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

February 21, 2019

#5E27961-BG2

NMOCD District 2
Mr. Robert Hamlet
811 S. First Street
Artesia, New Mexico 88210

SUBJECT: Remediation Closure Report for the Charlie Sweeney Tank Battery Release (2RP-5196), Eddy County, New Mexico

Dear Mr. Hamlet,

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 Charlie Sweeney Tank Battery. The site is in Unit N, Section 30, Township 23S, 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	Charlie Sweeney Tank Battery	Company	Matador Resources
API Number	N/A	Location	32.270273 -104.131200
Incident Number	2RP-5196		
Estimated Date of Release	1/7/2019	Date Reported to NMOCD	1/9/2019
Land Owner	Henry McDonald	Reported To	NMOCD District II
Source of Release	Failure at the meter run		
Released Volume	20 bbls	Released Material	Produced Water
Recovered Volume	0	Net Release	20 bbls
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	1/8/2019 2/4/2019 2/5/2019		

1.0 Background

On January 7, 2019, a release was discovered at the Charlie Sweeney Tank Battery due to 1" nipple failing at the meter run. The meter ran for approximately 10 minutes before the line was shit in. Initial response activities were conducted by the operator, and included source elimination by means of repair. Figures 1 and 2 illustrate the vicinity and site location, Figure 3 illustrates the release location. The C-141 forms are included in Appendix A.

2.0 Site Information and Closure Criteria

The Charles Sweeney Tank Battery is located approximately in Loving, New Mexico on privately-owned land at an elevation of approximately 3125 feet above mean sea level (amsl).

Based upon the New Mexico Office of the State Engineers (NMOSE) online water well database, (Appendix B), depth to groundwater in the area is estimated to be 195 feet below grade surface (bgs). There are no known water sources within ½-mile of the location, according to the NMOSE database. (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed 2/8/2019). The nearest significant watercourse is the South Canal, located approximately 780 feet north of the location. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of greater than 100 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC.

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 January 8, 2019, SMA personnel arrived on site in response to the release associated with Charlie Sweeney Tank Battery. SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly stained area. Soil samples were field-screened for chloride using an electrical conductivity (EC) meter.

A total of 9 sample locations (L1 - L7 & BG1 – BG2) were investigated using a hand-auger, to depths up to 3 feet bgs. A minimum of two samples were collected at each sampling location and field-screened using the method above. A total of 21 samples were collected for laboratory analysis for total chloride using EPA Method 300.0.

As summarized in Table 3, results indicated that an area approximately 1000 yards had been impacted.

SMA returned to the site to oversee portions of the excavation of contaminated soil. SMA guided the excavation activities by collecting soil samples for field screening. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria would be met.

On February 4, 2019 SMA began conducting confirmation sampling of the walls and base of the excavation. The areas around sample locations BH1-BH4, BH11 and BH12 were excavated to a depth of 1.5 feet bgs. The areas around sample locations BH5-BH10 were excavated to 1-foot bgs and BH13 to 0.5 feet bgs. The pooling area represented by sample locations BH14, BH15, and BH16 were excavated to 3, 4, and 7 feet, respectively.

The confirmation samples were collected from within the excavation in accordance with a systematic sampling approach as defined by SW846 using Gilbert, 1987 equation 5.2.3 for Stratified Random Sampling which is detailed in Appendix C. This systematic method meets the EPAs data quality assessment standards (DQA) for composite sampling as defined by (Myers 1997) Using Confirmation samples were comprised of five-point composites of the base (BH1-BH16) and walls (SW1-SW17).

Lab analysis showed that sample locations BH8 and SW8 were still elevated in chlorides. On February 15, 2019, SMA returned to the location to recollect the two composite samples. No further excavation was required.

A total of 36 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 3 shows the extent of the excavation and sample locations. All laboratory results are summarized in Table 3. Laboratory reports are included in Appendix D.

In addition to meeting the Closure Criteria, the top four (4) feet of impacted areas off of the well pad meet the Reclamation requirement of 19.15.29.13(D)(1). 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 name of landfill, near, NM, an NMOCD permitted disposal facility.

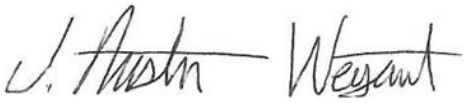
4.0 Scope and Limitations

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 Austin Weyant at 575-689-8801 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Melodie Sanjari
Staff Scientist

Austin Weyant
Senior Scientist

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map
Figure 2: Surface Water Radius Map
Figure 3: Site and Sample Location Map

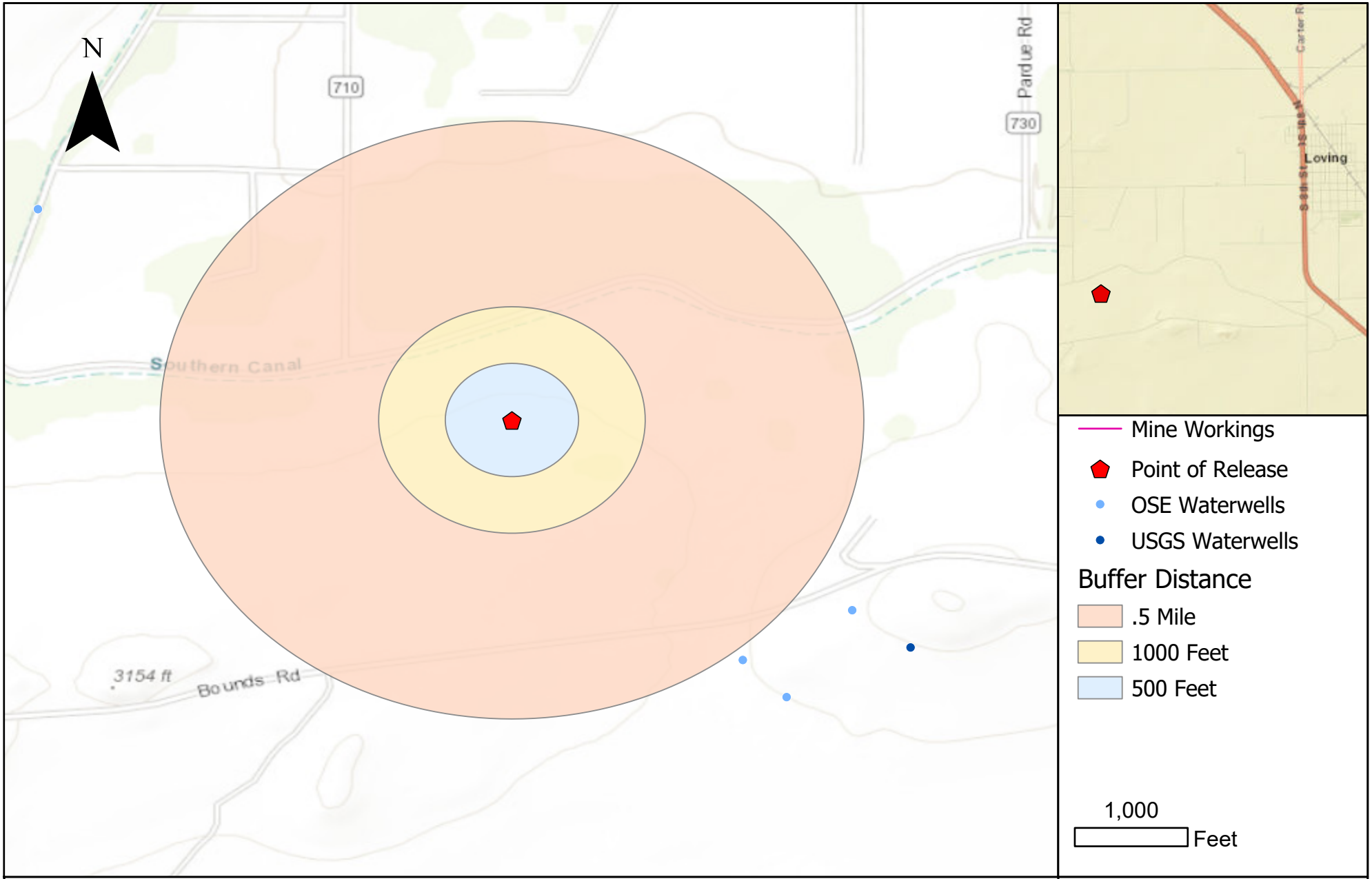
Tables:

Table 2: NMOCD Closure Criteria Justification
Table 3a: Summary of Initial Sample Results
Table 3b: Summary of Closure Sample Results

Appendices:

Appendix A: Form C141
Appendix B: NMOSE Wells Report
Appendix C: VSP Sampling Protocol
Appendix D: Laboratory Analytical Reports
Appendix E: Open Excavation Photo Log

FIGURES



Regional Vicinity & Wellhead Protection Map
Charlie Sweeny - Matador Resources
Sec 31 23S 28E Eddy County

Figure 1

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

Date Saved: 2/7/2019

Drawn APM
Date 2/7/2019
Checked
Approved

201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689-7040
Serving the Southwest & Rocky Mountains

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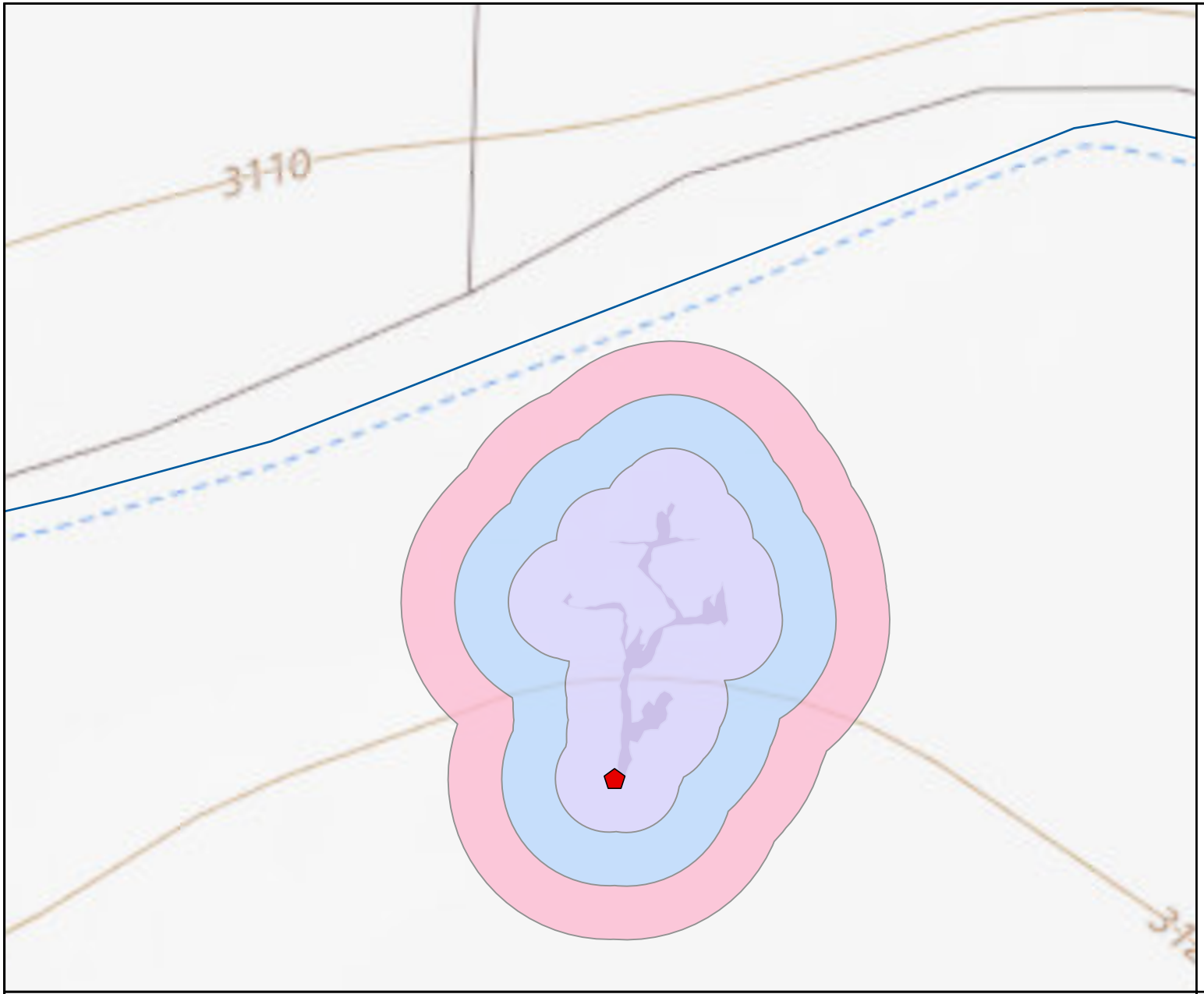

Point of Release
Springs Seeps
Streams Canals
Rivers
NM Wetlands
Lakes Playas
FEMA Flood Zones 2011

Buffer Distance

100 Feet
200 Feet
300 Feet
Release Area

N

430
Feet

Surface Water Protection Map
Charlie Sweeney- Matador Resources Company
Eddy County , NM

Figure 2

P:\5-Matador 2019 MSA (5E27961)\GIS\ARCGIS\MATADOR_MIT.aprx

Date Saved: 2/7/2019

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

Drawn
Date 2/7/2019
Checked
Approved

SMA

201 South Halaguena Street
Carlsbad, New Mexico 88221
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Estimated Surface Impact:
2,275 square yards

- Equipment
- Pipelines
- Point of Release
- Release Area
- Sample Locations

N

0.02 Miles

Site and Sample location Map
Charlie Sweeney31 TB - Matador Resources
Eddy County , NM UL: N S: 30 T23S R28E

Figure 3

\\CBO10\Projects\MATADOR\GIS\ARCGIS\MATADOR_MIT.aprx

Date Saved: 1/9/2019

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

Drawn
Date 1/9/2019
Checked
Approved

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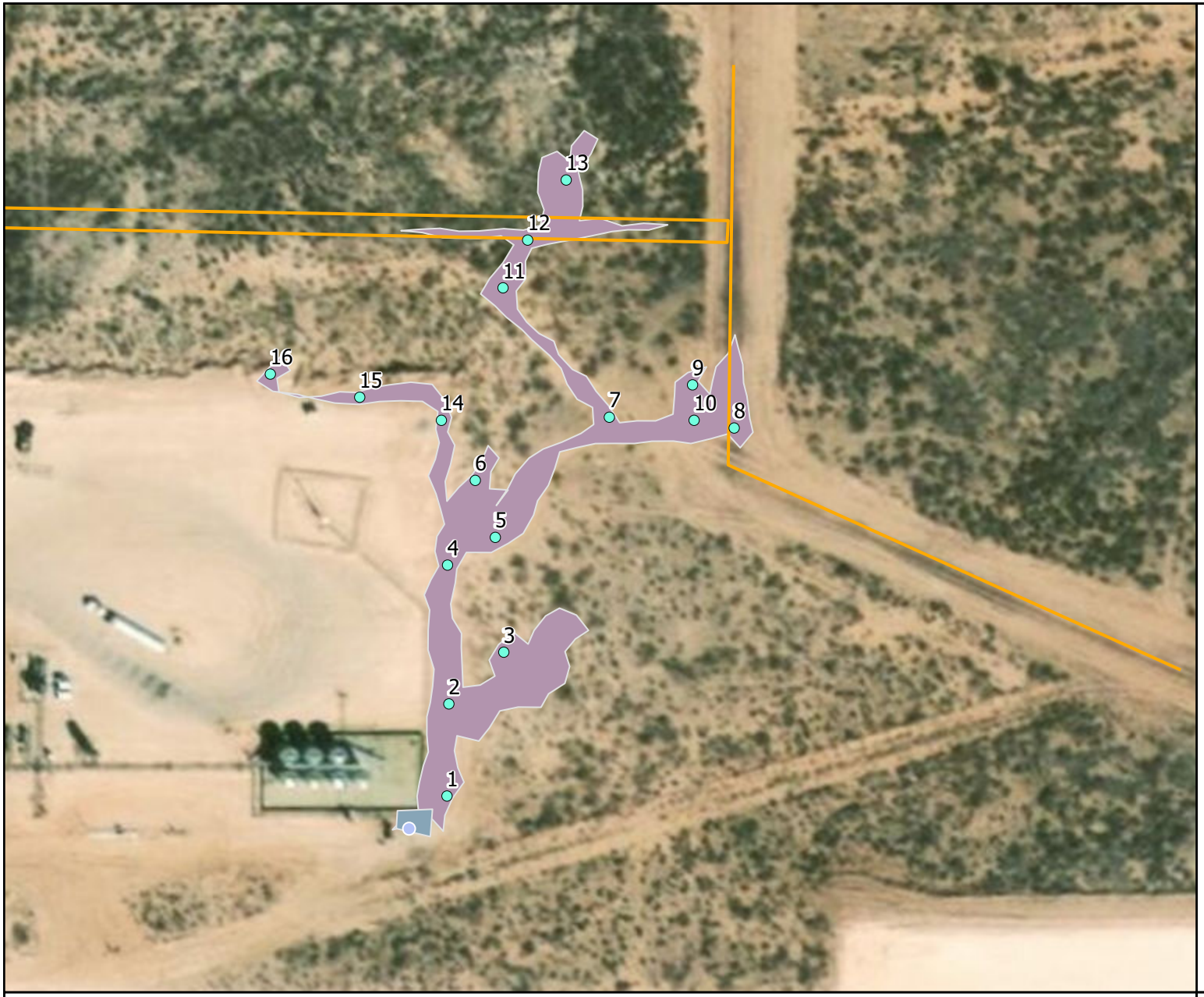

Point of Release
Pipelines
Release Area
Equipment

N

150
Feet

Bottomhole Closure Sample Locations
Charlie Sweeney - Matador Resources

Figure 3

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Date Saved: 2/7/2019

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

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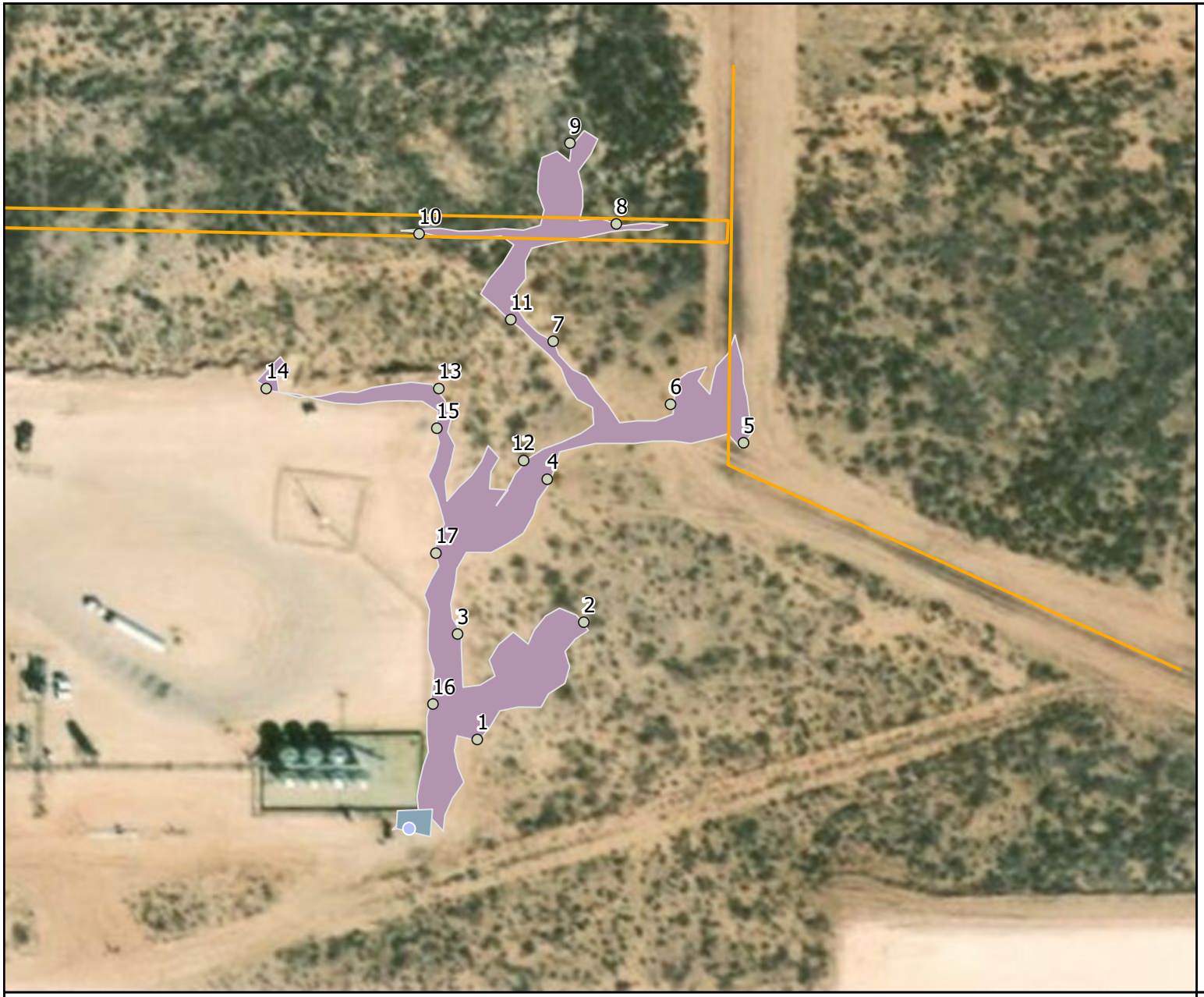

Sidewall Closure Sample Locations
Charlie Sweeney - Matador Resources

Figure 3

P:\5-Matador 2019 MSA (5E27961)\GIS\ARCGIS\MATADOR_MIT.aprx

Date Saved: 2/7/2019

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

Drawn
Date 2/7/2019
Checked
Approved

SMA
201 South Halaguena Street
Carlsbad, New Mexico 88221
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TABLES

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	195	OSE (Appendix B)
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	780	Southern Canal
Hortizontal Distance to Nearest Significant Watercourse (ft)	780	Southern Canal

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		600	100		50	10
51' to 100'		10000	2500	1000	50	10
> 100'	x	20000	2500	1000	50	10
Surface Water	**yes or no**	**if yes, then**				
<300' from continuously flowing watercourse or other significant watercourse?	no	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	no					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	no					
<1000' from fresh water well or spring?	no					
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; medium karst					
within a 100-year floodplain?	no					

Table 3a:
Summary of Initial Sample Results

Matador Resources Company
Charlie Sweeney Tank Battery

Sample ID	Sample Date	Depth (feet bgs)	Completed 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	1,000			2,500	20,000
L1	1/8/2019	0-1	Excavated							--
	1/8/2019	1	Excavated							**1,300**
	1/8/2019	1.5	In-Situ							510
L2	1/8/2019	0-1	Excavated							--
	1/8/2019	1	Excavate							600
	1/8/2019	2	In-Situ							370
	1/8/2019	2.5	In-Situ							61
L3	1/8/2019	0-1	Excavated							--
	1/8/2019	1	In-Situ							240
	1/8/2019	2	In-Situ							62
	1/8/2019	2.5	In-Situ							60
L4	1/8/2019	0-1	Excavated							--
	1/8/2019	1	In-Situ							180
	1/8/2019	2	In-Situ							180
L5	1/8/2019	0-1	Excavated							--
	1/8/2019	1	Excavated							**1,800**
	1/8/2019	2	In-Situ							51
L6	1/8/2019	0-1	Excavated							--
	1/8/2019	1	In-Situ							560
	1/8/2019	2	In-Situ							260
L7	1/8/2019	0-1	Excavated							--
	1/8/2019	1	Excavated							**11,000**
	1/8/2019	2	Excavated							**9,100**
	1/8/2019	3	Excavated							**7,700**
BG1	1/8/2019	1	In-Situ							<30
		2	In-Situ							<30
BG2	1/8/2019	1	In-Situ							<30
		1.75	In-Situ							<30

"--" = Not Analyzed

Table 3b:
Summary of Closure Sample Results

Matador Resources Company
Charlie Sweeney Tank Battery

Sample ID	Sample Date	Depth (feet bgs)	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	1,000			2,500	20,000
SW1	2/4/2019	sidewall	<0.225	<0.025	<5.0	<9.9	<50	<64.9	100
SW2	2/4/2019	sidewall	<0.22	<0.024	<4.9	<9.4	<47	<61.3	260
SW3	2/4/2019	sidewall	<0.216	<0.024	<4.8	<9.9	<49	<63.7	220
SW4	2/4/2019	sidewall	<0.212	<0.024	<4.7	<9.7	<48	<62.4	390
SW5	2/4/2019	sidewall	<0.217	<0.024	<4.8	<9.7	<49	<63.5	<60
SW6	2/4/2019	sidewall	<0.208	<0.023	<4.6	<9.5	<47	<61.1	<60
SW7	2/4/2019	sidewall	<0.213	<0.024	<4.7	<9.7	<48	<62.4	<60
SW8	2/4/2019	sidewall	<0.219	<0.024	<4.9	<9.7	<49	<63.6	1,000
	2/15/2019	sidewall	--	--	--	--	--	--	180
SW9	2/4/2019	sidewall	<0.207	<0.023	<4.6	<9.8	<49	<63.4	<60
SW10	2/4/2019	sidewall	<0.208	<0.023	<4.6	<9.4	<47	<61	<60
SW11	2/4/2019	sidewall	<0.216	<0.024	<4.8	<9.5	<48	<62.3	<60
SW12	2/4/2019	sidewall	<0.219	<0.024	<4.9	<9.3	<46	<60.2	<60
SW13	2/4/2019	sidewall	<0.212	<0.024	<4.7	<9.5	<47	<61.2	170
SW14	2/4/2019	sidewall	<0.212	<0.024	<4.7	<9.7	<48	<62.4	640
SW15	2/4/2019	sidewall	<0.225	<0.025	<5.0	<9.3	<46	<60.3	130
SW16	2/4/2019	sidewall	<0.207	<0.023	<4.6	<9.8	<49	<63.4	62
SW17	2/4/2019	sidewall	<0.211	<0.23	<4.7	<9.2	<46	<59.9	220
BH1	2/4/2019	1.5	<0.216	<0.024	<4.8	<9.8	<49	<63.6	240
BH2	2/4/2019	1.5	<0.213	<0.024	<4.7	<9.9	<50	<64.6	190
BH3	2/4/2019	1.5	<0.217	<0.024	<4.8	<10	<50	<64.8	290
BH4	2/4/2019	1.5	<0.213	<0.024	<4.7	<10	<50	<64.7	340
BH5	2/4/2019	1	<0.217	<0.024	<4.8	<10	<52	<68.8	340
BH6	2/4/2019	1	<0.215	0.024	<4.8	<9.5	<47	<61.3	71
BH7	2/4/2019	1	<0.22	<0.024	<4.8	<10	<50	<64.8	<60
BH8	2/4/2019	1	<0.212	<0.024	<4.7	<9.5	<48	<62.2	1,600
	2/15/2019	1	--	--	--	--	--	--	100
BH9	2/4/2019	1	<0.221	<0.025	<4.9	<9.5	<47	<61.2	94
BH10	2/4/2019	1	<0.211	<0.023	<4.7	<9.3	<47	<61	93
BH11	2/4/2019	1.5	<0.208	<0.023	<4.6	<9.9	<50	<64.5	<60
BH12	2/4/2019	1.5	<0.221	<0.025	<4.9	<9.5	<47	<61.4	240
BH13	2/4/2019	0.5	<0.21	<0.023	<4.7	<9.5	<48	<62.2	<60
BH14	2/5/2019	3	<0.206	<0.023	<4.6	<9.5	<48	<62.1	340
BH15	2/5/2019	5	<0.216	<0.024	<4.8	<9.9	<49	<63.7	71
BH16	2/5/2019	7	<0.224	<0.025	<5.0	<9.9	<50	<64.9	<60
	2/5/2019	8	<0.207	<0.023	<4.6	<10	<50	<64.6	74

"--" = Not Analyzed

APPENDIX A
FORMS C141

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 Company	OGRID 228937
Contact Name John Hurt	Contact Telephone 972-371-5200
Contact email JHurt@matadorresources.com	Incident # *(assigned by OCD)*
Contact mailing address5400 LBJ Freeway, Suite 1500 Dallas,TX 75240	

Location of Release Source

Latitude 32.270273°_____ Longitude -104.131200°_____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Charlie Sweeney TB	Site Type Tank Battery
Date Release Discovered 1/7/2019	API# *(if applicable) N/A*

Unit Letter	Section	Township	Range	County
N	30	23S	28E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: Henry McDonald*_____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 20	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
A 1" nipple at meter run failed causing the release. The meter ran for approximately 10 mins before the line was shut in. The pump was down and release gravity flowed through 1 in. opening. Personal onsite calculated the volume based off the diameter of the opening and total time of the release to determine 20 bbls released.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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.

☒ The impacted area has been secured to protect human health and the environment.

☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:
The release flowed to lowest area and did not continue to move laterally. Liquids moved into soil and no free fluid was able to be recovered.

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: John Hurt Title: RES Specialist

Signature: Date: 1/9/18

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

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

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Revised August 24, 2018
Submit to appropriate OCD District office

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District RP	
Facility ID	
Application ID	

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Responsible Party

Responsible Party Matador Resources Company	OGRID 228937
Contact Name John Hurt	Contact Telephone 972-371-5200
Contact email JHurt@matadorresources.com	Incident # *(assigned by OCD)*
Contact mailing address5400 LBJ Freeway, Suite 1500 Dallas,TX 75240	

Location of Release Source

Latitude 32.270273°_____ Longitude -104.131200°_____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Charlie Sweeney TB	Site Type Tank Battery
Date Release Discovered 1/7/2019	API# *(if applicable) N/A*

Unit Letter	Section	Township	Range	County
N	30	23S	28E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: Henry McDonald*_____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 20	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
A 1" nipple at meter run failed causing the release. The meter ran for approximately 10 mins before the line was shut in. The pump was down and release gravity flowed through 1 in. opening. Personal onsite calculated the volume based off the diameter of the opening and total time of the release to determine 20 bbls released.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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.

☒ The impacted area has been secured to protect human health and the environment.

☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:
The release flowed to lowest area and did not continue to move laterally. Liquids moved into soil and no free fluid was able to be recovered.

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: John Hurt Title: RES Specialist

Signature: Date: 2/20/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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?	195 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ 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.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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: 2/20/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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: 2/20/19

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
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
NA	C 04085 POD1	1	4	1	31	23S	28E	582039	3570027

Driller License:	331	**Driller Company:**	SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.		
Driller Name:					
Drill Start Date:	08/08/2017	**Drill Finish Date:**	08/30/2017	**Plug Date:**	
Log File Date:	09/29/2017	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	30 GPM
Casing Size:	6.00	**Depth Well:**	250 feet	**Depth Water:**	200 feet

Water Bearing Stratifications:	Top	Bottom	Description
	212	250	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	70	230

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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 04085 POD1		CUB	ED	1	4	1	31	23S	28E	582039	3570027	731	250	200	50
C 04281 POD1		C	ED	2	4	1	31	23S	28E	582193	3570055	765	200	100	100
C 04085 POD2		CUB	ED	2	4	1	31	23S	28E	582083	3569982	786	240	100	140
C 04037 POD1		C	ED	4	3	2	31	23S	28E	582576	3569872	1137	99	60	39
C 00010 CLW191724	O	CUB	ED	2	3	2	25	23S	27E	580926	3571666*	1299	259		
C 00010		CUB	ED	1	2	2	25	23S	27E	581129	3572075*	1517	250	103	147
C 00010 CLW191759	O	CUB	ED	1	2	2	25	23S	27E	581129	3572075*	1517	259		
C 00010 ENLGD		CUB	ED	1	2	2	25	23S	27E	581129	3572075*	1517	259		

Average Depth to Water: **112 feet**

Minimum Depth: **60 feet**

Maximum Depth: **200 feet**

Record Count: 8

UTMNAD83 Radius Search (in meters):

Easting (X): 581822.53 **Northing (Y):** 3570725.29 **Radius:** 1610

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

APPENDIX C
VSP SAMPLING PROTOCOL

VSP Sample Design Report for Using Stratified Sampling to Estimate the Population Proportion

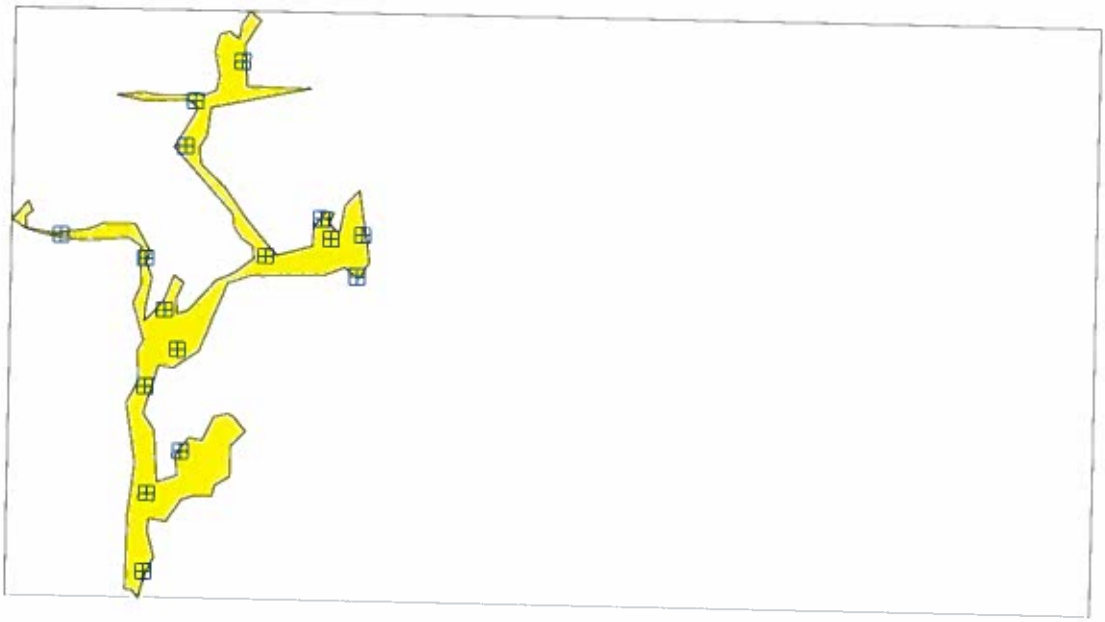
Summary

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	16
Stratum 1	16
Total area of all strata	20846.25 ft^2
Total cost of sampling [a]	

[a] 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
603810.5211	462073.9195			Random in Grid		
603812.3207	462143.2624			Random in Grid		
603840.5817	462180.4192			Random in Grid		
603809.1670	462235.7959			Random in Grid		
603836.5580	462269.5069			Random in Grid		
603824.8768	462303.8695			Random in Grid		
603990.6688	462335.9892			Random in Grid		
603733.2812	462368.5620			Random in Grid		
603807.5587	462348.5976			Random in Grid		
603911.2518	462352.2644			Random in Grid		
603967.9229	462368.8544			Random in Grid		
603995.0329	462372.8405			Random in Grid		
603958.8952	462386.4556			Random in Grid		
603840.2862	462448.1508			Random in Grid		
603848.2886	462487.4980			Random in Grid		
603888.3272	462522.8467			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 1 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

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
P_h	0.2
C_h	
W_h	20846.3

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, $n = \sum_{h=1}^{L} n_h$

sing this formula, the number of samples allocated to each stratum is:

Stratum	Number of Samples
1	16
Total Samples	16

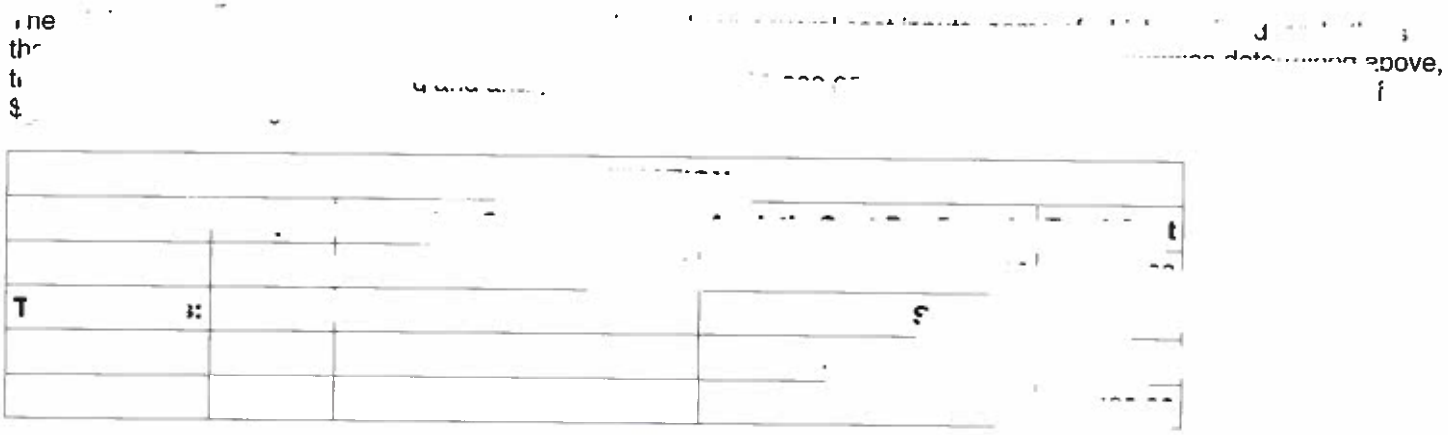
Method for Determining Sampling Locations
Five methods for determining sample locations are provided in VSP: 1) simple random sampling, 2) random sampling within grids, 3) systematic sampling with a random start, 4) systematic sampling with a fixed start and 5) adaptive grid sampling. One may use a different 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.

he first and third assumptions will be assessed in a post data collection analysis. The second assumption, although not ictly 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.

APPENDIX D

LABORATORY ANALYTICAL REPORTS

Analytical Report
Lab Order **1901420**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-1
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:00:00 PM
Lab ID: 1901420-001 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	1300	75		mg/Kg	50	1/14/2019 11:23:40 PM	42578

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

Qualifiers:

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

Analytical Report
Lab Order **1901420**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-1.5
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:05:00 PM
Lab ID: 1901420-002 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	510	30		mg/Kg	20	1/14/2019 11:11:33 AM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-1
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:10:00 PM
Lab ID: 1901420-003 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	600	30		mg/Kg	20	1/14/2019 11:23:58 AM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-2
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:15:00 PM
Lab ID: 1901420-004 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	370	30		mg/Kg	20	1/14/2019 11:36:22 AM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-2.5
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:20:00 PM
Lab ID: 1901420-005 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	61	30		mg/Kg	20	1/14/2019 12:38:25 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-1
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:25:00 PM
Lab ID: 1901420-006 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	240	30		mg/Kg	20	1/14/2019 12:50:49 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-2
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:30:00 PM
Lab ID: 1901420-007 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	62	30		mg/Kg	20	1/14/2019 1:03:13 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-2.5
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:35:00 PM
Lab ID: 1901420-008 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	60	30		mg/Kg	20	1/14/2019 1:15:37 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-1
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:40:00 PM
Lab ID: 1901420-009 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	180	30		mg/Kg	20	1/14/2019 1:28:01 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-2
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:45:00 PM
Lab ID: 1901420-010 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	180	30		mg/Kg	20	1/14/2019 1:40:25 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5-1
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:50:00 PM
Lab ID: 1901420-011 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	1800	75		mg/Kg	50	1/14/2019 11:36:04 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5-2
Project: Charlie Sweeney
Collection Date: 1/8/2019 2:55:00 PM
Lab ID: 1901420-012
Matrix: SOIL
Received Date: 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	51	30		mg/Kg	20	1/14/2019 2:05:15 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L6-1
Project: Charlie Sweeney
Collection Date: 1/8/2019 3:00:00 PM
Lab ID: 1901420-013 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	560	30		mg/Kg	20	1/14/2019 2:17:40 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L6-2
Project: Charlie Sweeney
Collection Date: 1/8/2019 3:05:00 PM
Lab ID: 1901420-014 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	260	30		mg/Kg	20	1/14/2019 2:30:05 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-1
Project: Charlie Sweeney
Collection Date: 1/8/2019 3:10:00 PM
Lab ID: 1901420-015 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	11000	750		mg/Kg	500	1/14/2019 11:48:29 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-2
Project: Charlie Sweeney
Collection Date: 1/8/2019 3:15:00 PM
Lab ID: 1901420-016 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	9100	750		mg/Kg	500	1/15/2019 12:00:54 AM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-3
Project: Charlie Sweeney
Collection Date: 1/8/2019 3:20:00 PM
Lab ID: 1901420-017 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	7700	300		mg/Kg	200	1/15/2019 12:13:18 AM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BG1-1
Project: Charlie Sweeney
Collection Date: 1/8/2019 3:30:00 PM
Lab ID: 1901420-018
Matrix: SOIL
Received Date: 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	1/14/2019 3:44:33 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BG1-2
Project: Charlie Sweeney
Collection Date: 1/8/2019 3:35:00 PM
Lab ID: 1901420-019 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	1/14/2019 3:56:57 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BG2-1
Project: Charlie Sweeney
Collection Date: 1/8/2019 3:40:00 PM
Lab ID: 1901420-020 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	1/14/2019 4:09:22 PM	42578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BG2-1.75
Project: Charlie Sweeney
Collection Date: 1/8/2019 3:45:00 PM
Lab ID: 1901420-021 **Matrix:** SOIL **Received Date:** 1/11/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	1/14/2019 4:46:37 PM	42591

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

Qualifiers:

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

Analytical Report
Lab Order **1902271**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 1
Project: Charlie Sweeney
Collection Date: 2/4/2019 11:30:00 AM
Lab ID: 1902271-001 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	100	60		mg/Kg	20	2/8/2019 4:41:27 PM	43055
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/8/2019 9:04:09 AM	43045
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/8/2019 9:04:09 AM	43045
Surr: DNOP	86.6	50.6-138		%Rec	1	2/8/2019 9:04:09 AM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/8/2019 9:34:28 AM	43040
Surr: BFB	107	73.8-119		%Rec	1	2/8/2019 9:34:28 AM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	2/8/2019 9:34:28 AM	43040
Toluene	ND	0.050		mg/Kg	1	2/8/2019 9:34:28 AM	43040
Ethylbenzene	ND	0.050		mg/Kg	1	2/8/2019 9:34:28 AM	43040
Xylenes, Total	ND	0.10		mg/Kg	1	2/8/2019 9:34:28 AM	43040
Surr: 4-Bromofluorobenzene	99.7	80-120		%Rec	1	2/8/2019 9:34:28 AM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 2
Project: Charlie Sweeney
Collection Date: 2/4/2019 11:35:00 AM
Lab ID: 1902271-002 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	260	60		mg/Kg	20	2/8/2019 4:53:52 PM	43055
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	2/8/2019 9:26:20 AM	43045
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/8/2019 9:26:20 AM	43045
Surr: DNOP	72.2	50.6-138		%Rec	1	2/8/2019 9:26:20 AM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/8/2019 10:42:21 AM	43040
Surr: BFB	99.4	73.8-119		%Rec	1	2/8/2019 10:42:21 AM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 10:42:21 AM	43040
Toluene	ND	0.049		mg/Kg	1	2/8/2019 10:42:21 AM	43040
Ethylbenzene	ND	0.049		mg/Kg	1	2/8/2019 10:42:21 AM	43040
Xylenes, Total	ND	0.098		mg/Kg	1	2/8/2019 10:42:21 AM	43040
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	2/8/2019 10:42:21 AM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 3
Project: Charlie Sweeney
Collection Date: 2/4/2019 11:00:00 AM
Lab ID: 1902271-003 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	220	60		mg/Kg	20	2/8/2019 5:06:17 PM	43055
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/8/2019 11:38:52 AM	43045
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/8/2019 11:38:52 AM	43045
Surr: DNOP	76.2	50.6-138		%Rec	1	2/8/2019 11:38:52 AM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/8/2019 11:50:13 AM	43040
Surr: BFB	98.9	73.8-119		%Rec	1	2/8/2019 11:50:13 AM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 11:50:13 AM	43040
Toluene	ND	0.048		mg/Kg	1	2/8/2019 11:50:13 AM	43040
Ethylbenzene	ND	0.048		mg/Kg	1	2/8/2019 11:50:13 AM	43040
Xylenes, Total	ND	0.096		mg/Kg	1	2/8/2019 11:50:13 AM	43040
Surr: 4-Bromofluorobenzene	93.3	80-120		%Rec	1	2/8/2019 11:50:13 AM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 4
Project: Charlie Sweeney
Collection Date: 2/4/2019 11:50:00 AM
Lab ID: 1902271-004 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	390	60		mg/Kg	20	2/8/2019 5:18:41 PM	43055
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/8/2019 1:28:46 PM	43045
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/8/2019 1:28:46 PM	43045
Surr: DNOP	57.8	50.6-138		%Rec	1	2/8/2019 1:28:46 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/8/2019 12:12:52 PM	43040
Surr: BFB	95.6	73.8-119		%Rec	1	2/8/2019 12:12:52 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 12:12:52 PM	43040
Toluene	ND	0.047		mg/Kg	1	2/8/2019 12:12:52 PM	43040
Ethylbenzene	ND	0.047		mg/Kg	1	2/8/2019 12:12:52 PM	43040
Xylenes, Total	ND	0.094		mg/Kg	1	2/8/2019 12:12:52 PM	43040
Surr: 4-Bromofluorobenzene	89.8	80-120		%Rec	1	2/8/2019 12:12:52 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 5
Project: Charlie Sweeney
Collection Date: 2/4/2019 12:45:00 PM
Lab ID: 1902271-005 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	2/8/2019 5:31:06 PM	43055
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/8/2019 12:22:42 PM	43045
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/8/2019 12:22:42 PM	43045
Surr: DNOP	66.3	50.6-138		%Rec	1	2/8/2019 12:22:42 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/8/2019 12:35:36 PM	43040
Surr: BFB	98.7	73.8-119		%Rec	1	2/8/2019 12:35:36 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 12:35:36 PM	43040
Toluene	ND	0.048		mg/Kg	1	2/8/2019 12:35:36 PM	43040
Ethylbenzene	ND	0.048		mg/Kg	1	2/8/2019 12:35:36 PM	43040
Xylenes, Total	ND	0.097		mg/Kg	1	2/8/2019 12:35:36 PM	43040
Surr: 4-Bromofluorobenzene	91.4	80-120		%Rec	1	2/8/2019 12:35:36 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 6
Project: Charlie Sweeney
Collection Date: 2/4/2019 12:00:00 PM
Lab ID: 1902271-006 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	2/8/2019 5:43:30 PM	43055
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/8/2019 12:44:39 PM	43045
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/8/2019 12:44:39 PM	43045
Surr: DNOP	64.2	50.6-138		%Rec	1	2/8/2019 12:44:39 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/8/2019 12:58:18 PM	43040
Surr: BFB	99.6	73.8-119		%Rec	1	2/8/2019 12:58:18 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	2/8/2019 12:58:18 PM	43040
Toluene	ND	0.046		mg/Kg	1	2/8/2019 12:58:18 PM	43040
Ethylbenzene	ND	0.046		mg/Kg	1	2/8/2019 12:58:18 PM	43040
Xylenes, Total	ND	0.093		mg/Kg	1	2/8/2019 12:58:18 PM	43040
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	2/8/2019 12:58:18 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 7
Project: Charlie Sweeney
Collection Date: 2/4/2019 12:50:00 PM
Lab ID: 1902271-007
Matrix: SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	2/9/2019 6:28:50 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/8/2019 1:06:50 PM	43045
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/8/2019 1:06:50 PM	43045
Surr: DNOP	73.5	50.6-138		%Rec	1	2/8/2019 1:06:50 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/8/2019 1:21:05 PM	43040
Surr: BFB	100	73.8-119		%Rec	1	2/8/2019 1:21:05 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 1:21:05 PM	43040
Toluene	ND	0.047		mg/Kg	1	2/8/2019 1:21:05 PM	43040
Ethylbenzene	ND	0.047		mg/Kg	1	2/8/2019 1:21:05 PM	43040
Xylenes, Total	ND	0.095		mg/Kg	1	2/8/2019 1:21:05 PM	43040
Surr: 4-Bromofluorobenzene	90.4	80-120		%Rec	1	2/8/2019 1:21:05 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 8
Project: Charlie Sweeney
Collection Date: 2/4/2019 2:45:00 PM
Lab ID: 1902271-008 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1000	60		mg/Kg	20	2/9/2019 7:06:04 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/8/2019 1:50:55 PM	43045
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/8/2019 1:50:55 PM	43045
Surr: DNOP	122	50.6-138		%Rec	1	2/8/2019 1:50:55 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/8/2019 1:43:52 PM	43040
Surr: BFB	103	73.8-119		%Rec	1	2/8/2019 1:43:52 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 1:43:52 PM	43040
Toluene	ND	0.049		mg/Kg	1	2/8/2019 1:43:52 PM	43040
Ethylbenzene	ND	0.049		mg/Kg	1	2/8/2019 1:43:52 PM	43040
Xylenes, Total	ND	0.097		mg/Kg	1	2/8/2019 1:43:52 PM	43040
Surr: 4-Bromofluorobenzene	93.1	80-120		%Rec	1	2/8/2019 1:43:52 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 9
Project: Charlie Sweeney
Collection Date: 2/4/2019 2:30:00 PM
Lab ID: 1902271-009 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	2/9/2019 7:18:29 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/8/2019 2:12:56 PM	43045
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/8/2019 2:12:56 PM	43045
Surr: DNOP	70.5	50.6-138		%Rec	1	2/8/2019 2:12:56 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/8/2019 2:06:32 PM	43040
Surr: BFB	101	73.8-119		%Rec	1	2/8/2019 2:06:32 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	2/8/2019 2:06:32 PM	43040
Toluene	ND	0.046		mg/Kg	1	2/8/2019 2:06:32 PM	43040
Ethylbenzene	ND	0.046		mg/Kg	1	2/8/2019 2:06:32 PM	43040
Xylenes, Total	ND	0.092		mg/Kg	1	2/8/2019 2:06:32 PM	43040
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	2/8/2019 2:06:32 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 10
Project: Charlie Sweeney
Collection Date: 2/4/2019 2:50:00 PM
Lab ID: 1902271-010 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	2/9/2019 7:30:54 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	2/8/2019 2:35:00 PM	43045
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/8/2019 2:35:00 PM	43045
Surr: DNOP	70.5	50.6-138		%Rec	1	2/8/2019 2:35:00 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/8/2019 2:29:17 PM	43040
Surr: BFB	98.9	73.8-119		%Rec	1	2/8/2019 2:29:17 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	2/8/2019 2:29:17 PM	43040
Toluene	ND	0.046		mg/Kg	1	2/8/2019 2:29:17 PM	43040
Ethylbenzene	ND	0.046		mg/Kg	1	2/8/2019 2:29:17 PM	43040
Xylenes, Total	ND	0.093		mg/Kg	1	2/8/2019 2:29:17 PM	43040
Surr: 4-Bromofluorobenzene	88.8	80-120		%Rec	1	2/8/2019 2:29:17 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 11
Project: Charlie Sweeney
Collection Date: 2/4/2019 1:30:00 PM
Lab ID: 1902271-011 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	2/9/2019 7:43:18 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/8/2019 2:56:58 PM	43045
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/8/2019 2:56:58 PM	43045
Surr: DNOP	68.0	50.6-138		%Rec	1	2/8/2019 2:56:58 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/8/2019 4:23:00 PM	43040
Surr: BFB	98.3	73.8-119		%Rec	1	2/8/2019 4:23:00 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 4:23:00 PM	43040
Toluene	ND	0.048		mg/Kg	1	2/8/2019 4:23:00 PM	43040
Ethylbenzene	ND	0.048		mg/Kg	1	2/8/2019 4:23:00 PM	43040
Xylenes, Total	ND	0.096		mg/Kg	1	2/8/2019 4:23:00 PM	43040
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	1	2/8/2019 4:23:00 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 12
Project: Charlie Sweeney
Collection Date: 2/4/2019 11:05:00 AM
Lab ID: 1902271-012
Matrix: SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	2/9/2019 7:55:42 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/8/2019 3:19:02 PM	43045
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/8/2019 3:19:02 PM	43045
Surr: DNOP	75.6	50.6-138		%Rec	1	2/8/2019 3:19:02 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/8/2019 4:45:42 PM	43040
Surr: BFB	101	73.8-119		%Rec	1	2/8/2019 4:45:42 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 4:45:42 PM	43040
Toluene	ND	0.049		mg/Kg	1	2/8/2019 4:45:42 PM	43040
Ethylbenzene	ND	0.049		mg/Kg	1	2/8/2019 4:45:42 PM	43040
Xylenes, Total	ND	0.097		mg/Kg	1	2/8/2019 4:45:42 PM	43040
Surr: 4-Bromofluorobenzene	92.1	80-120		%Rec	1	2/8/2019 4:45:42 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 13
Project: Charlie Sweeney
Collection Date: 2/4/2019 11:50:00 AM
Lab ID: 1902271-013 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	170	60		mg/Kg	20	2/9/2019 8:32:55 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/8/2019 3:40:58 PM	43045
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/8/2019 3:40:58 PM	43045
Surr: DNOP	83.1	50.6-138		%Rec	1	2/8/2019 3:40:58 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/8/2019 5:08:19 PM	43040
Surr: BFB	98.6	73.8-119		%Rec	1	2/8/2019 5:08:19 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 5:08:19 PM	43040
Toluene	ND	0.047		mg/Kg	1	2/8/2019 5:08:19 PM	43040
Ethylbenzene	ND	0.047		mg/Kg	1	2/8/2019 5:08:19 PM	43040
Xylenes, Total	ND	0.094		mg/Kg	1	2/8/2019 5:08:19 PM	43040
Surr: 4-Bromofluorobenzene	89.8	80-120		%Rec	1	2/8/2019 5:08:19 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 14
Project: Charlie Sweeney
Collection Date: 2/4/2019 12:30:00 PM
Lab ID: 1902271-014
Matrix: SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	640	60		mg/Kg	20	2/9/2019 8:45:20 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/8/2019 4:03:01 PM	43045
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/8/2019 4:03:01 PM	43045
Surr: DNOP	82.9	50.6-138		%Rec	1	2/8/2019 4:03:01 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/8/2019 5:31:06 PM	43040
Surr: BFB	99.6	73.8-119		%Rec	1	2/8/2019 5:31:06 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 5:31:06 PM	43040
Toluene	ND	0.047		mg/Kg	1	2/8/2019 5:31:06 PM	43040
Ethylbenzene	ND	0.047		mg/Kg	1	2/8/2019 5:31:06 PM	43040
Xylenes, Total	ND	0.094		mg/Kg	1	2/8/2019 5:31:06 PM	43040
Surr: 4-Bromofluorobenzene	90.0	80-120		%Rec	1	2/8/2019 5:31:06 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 15
Project: Charlie Sweeney
Collection Date: 2/4/2019 10:15:00 AM
Lab ID: 1902271-015 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	60		mg/Kg	20	2/9/2019 8:57:45 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/8/2019 4:24:57 PM	43045
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/8/2019 4:24:57 PM	43045
Surr: DNOP	66.2	50.6-138		%Rec	1	2/8/2019 4:24:57 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/8/2019 5:53:57 PM	43040
Surr: BFB	104	73.8-119		%Rec	1	2/8/2019 5:53:57 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	2/8/2019 5:53:57 PM	43040
Toluene	ND	0.050		mg/Kg	1	2/8/2019 5:53:57 PM	43040
Ethylbenzene	ND	0.050		mg/Kg	1	2/8/2019 5:53:57 PM	43040
Xylenes, Total	ND	0.10		mg/Kg	1	2/8/2019 5:53:57 PM	43040
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	2/8/2019 5:53:57 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 16
Project: Charlie Sweeney
Collection Date: 2/4/2019 10:30:00 AM
Lab ID: 1902271-016 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	62	60		mg/Kg	20	2/9/2019 9:10:10 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/8/2019 4:47:07 PM	43045
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/8/2019 4:47:07 PM	43045
Surr: DNOP	86.0	50.6-138		%Rec	1	2/8/2019 4:47:07 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/8/2019 6:16:41 PM	43040
Surr: BFB	97.8	73.8-119		%Rec	1	2/8/2019 6:16:41 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	2/8/2019 6:16:41 PM	43040
Toluene	ND	0.046		mg/Kg	1	2/8/2019 6:16:41 PM	43040
Ethylbenzene	ND	0.046		mg/Kg	1	2/8/2019 6:16:41 PM	43040
Xylenes, Total	ND	0.092		mg/Kg	1	2/8/2019 6:16:41 PM	43040
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	2/8/2019 6:16:41 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 17
Project: Charlie Sweeney
Collection Date: 2/4/2019 10:35:00 AM
Lab ID: 1902271-017 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	220	60		mg/Kg	20	2/9/2019 9:22:34 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/8/2019 5:09:08 PM	43045
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/8/2019 5:09:08 PM	43045
Surr: DNOP	68.4	50.6-138		%Rec	1	2/8/2019 5:09:08 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/8/2019 6:39:28 PM	43040
Surr: BFB	97.4	73.8-119		%Rec	1	2/8/2019 6:39:28 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	2/8/2019 6:39:28 PM	43040
Toluene	ND	0.047		mg/Kg	1	2/8/2019 6:39:28 PM	43040
Ethylbenzene	ND	0.047		mg/Kg	1	2/8/2019 6:39:28 PM	43040
Xylenes, Total	ND	0.094		mg/Kg	1	2/8/2019 6:39:28 PM	43040
Surr: 4-Bromofluorobenzene	87.5	80-120		%Rec	1	2/8/2019 6:39:28 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 1
Project: Charlie Sweeney
Collection Date: 2/4/2019 11:30:00 AM
Lab ID: 1902271-018
Matrix: SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	240	60		mg/Kg	20	2/9/2019 9:34:58 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/8/2019 5:31:12 PM	43045
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/8/2019 5:31:12 PM	43045
Surr: DNOP	72.9	50.6-138		%Rec	1	2/8/2019 5:31:12 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/8/2019 7:02:15 PM	43040
Surr: BFB	97.9	73.8-119		%Rec	1	2/8/2019 7:02:15 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 7:02:15 PM	43040
Toluene	ND	0.048		mg/Kg	1	2/8/2019 7:02:15 PM	43040
Ethylbenzene	ND	0.048		mg/Kg	1	2/8/2019 7:02:15 PM	43040
Xylenes, Total	ND	0.096		mg/Kg	1	2/8/2019 7:02:15 PM	43040
Surr: 4-Bromofluorobenzene	86.5	80-120		%Rec	1	2/8/2019 7:02:15 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 2
Project: Charlie Sweeney
Collection Date: 2/4/2019 11:00:00 AM
Lab ID: 1902271-019 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	190	60		mg/Kg	20	2/9/2019 9:47:22 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/8/2019 5:53:06 PM	43045
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/8/2019 5:53:06 PM	43045
Surr: DNOP	78.2	50.6-138		%Rec	1	2/8/2019 5:53:06 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/8/2019 7:24:58 PM	43040
Surr: BFB	101	73.8-119		%Rec	1	2/8/2019 7:24:58 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 7:24:58 PM	43040
Toluene	ND	0.047		mg/Kg	1	2/8/2019 7:24:58 PM	43040
Ethylbenzene	ND	0.047		mg/Kg	1	2/8/2019 7:24:58 PM	43040
Xylenes, Total	ND	0.095		mg/Kg	1	2/8/2019 7:24:58 PM	43040
Surr: 4-Bromofluorobenzene	90.0	80-120		%Rec	1	2/8/2019 7:24:58 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 3
Project: Charlie Sweeney
Collection Date: 2/4/2019 11:20:00 AM
Lab ID: 1902271-020 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	290	60		mg/Kg	20	2/9/2019 9:59:47 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/8/2019 6:15:05 PM	43045
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/8/2019 6:15:05 PM	43045
Surr: DNOP	80.6	50.6-138		%Rec	1	2/8/2019 6:15:05 PM	43045
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/8/2019 7:47:42 PM	43040
Surr: BFB	102	73.8-119		%Rec	1	2/8/2019 7:47:42 PM	43040
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 7:47:42 PM	43040
Toluene	ND	0.048		mg/Kg	1	2/8/2019 7:47:42 PM	43040
Ethylbenzene	ND	0.048		mg/Kg	1	2/8/2019 7:47:42 PM	43040
Xylenes, Total	ND	0.097		mg/Kg	1	2/8/2019 7:47:42 PM	43040
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	2/8/2019 7:47:42 PM	43040

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 4
Project: Charlie Sweeney
Collection Date: 2/4/2019 12:30:00 PM
Lab ID: 1902271-021
Matrix: SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	340	60		mg/Kg	20	2/9/2019 10:12:11 PM	43067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/8/2019 8:25:38 PM	43047
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/8/2019 8:25:38 PM	43047
Surr: DNOP	73.3	50.6-138		%Rec	1	2/8/2019 8:25:38 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/9/2019 3:07:52 AM	43044
Surr: BFB	89.2	73.8-119		%Rec	1	2/9/2019 3:07:52 AM	43044
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/9/2019 3:07:52 AM	43044
Toluene	ND	0.047		mg/Kg	1	2/9/2019 3:07:52 AM	43044
Ethylbenzene	ND	0.047		mg/Kg	1	2/9/2019 3:07:52 AM	43044
Xylenes, Total	ND	0.095		mg/Kg	1	2/9/2019 3:07:52 AM	43044
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	2/9/2019 3:07:52 AM	43044

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 5
Project: Charlie Sweeney
Collection Date: 2/4/2019 12:15:00 PM
Lab ID: 1902271-022 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	340	60		mg/Kg	20	2/11/2019 5:15:33 PM	43074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/8/2019 8:47:21 PM	43047
Motor Oil Range Organics (MRO)	ND	52		mg/Kg	1	2/8/2019 8:47:21 PM	43047
Surr: DNOP	60.7	50.6-138		%Rec	1	2/8/2019 8:47:21 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/9/2019 3:30:50 AM	43044
Surr: BFB	88.3	73.8-119		%Rec	1	2/9/2019 3:30:50 AM	43044
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/9/2019 3:30:50 AM	43044
Toluene	ND	0.048		mg/Kg	1	2/9/2019 3:30:50 AM	43044
Ethylbenzene	ND	0.048		mg/Kg	1	2/9/2019 3:30:50 AM	43044
Xylenes, Total	ND	0.097		mg/Kg	1	2/9/2019 3:30:50 AM	43044
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	2/9/2019 3:30:50 AM	43044

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 6
Project: Charlie Sweeney
Collection Date: 2/4/2019 12:45:00 PM
Lab ID: 1902271-023 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	71	60		mg/Kg	20	2/11/2019 5:27:57 PM	43074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/8/2019 9:09:04 PM	43047
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/8/2019 9:09:04 PM	43047
Surr: DNOP	51.6	50.6-138		%Rec	1	2/8/2019 9:09:04 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/8/2019 9:18:23 PM	43044
Surr: BFB	102	73.8-119		%Rec	1	2/8/2019 9:18:23 PM	43044
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 9:18:23 PM	43044
Toluene	ND	0.048		mg/Kg	1	2/8/2019 9:18:23 PM	43044
Ethylbenzene	ND	0.048		mg/Kg	1	2/8/2019 9:18:23 PM	43044
Xylenes, Total	ND	0.095		mg/Kg	1	2/8/2019 9:18:23 PM	43044
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	2/8/2019 9:18:23 PM	43044

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 7
Project: Charlie Sweeney
Collection Date: 2/4/2019 1:25:00 PM
Lab ID: 1902271-024 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	2/11/2019 6:30:00 PM	43074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/8/2019 9:30:52 PM	43047
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/8/2019 9:30:52 PM	43047
Surr: DNOP	50.8	50.6-138		%Rec	1	2/8/2019 9:30:52 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/8/2019 9:41:01 PM	43044
Surr: BFB	99.9	73.8-119		%Rec	1	2/8/2019 9:41:01 PM	43044
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 9:41:01 PM	43044
Toluene	ND	0.049		mg/Kg	1	2/8/2019 9:41:01 PM	43044
Ethylbenzene	ND	0.049		mg/Kg	1	2/8/2019 9:41:01 PM	43044
Xylenes, Total	ND	0.098		mg/Kg	1	2/8/2019 9:41:01 PM	43044
Surr: 4-Bromofluorobenzene	89.9	80-120		%Rec	1	2/8/2019 9:41:01 PM	43044

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 8
Project: Charlie Sweeney
Collection Date: 2/4/2019 2:40:00 PM
Lab ID: 1902271-025 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1600	60		mg/Kg	20	2/11/2019 6:42:25 PM	43074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/8/2019 9:52:42 PM	43047
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/8/2019 9:52:42 PM	43047
Surr: DNOP	53.7	50.6-138		%Rec	1	2/8/2019 9:52:42 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/8/2019 10:03:36 PM	43044
Surr: BFB	101	73.8-119		%Rec	1	2/8/2019 10:03:36 PM	43044
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 10:03:36 PM	43044
Toluene	ND	0.047		mg/Kg	1	2/8/2019 10:03:36 PM	43044
Ethylbenzene	ND	0.047		mg/Kg	1	2/8/2019 10:03:36 PM	43044
Xylenes, Total	ND	0.094		mg/Kg	1	2/8/2019 10:03:36 PM	43044
Surr: 4-Bromofluorobenzene	91.4	80-120		%Rec	1	2/8/2019 10:03:36 PM	43044

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 9
Project: Charlie Sweeney
Collection Date: 2/4/2019 3:50:00 PM
Lab ID: 1902271-026 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	94	60		mg/Kg	20	2/11/2019 6:54:50 PM	43074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/8/2019 10:14:24 PM	43047
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/8/2019 10:14:24 PM	43047
Surr: DNOP	65.2	50.6-138		%Rec	1	2/8/2019 10:14:24 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/8/2019 10:26:11 PM	43044
Surr: BFB	98.0	73.8-119		%Rec	1	2/8/2019 10:26:11 PM	43044
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	2/8/2019 10:26:11 PM	43044
Toluene	ND	0.049		mg/Kg	1	2/8/2019 10:26:11 PM	43044
Ethylbenzene	ND	0.049		mg/Kg	1	2/8/2019 10:26:11 PM	43044
Xylenes, Total	ND	0.098		mg/Kg	1	2/8/2019 10:26:11 PM	43044
Surr: 4-Bromofluorobenzene	88.3	80-120		%Rec	1	2/8/2019 10:26:11 PM	43044

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 10
Project: Charlie Sweeney
Collection Date: 2/4/2019 3:45:00 PM
Lab ID: 1902271-027
Matrix: SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	93	60		mg/Kg	20	2/11/2019 7:07:14 PM	43074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/8/2019 10:36:14 PM	43047
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/8/2019 10:36:14 PM	43047
Surr: DNOP	56.2	50.6-138		%Rec	1	2/8/2019 10:36:14 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/8/2019 10:48:45 PM	43044
Surr: BFB	99.8	73.8-119		%Rec	1	2/8/2019 10:48:45 PM	43044
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	2/8/2019 10:48:45 PM	43044
Toluene	ND	0.047		mg/Kg	1	2/8/2019 10:48:45 PM	43044
Ethylbenzene	ND	0.047		mg/Kg	1	2/8/2019 10:48:45 PM	43044
Xylenes, Total	ND	0.094		mg/Kg	1	2/8/2019 10:48:45 PM	43044
Surr: 4-Bromofluorobenzene	89.4	80-120		%Rec	1	2/8/2019 10:48:45 PM	43044

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 11
Project: Charlie Sweeney
Collection Date: 2/4/2019 3:30:00 PM
Lab ID: 1902271-028 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	60		mg/Kg	20	2/11/2019 7:19:39 PM	43074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/8/2019 10:57:59 PM	43047
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/8/2019 10:57:59 PM	43047
Surr: DNOP	57.5	50.6-138		%Rec	1	2/8/2019 10:57:59 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/8/2019 11:11:16 PM	43044
Surr: BFB	102	73.8-119		%Rec	1	2/8/2019 11:11:16 PM	43044
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.023		mg/Kg	1	2/8/2019 11:11:16 PM	43044
Toluene	ND	0.046		mg/Kg	1	2/8/2019 11:11:16 PM	43044
Ethylbenzene	ND	0.046		mg/Kg	1	2/8/2019 11:11:16 PM	43044
Xylenes, Total	ND	0.093		mg/Kg	1	2/8/2019 11:11:16 PM	43044
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	2/8/2019 11:11:16 PM	43044

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 12
Project: Charlie Sweeney
Collection Date: 2/4/2019 3:00:00 PM
Lab ID: 1902271-029 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	240	60		mg/Kg	20	2/11/2019 7:32:03 PM	43074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/8/2019 11:19:53 PM	43047
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/8/2019 11:19:53 PM	43047
Surr: DNOP	65.0	50.6-138		%Rec	1	2/8/2019 11:19:53 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/8/2019 11:33:47 PM	43044
Surr: BFB	99.4	73.8-119		%Rec	1	2/8/2019 11:33:47 PM	43044
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	2/8/2019 11:33:47 PM	43044
Toluene	ND	0.049		mg/Kg	1	2/8/2019 11:33:47 PM	43044
Ethylbenzene	ND	0.049		mg/Kg	1	2/8/2019 11:33:47 PM	43044
Xylenes, Total	ND	0.098		mg/Kg	1	2/8/2019 11:33:47 PM	43044
Surr: 4-Bromofluorobenzene	88.8	80-120		%Rec	1	2/8/2019 11:33:47 PM	43044

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 13
Project: Charlie Sweeney
Collection Date: 2/4/2019 2:20:00 PM
Lab ID: 1902271-030 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	2/12/2019 11:56:45 AM	43106
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/8/2019 11:41:48 PM	43047
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/8/2019 11:41:48 PM	43047
Surr: DNOP	69.2	50.6-138		%Rec	1	2/8/2019 11:41:48 PM	43047
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/8/2019 11:56:18 PM	43044
Surr: BFB	98.0	73.8-119		%Rec	1	2/8/2019 11:56:18 PM	43044
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	2/8/2019 11:56:18 PM	43044
Toluene	ND	0.047		mg/Kg	1	2/8/2019 11:56:18 PM	43044
Ethylbenzene	ND	0.047		mg/Kg	1	2/8/2019 11:56:18 PM	43044
Xylenes, Total	ND	0.093		mg/Kg	1	2/8/2019 11:56:18 PM	43044
Surr: 4-Bromofluorobenzene	87.9	80-120		%Rec	1	2/8/2019 11:56:18 PM	43044

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

Qualifiers:

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

Analytical Report
Lab Order **1902255**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 16-7
Project: Charlie Sweeney
Collection Date: 2/5/2019 8:45:00 AM
Lab ID: 1902255-001 **Matrix:** SOIL **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	ND	60		mg/Kg	20	2/7/2019 11:02:07 PM	43043
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/8/2019 8:20:57 PM	43035
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/8/2019 8:20:57 PM	43035
Surr: DNOP	109	50.6-138		%Rec	1	2/8/2019 8:20:57 PM	43035
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/8/2019 3:06:32 PM	43027
Surr: BFB	95.6	73.8-119		%Rec	1	2/8/2019 3:06:32 PM	43027
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	2/8/2019 3:06:32 PM	43027
Toluene	ND	0.050		mg/Kg	1	2/8/2019 3:06:32 PM	43027
Ethylbenzene	ND	0.050		mg/Kg	1	2/8/2019 3:06:32 PM	43027
Xylenes, Total	ND	0.099		mg/Kg	1	2/8/2019 3:06:32 PM	43027
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	2/8/2019 3:06:32 PM	43027

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 16-8
Project: Charlie Sweeney
Collection Date: 2/5/2019 9:00:00 AM
Lab ID: 1902255-002 **Matrix:** SOIL
Received Date: 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	74	60		mg/Kg	20	2/7/2019 11:14:32 PM	43043
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/8/2019 8:45:07 PM	43035
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/8/2019 8:45:07 PM	43035
Surr: DNOP	105	50.6-138		%Rec	1	2/8/2019 8:45:07 PM	43035
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/8/2019 4:16:41 PM	43027
Surr: BFB	93.4	73.8-119		%Rec	1	2/8/2019 4:16:41 PM	43027
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.023		mg/Kg	1	2/8/2019 4:16:41 PM	43027
Toluene	ND	0.046		mg/Kg	1	2/8/2019 4:16:41 PM	43027
Ethylbenzene	ND	0.046		mg/Kg	1	2/8/2019 4:16:41 PM	43027
Xylenes, Total	ND	0.092		mg/Kg	1	2/8/2019 4:16:41 PM	43027
Surr: 4-Bromofluorobenzene	90.6	80-120		%Rec	1	2/8/2019 4:16:41 PM	43027

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 14-3
Project: Charlie Sweeney
Collection Date: 2/5/2019 8:00:00 AM
Lab ID: 1902255-003 **Matrix:** SOLID **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	340	60		mg/Kg	20	2/7/2019 11:26:57 PM	43043
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/8/2019 9:09:01 PM	43035
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/8/2019 9:09:01 PM	43035
Surr: DNOP	89.5	50.6-138		%Rec	1	2/8/2019 9:09:01 PM	43035
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/8/2019 7:00:49 PM	43027
Surr: BFB	96.5	73.8-119		%Rec	1	2/8/2019 7:00:49 PM	43027
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	2/8/2019 7:00:49 PM	43027
Toluene	ND	0.046		mg/Kg	1	2/8/2019 7:00:49 PM	43027
Ethylbenzene	ND	0.046		mg/Kg	1	2/8/2019 7:00:49 PM	43027
Xylenes, Total	ND	0.091		mg/Kg	1	2/8/2019 7:00:49 PM	43027
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	2/8/2019 7:00:49 PM	43027

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 15-5
Project: Charlie Sweeney
Collection Date: 2/5/2019 8:30:00 AM
Lab ID: 1902255-004 **Matrix:** SOLID **Received Date:** 2/7/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	71	60		mg/Kg	20	2/7/2019 11:39:22 PM	43043
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/8/2019 9:33:04 PM	43035
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/8/2019 9:33:04 PM	43035
Surr: DNOP	110	50.6-138		%Rec	1	2/8/2019 9:33:04 PM	43035
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/8/2019 7:24:14 PM	43027
Surr: BFB	92.1	73.8-119		%Rec	1	2/8/2019 7:24:14 PM	43027
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/8/2019 7:24:14 PM	43027
Toluene	ND	0.048		mg/Kg	1	2/8/2019 7:24:14 PM	43027
Ethylbenzene	ND	0.048		mg/Kg	1	2/8/2019 7:24:14 PM	43027
Xylenes, Total	ND	0.096		mg/Kg	1	2/8/2019 7:24:14 PM	43027
Surr: 4-Bromofluorobenzene	90.4	80-120		%Rec	1	2/8/2019 7:24:14 PM	43027

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

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 20, 2019

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

RE: Charlie Sweeny OrderNo.: 1902749

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/16/2019 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 or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1902749**
Date Reported: **2/20/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Charlie Sweeny
Lab Order: 1902749

Lab ID: 1902749-001
Collection Date: 2/15/2019 9:00:00 AM
Client Sample ID: BH8
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	100	60		mg/Kg	20	2/18/2019 5:42:15 PM	43207

Lab ID: 1902749-002
Collection Date: 2/15/2019 9:20:00 AM
Client Sample ID: SW8
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	180	60		mg/Kg	20	2/18/2019 6:19:29 PM	43207

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902749**

20-Feb-19

Client: Souder, Miller & Associates

Project: Charlie Sweeny

Sample ID	**MB-43207**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**43207**	RunNo:	**57780**					
Prep Date:	**2/18/2019**	Analysis Date:	**2/18/2019**	SeqNo:	**1934377**	Units:	**mg/Kg**			

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

Sample ID	**LCS-43207**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**43207**	RunNo:	**57780**					
Prep Date:	**2/18/2019**	Analysis Date:	**2/18/2019**	SeqNo:	**1934378**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.2	90	110			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **SMA-CARLSBAD** Work Order Number: **1902749** RcptNo: **1**

Received By: **Leah Baca** **2/16/2019 8:55:00 AM** Leah Baca

Completed By: **Leah Baca** **2/18/2019 7:32:50 AM** Leah Baca

Reviewed By: ENM 2/18/19

Labeled by TO 2/18/19

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 ☑	TO
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 2/18/19 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

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	5.1	Good	Yes			

Chain-of-Custody Record

Client: SMA Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 2 day

Project Name: Charlie Sweeny

Project #:

Project Manager: Austin Weygant

Sampler: MRS

On Ice: ☒ Yes ☐ No

# of Coolers: (1)

Cooler Temp(including CF): 4.1 +.5 = 5.1 C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1902749
2/15/19	9:00	Soil	BH8	4oz		-001
	9:20	Soil	SW8	↓		-002

Analysis Request

BTEX / MTBE / TMB's (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_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)						
						✓									
						✓									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2.15.19	1:15					
2/15	1900			Courier	2/16/19	0855

Remarks: Matador

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.

APPENDIX E
OPEN EXCAVATION PHOTO LOG