE DATA MAP



VICINITY AND NMOSE DATA MAP  
TOM MATTHEWS #203H - Matador Resources  
S: 10T24S R28E, Eddy County New Mexico

Figure 1

Date Saved: 2/27/2018	By: _____	Date: _____	Revisions	Descr: _____
	By: _____	Date: _____		Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved				

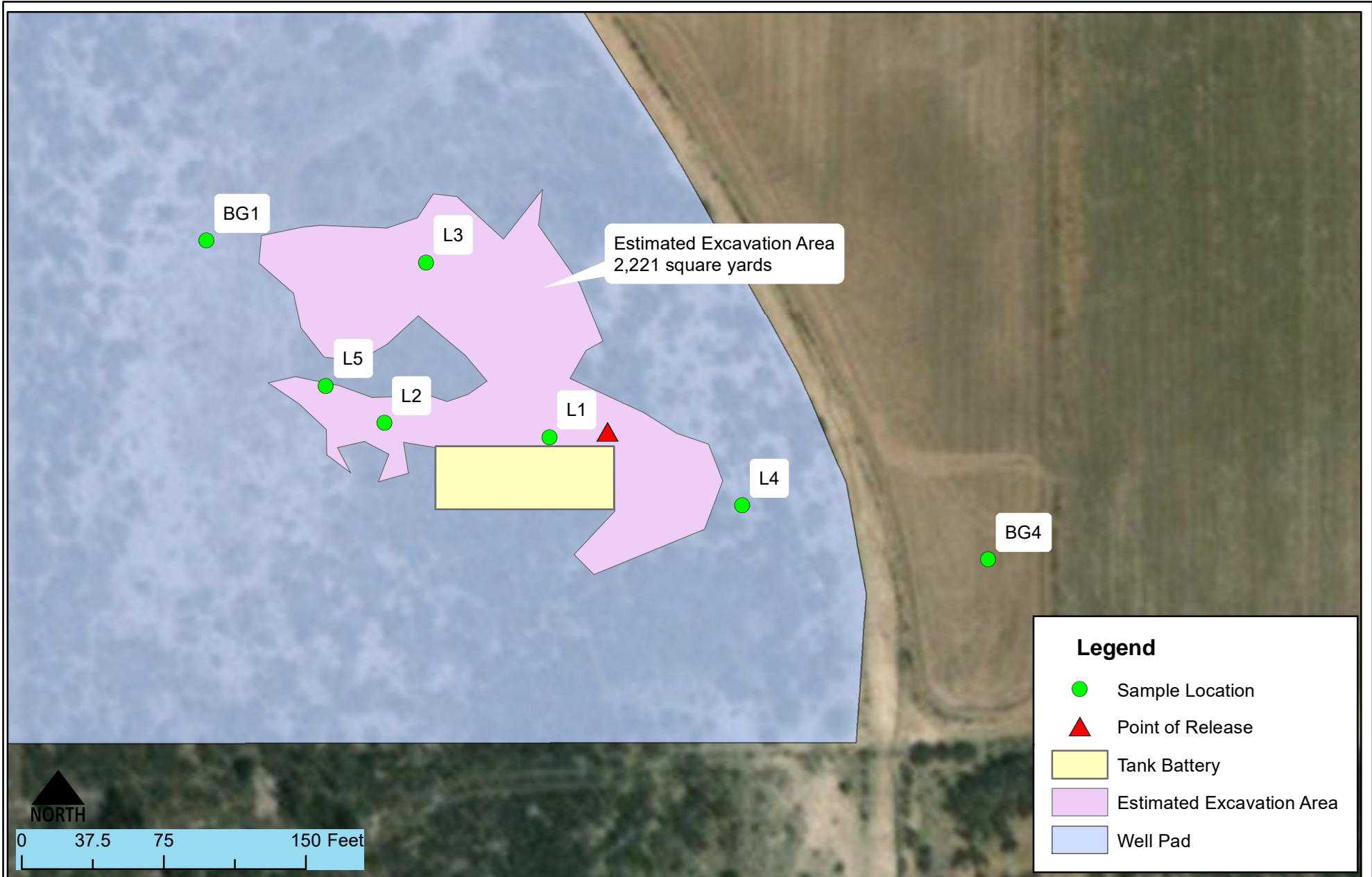
Drawn	Lucas Middleton
Checked	_____
Approved	_____



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# FIGURE 2 SITE AND SAMPLE LOCATION MAP





Site and Sample Location Map  
Matador-TOM MATTHEWS 10 24S 28E RB #203H  
S; 10 T24S R28E, New Mexico

Figure 2

Revisions		Descr:
By:	Date:	

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Drawn Lucas Middleton  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_



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## TABLE 3

# SUMMARY SAMPLE RESULTS

## Tom Mathews 10 24S 28E RB #203H

Table 3

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	CI- Field Screens (ppm)	CI- Laboratory mg/Kg
NMOCD RRAL's for Site Ranking 10				50 mg/Kg	10 mg/Kg				1000 mg/Kg		
L1	1/31/2018	0.5	Excavate	---	---	---	---	---	---	2128	---
L2	1/31/2018	0.5	Excavate	---	---	---	---	---	---	2904	---
L3	2/6/2018	Surface	Excavate	<0.099	<0.025	<5	<10	<51	<51	---	21000
	2/6/2018	0.5	Excavate	---	---	---	---	---	---	---	1800
	2/6/2018	1	Excavate	---	---	---	---	---	---	---	2700
	2/6/2018	1.5	Excavate	---	---	---	---	---	---	---	2300
	2/6/2018	2	In-Situ	---	---	---	---	---	---	---	370
	2/6/2018	2.5	In-Situ	---	---	---	---	---	---	---	870
	2/6/2018	3	In-Situ	---	---	---	---	---	---	---	380
L4	2/6/2018	0.5	In-Situ	---	---	---	---	---	---	---	150
	2/6/2018	1	In-Situ	---	---	---	---	---	---	---	28
	2/6/2018	2	In-Situ	---	---	---	---	---	---	---	<30
	2/6/2018	3	In-Situ	---	---	---	---	---	---	---	98
L5	2/6/2018	0.5	Excavate	---	---	---	---	---	---	---	1800
	2/6/2018	1	Excavate	---	---	---	---	---	---	---	2400
	2/6/2018	1.5	Excavate	---	---	---	---	---	---	---	2500
	2/6/2018	2	In-Situ	---	---	---	---	---	---	---	430
	2/6/2018	2.5	In-Situ	---	---	---	---	---	---	---	80
	2/6/2018	3	In-Situ	---	---	---	---	---	---	---	89
BG1	2/6/2018	Surface	---	---	---	---	---	---	---	---	560
BG4	2/6/2018	1.5	---	---	---	---	---	---	---	---	500
	2/6/2018	3	---	---	---	---	---	---	---	---	340

--- = Not Analyzed

# APPENDIX A FORM C141 INITIAL

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

State of New Mexico  
Energy Minerals and Natural Resources

FEB 19 2018

Form C-141  
Revised April 3, 2017

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

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

## Release Notification and Corrective Action

NAB1805132291

## OPERATOR

☒ Initial Report ☐ Final Report


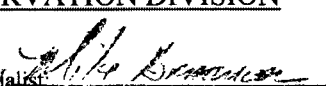
Name of Company Matador Resources Company 228937	Contact Casey Snow
Address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	Telephone No. (972) 371-5439
Facility Name TOM MATTHEWS 10 24S 28E RB #203H	Facility Type Oil well
Surface Owner Private	Mineral Owner Private
API No. 30-015-44561	

## LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	10	24S	28E	1659	South	349	West	Eddy

Latitude 32.229673° Longitude -104.083370° NAD83

## NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 193 bbl	Volume Recovered 45 bbl
Source of Release Equipment Failure	Date and Hour of Occurrence 1/31/18 ~8:00	Date and Hour of Discovery 2/1/18 ~8:00a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Lucas Middleton( SMA)	Date and Hour 2/1/18 12:00	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*  N/A		
Describe Cause of Problem and Remedial Action Taken.* Transfer Pump failed causing a release onto the pad. The pump was isolated and a vacuum truck and backhoe was on site vacuuming all standing fluids		
Describe Area Affected and Cleanup Action Taken.*  The release occurred on the pad around the tank battery. SMA will delineate and submit a work plan for approval of remediation actions.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Casey Snow	Approved by Environmental Specialist: 	
Title: Manager Regulatory, Environmental, & Safety	Approval Date: 2/19/18	Expiration Date: N/A
E-mail Address: csnow@matadorresources.com	Conditions of Approval: See attached	
Date: Phone: (972) 371-5439	Attached <input type="checkbox"/> 228937-44029	

\* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 2/19/2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RD-4029 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 3/19/2018. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

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

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

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

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

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

**Jim Griswold**

OCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us

# APPENDIX B

## NMOSE WELLS REPORT





# New Mexico Office of the State Engineer

## Water Right Summary

**WR File Number:** C 00764      **Subbasin:** -      **Cross Reference:** -  
**Primary Purpose:** IRR      IRRIGATION  
**Primary Status:** LIC      LICENSED  
**Total Acres:** 39.3      **Subfile:** 24 28 10 A  
**Total Diversion:** 117.9      **Cause/Case:** -  
**Owner:** MIKE M. VASQUEZ

### Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
<a href="#">245357</a>	<a href="#">COWNP</a>	<a href="#">2002-10-29</a>	PMT	APR	C 00764 A	F	6.8	20.4	
<a href="#">228783</a>	<a href="#">COWNF</a>	<a href="#">2002-03-18</a>	CHG	PRC	C 00764	T	0	0	
<a href="#">156621</a>	<a href="#">LIC</a>	<a href="#">1963-11-22</a>	LIC	PRC	C-764	T	46.1	138.3	
<a href="#">156619</a>	<a href="#">CLWPP</a>	<a href="#">1958-08-11</a>	PMT	APR	C-764	T	0	0	
<a href="#">156619</a>	<a href="#">CLWPP</a>	<a href="#">1958-08-11</a>	PMT	APR	C-764	F	0	0	
<a href="#">156446</a>	<a href="#">ALTD</a>	<a href="#">1957-05-09</a>	PMT	PBU	6 & C-764	T	57	171	

### Current Points of Diversion

POD Number	Source	Q Q Q			Sec	Tws	Rng	(NAD83 UTM in meters)		Other Location Desc
		64	16	4				X	Y	
<a href="#">C 00764</a>	Shallow	3	1	3	10	24S	28E	586399	3566292*	
<a href="#">SP 00006</a>		4	1	3	12	21S	26E	570265	3595078	AVALON DAM GATE TO CID MAIN CA
<a href="#">SP 01927</a>		4	12	24S	27E			581032	3566097*	BLACK RIVER

\*An (\*) after northing value indicates UTM location was derived from PLSS - see Help

### Priority Summary

Priority	Status	Acres	Diversion	Pod Number	Source
03/22/1957	LIC	39.3	117.9	<a href="#">C 00764</a>	Shallow
				<a href="#">SP 00006</a>	
				<a href="#">SP 01927</a>	

### Place of Use

Q	Q	Q	Q	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
256	64	16	4	3	10	24S 28E	16.4	19.2		IRR	03/22/1957	LIC	
1	1	3	10	24S	28E		2.2	6.6		IRR	03/22/1957	LIC	
1	4	3	10	24S	28E		4.4	13.2		IRR	03/22/1957	LIC	
2	1	3	10	24S	28E		2.6	7.8		IRR	03/22/1957	LIC	
2	4	3	10	24S	28E		6.6	19.8		IRR	03/22/1957	LIC	
3	1	3	10	24S	28E		1.7	5.1		IRR	03/22/1957	LIC	
4	1	3	10	24S	28E		9.8	29.4		IRR	03/22/1957	LIC	

### Source

Acres	Diversion	CU	Use	Priority	Source Description
-------	-----------	----	-----	----------	--------------------

24 28 10 A

Source

Acres	Diversion	CU	Use	Priority	Source Description
46.1	138.3	IRR	03/22/1957	GW	
39.3	117.9	IRR	03/22/1957	GW	

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

# APPENDIX C

## LABORATORY ANALYTICAL REPORTS



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

February 16, 2018

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

RE: Tom Mathews 202

OrderNo.: 1802499

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 22 sample(s) on 2/8/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report

Lab Order 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: B61

Project: Tom Mathews 202

Collection Date: 2/6/2018 11:05:00 AM

Lab ID: 1802499-001

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	560	30		mg/Kg	20	2/9/2018 1:33:22 PM	36450

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: B62

Project: Tom Mathews 202

Collection Date: 2/6/2018 11:22:00 AM

Lab ID: 1802499-002

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3500	150		mg/Kg	100	2/12/2018 4:59:54 PM	36450

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: B63

Project: Tom Mathews 202

Collection Date: 2/6/2018 11:30:00 AM

Lab ID: 1802499-003

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2300		75	mg/Kg	50	2/12/2018 5:37:08 PM	36450

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: B64-1.5

Project: Tom Mathews 202

Collection Date: 2/6/2018 12:59:00 PM

Lab ID: 1802499-004

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	500		30	mg/Kg	20	2/9/2018 2:35:24 PM	36450

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: B64-3

Project: Tom Mathews 202

Collection Date: 2/6/2018 1:03:00 PM

Lab ID: 1802499-005

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	340		30	mg/Kg	20	2/9/2018 3:12:38 PM	36450

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 1802499

Date Reported: 2/16/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: L3-Surface

Project: Tom Mathews 202

Collection Date: 2/6/2018 12:05:00 PM

Lab ID: 1802499-006

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CJS</b>
Chloride	21000	1500		mg/Kg	1E	2/15/2018 1:32:28 PM	36522
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/13/2018 9:37:12 AM	36466
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	2/13/2018 9:37:12 AM	36466
Surr: DNOP	108	70-130		%Rec	1	2/13/2018 9:37:12 AM	36466
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/9/2018 12:55:09 PM	36440
Surr: BFB	133	15-316		%Rec	1	2/9/2018 12:55:09 PM	36440
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	2/9/2018 12:55:09 PM	36440
Benzene	ND	0.025		mg/Kg	1	2/9/2018 12:55:09 PM	36440
Toluene	ND	0.050		mg/Kg	1	2/9/2018 12:55:09 PM	36440
Ethylbenzene	ND	0.050		mg/Kg	1	2/9/2018 12:55:09 PM	36440
Xylenes, Total	ND	0.099		mg/Kg	1	2/9/2018 12:55:09 PM	36440
Surr: 4-Bromofluorobenzene	135	80-120	S	%Rec	1	2/9/2018 12:55:09 PM	36440

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

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

Page 6 of 26

Analytical Report

Lab Order 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-0.5

Project: Tom Mathews 202

Collection Date: 2/6/2018 12:10:00 PM

Lab ID: 1802499-007

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	1800		75	mg/Kg	50	2/12/2018 5:49:32 PM	36450

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-1

Project: Tom Mathews 202

Collection Date: 2/6/2018 12:21:00 PM

Lab ID: 1802499-008

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2700		75	mg/Kg	50	2/12/2018 6:01:57 PM	36450

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1802499  
Date Reported: 2/16/2018

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-1.5

Project: Tom Mathews 202

Collection Date: 2/6/2018 12:28:00 PM

Lab ID: 1802499-009

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	2300		75	mg/Kg	50	2/12/2018 6:14:22 PM	36450

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-2

Project: Tom Mathews 202

Collection Date: 2/6/2018 12:30:00 PM

Lab ID: 1802499-010

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	370	30		mg/Kg	20	2/9/2018 4:02:16 PM	36450

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-2.5

Project: Tom Mathews 202

Collection Date: 2/6/2018 12:34:00 PM

Lab ID: 1802499-011

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	870		30	mg/Kg	20	2/9/2018 4:14:41 PM	36450

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1802499  
Date Reported: 2/16/2018

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-3

Project: Tom Mathews 202

Collection Date: 2/6/2018 12:40:00 PM

Lab ID: 1802499-012

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	380	30		mg/Kg	20	2/9/2018 1:10:01 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L4-0.5

Project: Tom Mathews 202

Collection Date: 2/6/2018 1:15:00 PM

Lab ID: 1802499-013

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	150		30	mg/Kg	20	2/9/2018 1:47:15 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L4-1

Project: Tom Mathews 202

Collection Date: 2/6/2018 1:30:00 PM

Lab ID: 1802499-014

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	280	30		mg/Kg	20	2/9/2018 1:59:40 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L4-2

Project: Tom Mathews 202

Collection Date: 2/6/2018 1:32:00 PM

Lab ID: 1802499-015

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	2/9/2018 2:12:04 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L4-3

Project: Tom Mathews 202

Collection Date: 2/6/2018 1:45:00 PM

Lab ID: 1802499-016

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	98	30		mg/Kg	20	2/9/2018 2:24:29 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-0.5

Project: Tom Mathews 202

Collection Date: 2/6/2018 1:50:00 PM

Lab ID: 1802499-017

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1800		75	mg/Kg	50	2/12/2018 6:26:47 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-1

Project: Tom Mathews 202

Collection Date: 2/6/2018 1:55:00 PM

Lab ID: 1802499-018

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2400		75	mg/Kg	50	2/12/2018 6:39:12 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-1.5

Project: Tom Mathews 202

Collection Date: 2/6/2018 2:11:00 PM

Lab ID: 1802499-019

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2500		75	mg/Kg	50	2/12/2018 6:51:37 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-2

Project: Tom Mathews 202

Collection Date: 2/6/2018 2:18:00 PM

Lab ID: 1802499-020

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	430		30	mg/Kg	20	2/9/2018 3:38:57 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-2.5

Project: Tom Mathews 202

Collection Date: 2/6/2018 2:30:00 PM

Lab ID: 1802499-021

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	80	30		mg/Kg	20	2/9/2018 3:51:21 PM	36451

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 1802499

Date Reported: 2/16/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-3

Project: Tom Mathews 202

Collection Date: 2/6/2018 2:25:00 PM

Lab ID: 1802499-022

Matrix: SOIL

Received Date: 2/8/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	89	30		mg/Kg	20	2/9/2018 4:03:45 PM	36451

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1802499

16-Feb-18

Client: Souder, Miller &amp; Associates

Project: Tom Mathews 202

Sample ID	MB-36450		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 36450		RunNo: 49015					
Prep Date:	2/9/2018		Analysis Date: 2/9/2018		SeqNo: 1578602		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-36450		SampType: Ics		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 36450		RunNo: 49015					
Prep Date:	2/9/2018		Analysis Date: 2/9/2018		SeqNo: 1578603		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	90	110			

Sample ID	MB-36451		SampType:	mblk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	36451		RunNo:	49016				
Prep Date:	2/9/2018		Analysis Date:	2/9/2018		SeqNo:	1578762		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-36451		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 36451		RunNo: 49016					
Prep Date:	2/9/2018		Analysis Date: 2/9/2018		SeqNo: 1578763		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Sample ID	MB-36522		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 36522		RunNo: 49121					
Prep Date:	2/14/2018		Analysis Date: 2/14/2018		SeqNo: 1584649		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-36522		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 36522		RunNo: 49121					
Prep Date:	2/14/2018		Analysis Date: 2/14/2018		SeqNo: 1584650		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.9	90	110			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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

WO#: 1802499

16-Feb-18

**Client:** Souder, Miller & Associates**Project:** Tom Mathews 202

Sample ID	1802499-006AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	L3-Surface	Batch ID:	36466	RunNo:	49070					
Prep Date:	2/12/2018	Analysis Date:	2/13/2018	SeqNo:	1579507	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.6	48.12	2.127	87.0	55.8	125			
Surr: DNOP	4.5		4.812		94.5	70	130			

Sample ID	LCS-36466	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	36466	RunNo:	49070					
Prep Date:	2/12/2018	Analysis Date:	2/13/2018	SeqNo:	1579508	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	70	130			
Surr: DNOP	4.4		5.000		87.9	70	130			

Sample ID	MB-36466	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	36466	RunNo:	49070					
Prep Date:	2/12/2018	Analysis Date:	2/13/2018	SeqNo:	1579509	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		102	70	130			

Sample ID	1802499-006AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	L3-Surface	Batch ID:	36466	RunNo:	49070					
Prep Date:	2/12/2018	Analysis Date:	2/13/2018	SeqNo:	1580359	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.9	49.26	2.127	89.4	55.8	125	4.89	20	
Surr: DNOP	4.7		4.926		96.0	70	130	0	0	

**Qualifiers:**

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

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



QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802499  
16-Feb-18

Client: Souder, Miller & Associates  
Project: Tom Mathews 202

Sample ID	MB-36440		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	36440		RunNo:	49018				
Prep Date:	2/8/2018		Analysis Date:	2/9/2018		SeqNo:	1578201		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	1100		1000		110	15	316				

Sample ID	LCS-36440		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 36440		RunNo: 49018					
Prep Date:	2/8/2018		Analysis Date: 2/9/2018		SeqNo: 1578202		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	75.9	131			
Surr: BFB	1200		1000		116	15	316			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical 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 25 of 26

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802499

16-Feb-18

Client: Souder, Miller & Associates

Project: Tom Mathews 202

Sample ID	MB-36440		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 36440		RunNo: 49018					
Prep Date:	2/8/2018		Analysis Date: 2/9/2018		SeqNo: 1578215		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	1.2		1.000		115	80	120			

Sample ID	LCS-36440		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 36440		RunNo: 49018					
Prep Date:	2/8/2018		Analysis Date: 2/9/2018		SeqNo: 1578216		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.92	0.10	1.000	0	92.3	70.1	121			
Benzene	1.0	0.025	1.000	0	103	77.3	128			
Toluene	1.0	0.050	1.000	0	104	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	104	80.7	127			
Xylenes, Total	3.2	0.10	3.000	0	107	81.6	129			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

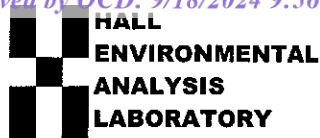
J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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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: 1802499

RcptNo: 1

Received By: Sophia Campuzano 2/8/2018 10:00:00 AM

Completed By: Dennis Suazo 2/8/2018 12:29:01 PM

Reviewed By: SRE 02/08/17

Labeled By Amy

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

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

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

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good	Not Present			

## Chain-of-Custody Record

Client:

SMA

Mailing Address:

Carlsbad

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)

Accreditation

☐ NELAP☐ Other☐ EDD (Type)

Turn-Around Time:

☐ Standard☒ Rush

5 day

Project Name:

Tom Mathews 202

Project #:

Project Manager:

Sampler: CM

On Ice:

☒ Yes☐ No

Sample Temperature: 13-10 (CE) = 0.3

Date

Time

Matrix

Sample Request ID

Container Type and #

Preservative Type

HEAL No. 1802499

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

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## Chain-of-Custody Record

Client:

SMA

Mailing Address:

Calsbad

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)

Accreditation

☐ NELAP☐ Other☐ EDD (Type)

Turn-Around Time:

☐ Standard☒ Rush

S dn

Project Name:

Tom Mather 202

Project #:

202

Project Manager:

Austin Weyers

Sampler:

Carm

On Ice:

☒ Yes☐ No

Sample Temperature: 1.3-1.0 (CF) = 0.3

Date

Time

Matrix

Sample Request ID

Container Type and #

Preservative Type

HEAL No.

1802499

013

014

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**From:** Lucas Middleton  
**To:** [Weaver, Crystal, EMNRD](#)  
**Cc:** [Csnow \(Csnow@matadorresources.com\)](mailto:Csnow@matadorresources.com)  
**Subject:** RE: Tom Mathews C141 Initial  
**Date:** Monday, April 2, 2018 3:27:39 PM  
**Attachments:** [image003.png](#)  
[image004.png](#)  
[SOIL REMEDIATION WORK PLAN FOR THE TOM MATTHEWS #203H RELEASE \(2RP-.pdf\)](#)

---

Crystal,

As included below I submitted the work plan on March 7, 2018.

**From:** Lucas Middleton  
**Sent:** Wednesday, March 07, 2018 10:52 AM  
**To:** 'Bratcher, Mike, EMNRD' <mike.bratcher@state.nm.us>; 'Weaver, Crystal, EMNRD' <Crystal.Weaver@state.nm.us>  
**Cc:** 'John Hurt' <JHurt@matadorresources.com>; Csnow (Csnow@matadorresources.com) <Csnow@matadorresources.com>  
**Subject:** SOIL REMEDIATION WORK PLAN FOR THE TOM MATTHEWS #203H RELEASE (2RP-4629) API # 30-015- 44561

Good Morning,

On behalf of Matador Resources, SMA is submitting a soil remediation work plan for TOM MATTHEWS #203H. 2RP-4629, API # 30-015- 44561.

Thank you and have a great day

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



Souder, Miller & Associates  
Engineering   Environmental   Surveying  
201 S. Halagueno  
Carlsbad, NM 88220  
[www.soudermiller.com](http://www.soudermiller.com)

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---

**From:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>  
**Sent:** Monday, April 02, 2018 1:57 PM

**To:** Lucas Middleton <lucas.middleton@soudermiller.com>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>  
**Cc:** Csnow (Csnow@matadorresources.com) <Csnow@matadorresources.com>  
**Subject:** RE: Tom Mathews C141 Initial

RE: Matador \* Tom Matthews 10 24S 28E RB #203H \* 30-015-44561 \* 2RP-4629

Casey/Lucas,

I have included a scanned copy of the signed Initial C-141 Remediation Permit along with an attached Conditions of Approval (COA). The OCD tracking number for this event is 2RP-4629, please refer to this tracking number on any and all submissions sent in to the OCD. Please remit a site characterization plan (see COA document included in attachment) or advise OCD of plan of action immediately since this one has a due date of 3/19/18 and that has passed.

Thank you,

**Crystal Weaver**

Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
Cell: 575-840-5963  
Fax: 575-748-9720

---

**From:** Lucas Middleton [<mailto:lucas.middleton@soudermiller.com>]  
**Sent:** Monday, February 19, 2018 10:02 AM  
**To:** Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>; Weaver, Crystal, EMNRD <[Crystal.Weaver@state.nm.us](mailto:Crystal.Weaver@state.nm.us)>  
**Subject:** Tom Mathews C141 Initial

Hello,

I am submitting a C141 Initial for Matador Resources for Tom Mathews 10 24S28E RB #203H which occurred on 1/31/18.

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





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**From:** [Weaver, Crystal, EMNRD](#)  
**To:** ["Lucas Middleton"](#)  
**Cc:** [Csnow \(Csnow@matadorresources.com\)](mailto:Csnow@matadorresources.com); [Bratcher, Mike, EMNRD](#)  
**Subject:** RE: Tom Mathews C141 Initial  
**Date:** Monday, April 2, 2018 3:34:00 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)

---

Lucas,

You are correct. I forgot to adjust that last sentence in my prewritten paragraph portion. I did know you had sent in a work plan cause I had seen the work plan in the que. Please disregard the last sentence asking for an update/submission.

Thanks,

## Crystal Weaver

Environmental Specialist  
OCD – Artesia District II  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Office: 575-748-1283 ext. 101  
Cell: 575-840-5963  
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**Cc:** Csnow ([Csnow@matadorresources.com](mailto:Csnow@matadorresources.com)) <[Csnow@matadorresources.com](mailto:Csnow@matadorresources.com)>  
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**Cc:** 'John Hurt' <[JHurt@matadorresources.com](mailto:JHurt@matadorresources.com)>; Csnow ([Csnow@matadorresources.com](mailto:Csnow@matadorresources.com)) <[Csnow@matadorresources.com](mailto:Csnow@matadorresources.com)>  
**Subject:** SOIL REMEDIATION WORK PLAN FOR THE TOM MATTHEWS #203H RELEASE (2RP-4629) API # 30-015- 44561

Good Morning,

On behalf of Matador Resources, SMA is submitting a soil remediation work plan for TOM MATTHEWS #203H. 2RP-4629, API # 30-015- 44561.

Thank you and have a great day

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



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**Cc:** Csnow ([Csnow@matadorresources.com](mailto:Csnow@matadorresources.com)) <[Csnow@matadorresources.com](mailto:Csnow@matadorresources.com)>  
**Subject:** RE: Tom Mathews C141 Initial

RE: Matador \* Tom Matthews 10 24S 28E RB #203H \* 30-015-44561 \* 2RP-4629

Casey/Lucas,

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Thank you,

**Crystal Weaver**

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**Subject:** Tom Mathews C141 Initial

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



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**From:** [Bayliss, Randolph, EMNRD](#)  
**To:** [Lucas Middleton](#)  
**Cc:** [John Hurt](#); [Csnow](#); [Bratcher, Mike, EMNRD](#); [Weaver, Crystal, EMNRD](#); [Griswold, Jim, EMNRD](#)  
**Subject:** APPROVAL FOR SOIL REMEDIATION WORK PLAN FOR THE TOM MATTHEWS #203H RELEASE (2RP-4629) API # 30-015- 44561  
**Date:** Thursday, April 19, 2018 11:19:04 AM  
**Attachments:** [image001.png](#)

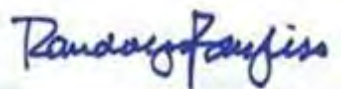
---

RE: MATADOR \* TOM MATTHEWS #203H \* 2RP-4629 \* DOR: 1/31/18

Matador's proposal for remedial actions is approved. Following remediation, Matador shall submit a Closure Report with results of confirmation sampling. Please submit a proposed schedule for remediation and reporting.

Thank you,

On behalf of  
NMOCD District 2  
811 South First Street  
Artesia, NM 88210



Randolph Bayliss, P.E.  
Hydrologist

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws.

---

**From:**  
**Sent:** Wednesday, March 7, 2018 10:52 AM  
**To:**  
**Cc:**  
**Subject:** SOIL REMEDIATION WORK PLAN FOR THE TOM MATTHEWS #203H RELEASE (2RP-4629) API # 30-015- 44561

Good Morning,  
On behalf of Matador Resources, SMA is submitting a soil remediation work plan for TOM MATTHEWS #203H. 2RP-4629, API # 30-015- 44561.

Thank you and have a great day

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



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**From:** [Ashley Giovengo](#)  
**To:** [Wells, Shelly, EMNRD](#)  
**Subject:** [EXTERNAL] RE: NAPP2332849245 CHARLIE SWEENEY FED TANK BATTERY  
**Date:** Tuesday, October 1, 2024 9:22:18 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[20240930\\_Charlie Sweeney Fed TB\\_fig5\\_v6\\_JV.pdf](#)  
[20240930\\_Charlie Sweeney Fed TB\\_fig4\\_v8\\_JV.pdf](#)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Morning Shelly,

Please see the corrected figures; I apologize for the inconvenience.

Thanks,



**Ashley Giovengo**

Senior Scientist

575-988-0055

**Ensolum, LLC**

**in f X**

"Your authenticity is your superpower." – Unknown

---

**From:** Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>  
**Sent:** Monday, September 30, 2024 10:47 AM  
**To:** Ashley Giovengo <agiovengo@ensolum.com>  
**Subject:** NAPP2332849245 CHARLIE SWEENEY FED TANK BATTERY

[ \*\*EXTERNAL EMAIL\*\* ]

Hi Ashley,

I am reviewing the submitted deferral request for the following incident, NAPP2332849245 CHARLIE SWEENEY FED TANK BATTERY and have a question for you. Figure 5 is missing SW06. SW08 appears twice. Can you please update this so I can see where each SW is located?

Kind regards,

Shelly

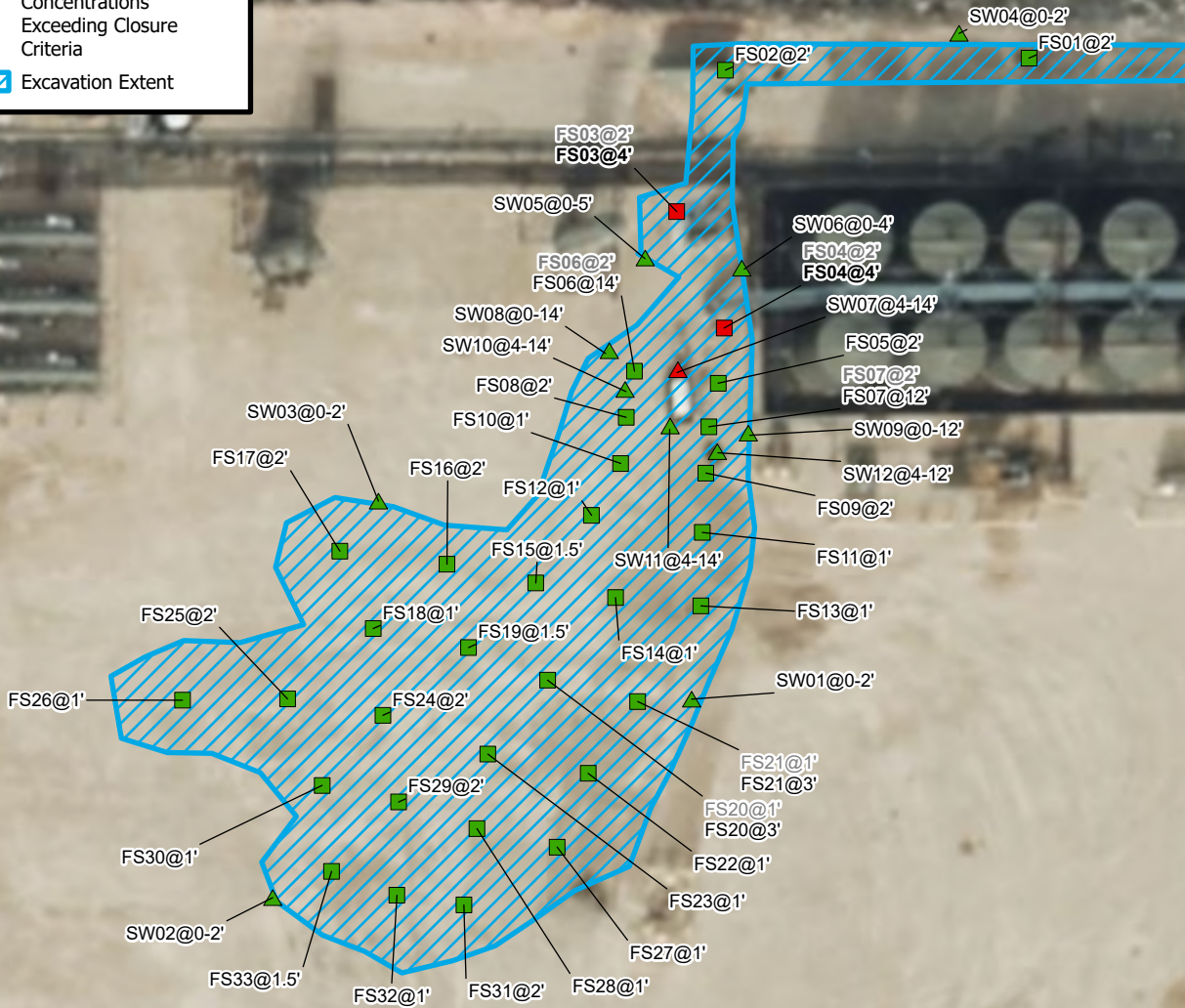
**Shelly Wells** \* Environmental Specialist-Advanced  
Environmental Bureau  
EMNRD-Oil Conservation Division



1220 S. St. Francis Drive|Santa Fe, NM 87505  
(505)469-7520|[Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

**Legend**

- Confirmation Floor  
Sample in Compliance  
with Closure Criteria
- ▲ Confirmation Sidewall  
Sample in Compliance  
with Closure Criteria
- Confirmation Floor  
Sample with  
Concentrations  
Exceeding Closure  
Criteria
- ▲ Confirmation Sidewall  
Sample with  
Concentrations  
Exceeding Closure  
Criteria
- ▨ Excavation Extent



Notes:  
 Sample ID @ Depth Below Ground Surface.  
 Samples in bold indicate sample exceeded applicable  
 closure criteria.  
 Grey text indicate soil sample was removed during  
 excavation activities.

0 5 10 20 30 40  
 Feet

Sources: Environmental Systems Research Institute (ESRI)

## Confirmation Soil Sample Locations

Matador Production Company  
 Charlie Sweeney Fed TB  
 Incident Number: nAPP2332849245  
 Unit P, Section 31, Township 23S, Range 28E  
 Eddy Co., New Mexico

FIGURE

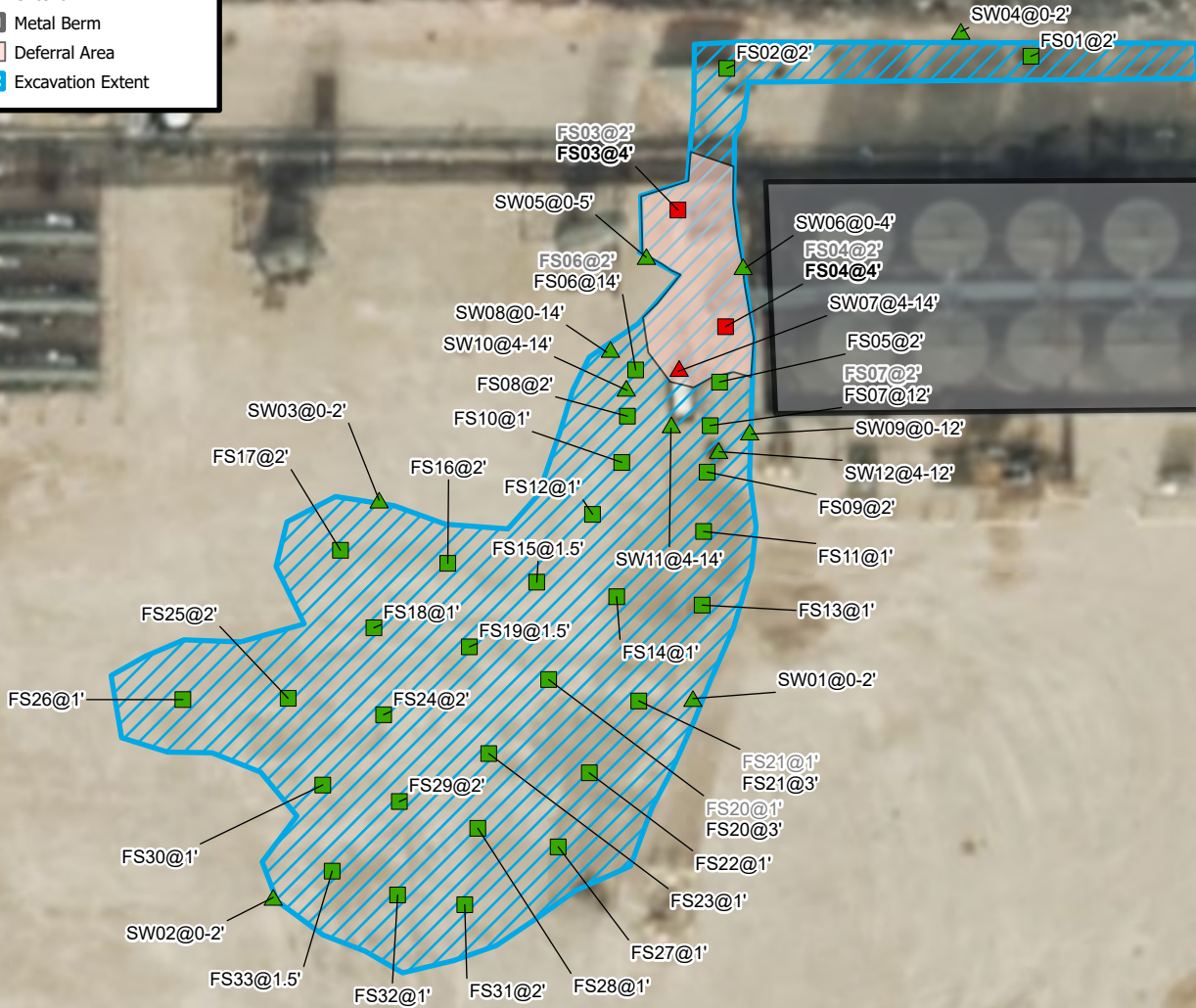
4





**Legend**

- Confirmation Floor  
Sample in Compliance  
with Closure Criteria
- ▲ Confirmation Sidewall  
Sample in Compliance  
with Closure Criteria
- Confirmation Floor  
Sample with  
Concentrations  
Exceeding Closure  
Criteria
- ▲ Confirmation Sidewall  
Sample with  
Concentrations  
Exceeding Closure  
Criteria
- Metal Berm
- Deferral Area
- Excavation Extent



Notes:  
 Sample ID @ Depth Below Ground Surface.  
 Samples in bold indicate sample exceeded applicable  
 closure criteria.  
 Grey text indicate soil sample was removed during  
 excavation activities.

0 5 10 20 30 40  
 Feet

Sources: Environmental Systems Research Institute (ESRI)



## Area of Requested Deferral

Matador Production Company  
 Charlie Sweeney Fed TB  
 Incident Number: nAPP2332849245  
 Unit P, Section 31, Township 23S, Range 28E  
 Eddy Co., New Mexico

**FIGURE**

**5**

**District I**  
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Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 384550

QUESTIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 384550
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2332849245
Incident Name	NAPP2332849245 CHARLIE SWEENY FED TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Deferral Request Received

Location of Release Source	
Please answer all the questions in this group.	
Site Name	CHARLIE SWEENY FED TANK BATTERY
Date Release Discovered	11/24/2023
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Pump   Produced Water   Released: 67 BBL   Recovered: 35 BBL   Lost: 32 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Seal on SWD pump failed causing release.

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QUESTIONS, Page 2

Action 384550

**QUESTIONS (continued)**

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID:
	228937
	Action Number:
	384550
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

**QUESTIONS**

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

**Initial Response**

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

I hereby agree and sign off to the above statement	Name: Jason Touchet Title: EHS Field Rep Email: jason.touchet@matadorresources.com Date: 09/18/2024
--	--

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QUESTIONS, Page 3

Action 384550

**QUESTIONS (continued)**

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID:
	228937
	Action Number:
	384550
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

**QUESTIONS****Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between ½ and 1 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

**Remediation Plan**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

**Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride	(EPA 300.0 or SM4500 Cl B)	11800
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	26
GRO+DRO	(EPA SW-846 Method 8015M)	26
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	01/29/2024
On what date will (or did) the final sampling or liner inspection occur	09/03/2024
On what date will (or was) the remediation complete(d)	06/24/2024
What is the estimated surface area (in square feet) that will be reclaimed	483
What is the estimated volume (in cubic yards) that will be reclaimed	250
What is the estimated surface area (in square feet) that will be remediated	6647
What is the estimated volume (in cubic yards) that will be remediated	680

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.



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QUESTIONS, Page 4

Action 384550

**QUESTIONS (continued)**

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID:
	228937
	Action Number:
	384550
	Action Type:
	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS****Remediation Plan (continued)**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

**This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:**

(Select all answers below that apply.)

(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Yes
What is the name of the NMED facility	R360 Hobbs
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

I hereby agree and sign off to the above statement	Name: Jason Touchet Title: EHS Field Rep Email: jason.touchet@matadorresources.com Date: 09/18/2024
--	--

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.



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QUESTIONS, Page 5

Action 384550

**QUESTIONS (continued)**

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 384550
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS****Deferral Requests Only**

Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.

Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	Pipelines, Transfer pumps, Concrete pad, and Catwalk stairs
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	483
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	250
Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	
Enter the facility ID (f#) on which this deferral should be granted	Charlie Sweeney Fed Facility Tank battery [fAPP2202571816]
Enter the well API (30-) on which this deferral should be granted	30-015-44025 CHARLIE SWEENEY FEDERAL COM #208H
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
I hereby agree and sign off to the above statement	Name: Jason Touchet Title: EHS Field Rep Email: jason.touchet@matadorresources.com Date: 09/18/2024

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QUESTIONS, Page 6  
  
Action 384550

**QUESTIONS (continued)**

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID:
	228937
	Action Number:
	384550
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	378968
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/04/2024
What was the (estimated) number of samples that were to be gathered	5
What was the sampling surface area in square feet	6647

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS  
  
Action 384550

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 384550
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
scwells	Deferral approved. Deferral of FS03, FS04, and SW07 is approved until plugging and abandonment or a major facility deconstruction, whichever comes first. A complete and accurate remediation report and/or reclamation report will need to be submitted at that time.	10/1/2024