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

November 8, 2018

#5E26816-BG10

NMOCD District 2
Ms. Maria Pruett
811 S. 1st Street
Artesia, NM 88210

SUBJECT: Remediation Closure Report for the SST #3 Release (2RP-4843), Eddy County, New Mexico

Dear Ms. Maria Pruett:

On behalf of Responsible Party and/or Client, 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 SST #3 site. The site is in Unit C, Section 6, Township 19S, Range 29E, Eddy County, New Mexico, on State of New Mexico 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	SST #3	Company	Matador Resources
API Number	30-15-26457	Location	32.694937, -104.115848°
Incident Number	2RP-4843		
Estimated Date of Release	Unknown	Date Reported to NMOCD	7/2/18
Land Owner	State of New Mexico	Reported To	OCD, Mike Bratcher NMSLO, Ryan Mann
Source of Release	Illegal Dump		
Released Volume	Unknown	Released Material	Possible produced water
Recovered Volume	None	Net Release	Unknown
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	6/29/18		

1.0 Background

On June 29, 2018, a release was discovered at the SST #3 site due to an illegal dump. Initial response activities were conducted by SMA, and included checking for source elimination and site security; containment; site stabilization activities, and zero free fluids or soil was hauled off location at the time of the initial response. Figure 1 illustrates the vicinity and site location, Figure 2 illustrates the release location. The final C-141 form is included in Appendix A.

2.0 Site Information and Closure Criteria

The SST #3 is located approximately miles relative to nearest town/landmark, New Mexico on State of New Mexico land at an elevation of approximately 3,356 feet above mean sea level (amsl).

Based upon USGS groundwater data (Appendix B), depth to groundwater in the area is estimated to be 167 feet below grade surface (bgs). There are 0 known water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed 927/18). USGS well within the area were used to determine the depth to ground water. These wells ending in 4301,4701,3601 and 40301. The nearest surface water is Pecos River located approximately 10.6 Miles to the west. 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 Activities and Findings

On September 5, 2018, SMA personnel arrived on site in response to the release associated with SST #3. 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 and for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp.

A total of 24 sample locations were investigated using excavated test pits, to depths up to 3 feet bgs. A minimum of two samples were collected at each sampling location and field-screened using the methods above A total of 7 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. Table 3 itemizes the samples and field-screening results as well as identifying any variances from the typical specification of two samples per boring. Locations for all samples are depicted on Figure 3.

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 C).

As summarized in Table 3, This release has two areas which include the road and the pad. Results for the road indicated that an area approximately 2,127 feet by 9 feet by 0.5 feet deep had been impacted.

Results for the pad indicated that an area approximately 222 feet by 32 feet by 2 feet deep had been impacted. In the Remediation and Closure Sampling Plan for the SST #3 Release (2RP-4843), Eddy County, New Mexico dated October 11, 2018 , NMOCD and SMA agreed to add two more sample locations on the road. Also discussed was that SMA would sample all location on Figure 3 and send to a laboratory to be tested for all constitutes on Table 1 NMAC 19.15.29.

4.0 Soil Remediation Summary

In accordance with the Remediation and Closure Sampling Plan for the SST #3 Release (2RP-4843, submitted on 10/12/18, SMA returned to the site to oversee the excavation and take closure samples. After approval from area utilities via 811, SMA guided the excavation activities by collecting soil samples for field screening. Samples were screened for chloride using an electrical conductivity (EC) meter and/or for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria would be met. NMOCD was notified on October 10, 2018 that closure samples were expected to be collected with in two (2) business days.

On October 12, 2018, SMA conducted confirmation sampling of the excavation, which measured approximately dimensions. feet. The area around sample locations P1, P2, P3, P4, R1, R2, R3, R4 and R5 was excavated to a depth of 1 feet bgs. The area around sample locations L3. was excavated to a depth of 1.5 feet bgs. The area around sample locations Pad P1, L1 and L2. was excavated to a depth of 2 feet bgs. Confirmation samples were comprised of five-point composites at the location's areas. SMA sample all location on Figure 3 and send to a laboratory to be tested for all constitutes on Table 1 NMAC 19.15.29 in accordance to the Remediation and Closure Sampling Plan for the SST #3 Release (2RP-4843), EddyCounty, New Mexico dated October 11, 2018

Figure 3 shows the extent of the excavation and sample locations. All field screening and laboratory results are summarized in Table 3. Laboratory reports are included in Appendix C.

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 an NMOCD permitted disposal facility.

5.0 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:

Lucas C. Middleton
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

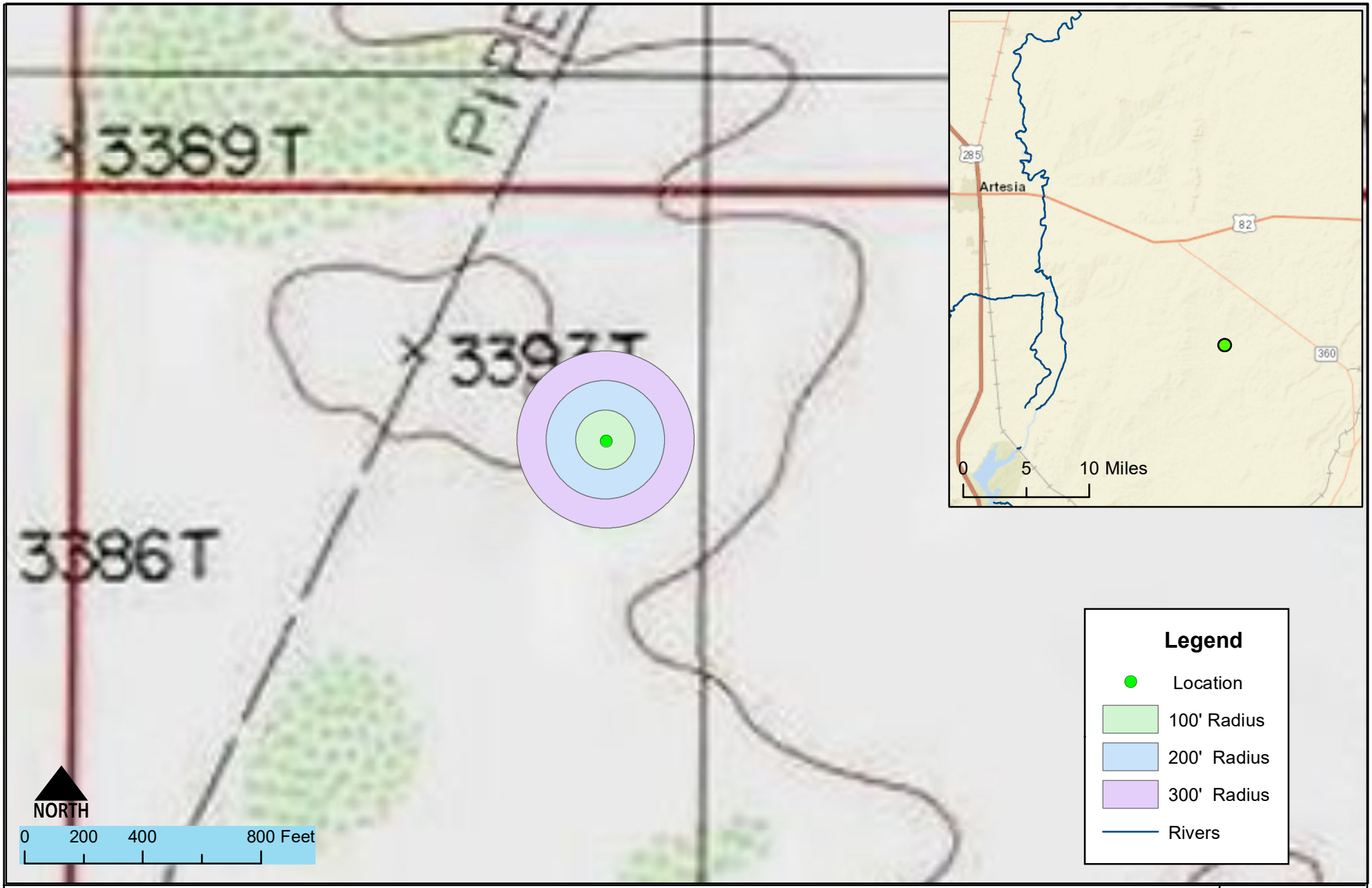
Tables:

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

Appendices:

Appendix A: Form C141
Appendix B: NMOSE Wells Report
Appendix C: Laboratory Analytical Reports
Appendix D: Site Assessment/Characterization
Appendix E: Excavation Photo Log

FIGURES



Surface Water Map
SST #003 Matador Resources
S: 6 T19S R29 E, Eddy County New Mexico

Figure 2

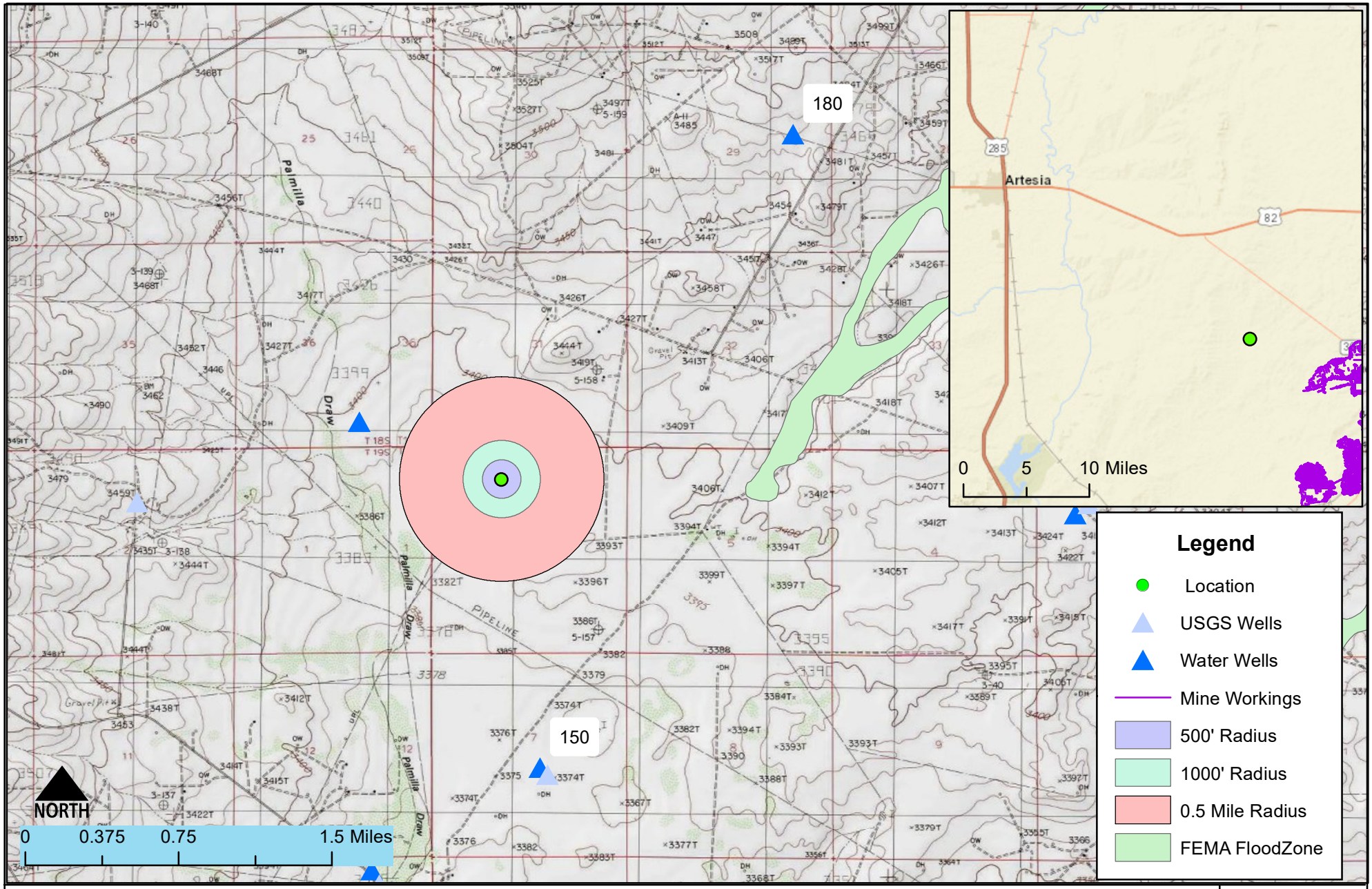
Revisions
By: Date: Descr:
By: Date: Descr:

Drawn Lucas Middleton
Checked
Approved

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

Date Saved: 9/25/2018

Document: C:\Users\lcm\Documents\GIS DATA\MAPS\SST Figure 2.mxd



Regional Vicinity & Wellhead Protection Map
SST #003 Matador Resources
S: 6 T19S R29 E, Eddy County New Mexico

Figure 1

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

Drawn Lucas Middleton
Checked
Approved

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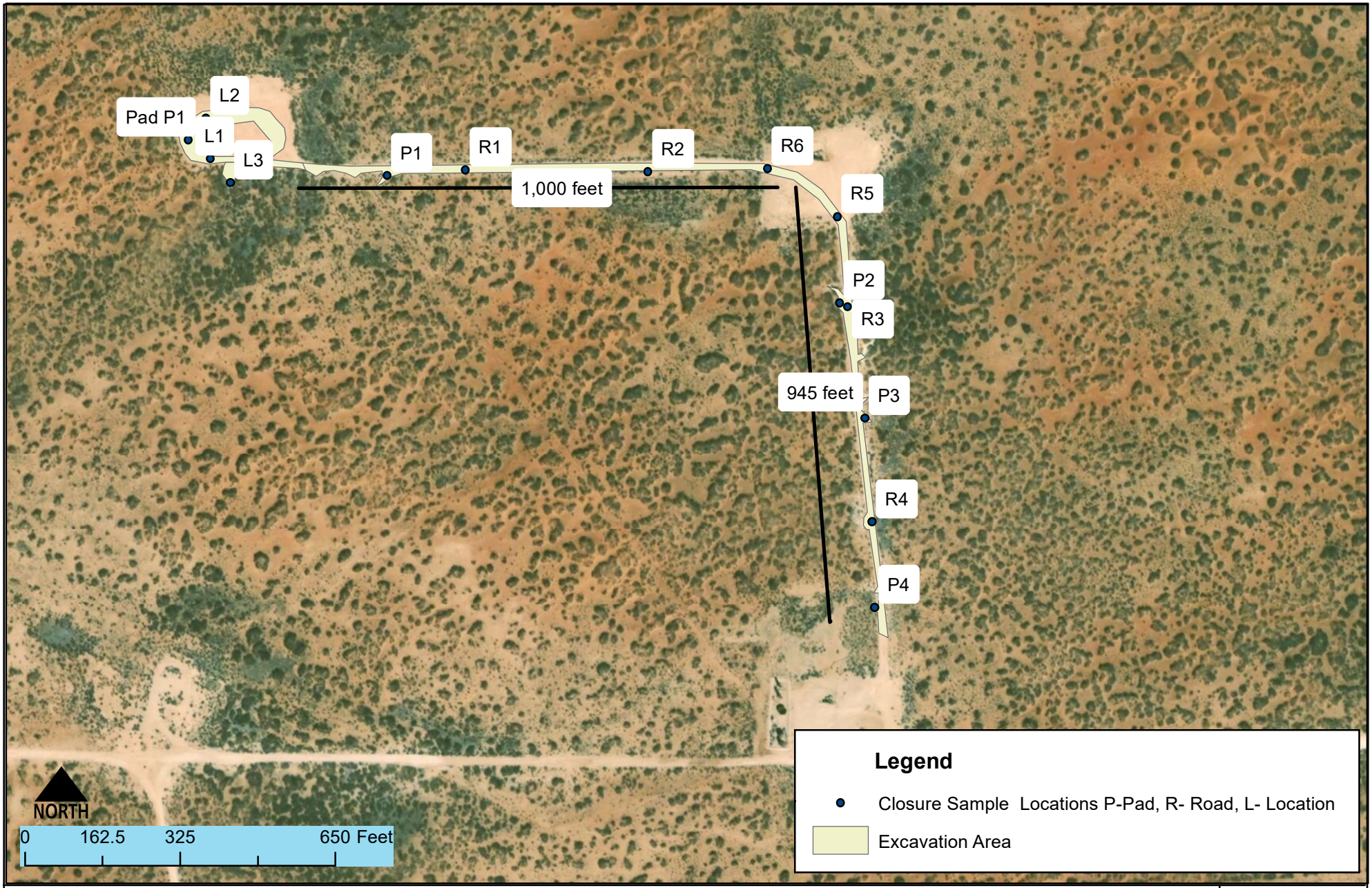
Document: C:\Users\lcm\Documents\GIS DATA\MAPS\SST figure1.mxd



Site and Sample Location Map
SST #003 Matador Resources
S: 6 T19S R29 E, Eddy County New Mexico

Figure 3a

Document: C:\Users\lcm\Documents\GIS DATA\MAPS\SST-3figure 3.mxd

Date Saved: 10/10/2018

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

Drawn Lucas Middleton
Checked
Approved

SMA
201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689.7040
www.soudermiller.com
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TABLES

Table 2:
NMOCD Closure Criteria

Matador Resources
SST #3 (2RP-4843)

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	~167	USGS
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	none	OSE, USGS
Hortizontal Distance to Nearest Significant Watercourse (miles)	10.6	USG 7.5 quad Topographic Map

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		**Closure Criteria (units in mg/kg)**				
		Chloride *numerical limit or background, whichever is greater	**TPH**	**GRO + DRO**	**BTEX**	**Benzene**
< 50' BGS		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					
within a 100-year floodplain?	No					

SMA #

Table 3:
Summary of Sample Results

Matador Resources
SST #3 (2RP-4843)

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action/ Action Taken	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	GRO + DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria				50	10			1000		100	20,000
P1	10/12/2018	1'	In-Situ	<0.097	<0.024	<4.9	<9.7	<9.7	<49	<49	<30
P2	10/12/2018	1'	In-Situ	<0.098	<0.025	<4.9	<9.9	<9.9	<50	<50	<30
P3	10/12/2018	1'	In-Situ	<0.094	<0.023	<4.7	<9.4	<9.4	<47	<47	<30
P4	10/12/2018	1'	In-Situ	<0.093	<0.023	<4.7	<10	<10	<50	<50	39
PAD P1	10/12/2018	2'	In-Situ	<0.024	<0.094	<4.7	<9.4	<9.4	<47	<47	<30
L1	10/12/2018	2'	In-Situ	<0.024	<0.097	<4.9	<9.4	<9.7	<48	<48	<30
L2	10/12/2018	2'	In-Situ	<0.023	<0.094	<4.7	<9.7	<9.7	<49	<49	<30
L3	10/12/2018	1.5'	In-Situ	<0.025	<0.10	<5	<9.8	<9.8	<49	<49	<30
R1	10/12/2018	1'	In-Situ	<0.025	<0.10	<5	<9.8	<9.8	<49	<49	76
R2	10/12/2018	1'	In-Situ	<0.095	<0.024	<4.7	<9.7	<9.7	<48	<48	180
R3	10/12/2018	1'	In-Situ	<0.99	<0.025	<4.9	<9.6	<4.9	<48	<48	220
R4	10/12/2018	1'	In-Situ	<0.97	<0.024	<4.9	<9.8	<9.8	<49	<49	180
R5	10/12/2018	1'	In-Situ	<0.096	<0.024	<4.8	<9.8	<9.8	<49	<49	<30

SMA #

APPENDIX A
FORM C141

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAB1819142351
District RP	2RP-4843
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: 11/9/18

email: JHurt@matadorresources.com Telephone: 972-371-5499

OCD Only

Received by: Jocelyn Harimon Date: 12/07/2022

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: Ashley Maxwell Date: 2/03/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

APPENDIX B
NMOSE WELLS REPORT

APPENDIX C

LABORATORY ANALYTICAL REPORTS

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

October 22, 2018

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

RE: SST OrderNo.: 1810903

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/17/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com 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 **1810903**
Date Reported: **10/22/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: R5
Project: SST
Collection Date: 10/12/2018 1:50:00 PM
Lab ID: 1810903-001 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/19/2018 1:35:55 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/19/2018 11:20:11 AM	41069
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2018 11:20:11 AM	41069
Surr: DNOP	107	50.6-138		%Rec	1	10/19/2018 11:20:11 AM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/18/2018 3:13:30 PM	41049
Surr: BFB	91.6	15-316		%Rec	1	10/18/2018 3:13:30 PM	41049
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/18/2018 3:13:30 PM	41049
Toluene	ND	0.048		mg/Kg	1	10/18/2018 3:13:30 PM	41049
Ethylbenzene	ND	0.048		mg/Kg	1	10/18/2018 3:13:30 PM	41049
Xylenes, Total	ND	0.096		mg/Kg	1	10/18/2018 3:13:30 PM	41049
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	10/18/2018 3:13:30 PM	41049

Refer to the QC Summary report and 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 **1810903**
Date Reported: **10/22/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: R6
Project: SST
Collection Date: 10/12/2018 2:00:00 PM
Lab ID: 1810903-002 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/19/2018 2:13:08 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/19/2018 12:33:23 PM	41069
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/19/2018 12:33:23 PM	41069
Surr: DNOP	102	50.6-138		%Rec	1	10/19/2018 12:33:23 PM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/18/2018 3:36:19 PM	41049
Surr: BFB	90.9	15-316		%Rec	1	10/18/2018 3:36:19 PM	41049
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	10/18/2018 3:36:19 PM	41049
Toluene	ND	0.050		mg/Kg	1	10/18/2018 3:36:19 PM	41049
Ethylbenzene	ND	0.050		mg/Kg	1	10/18/2018 3:36:19 PM	41049
Xylenes, Total	ND	0.099		mg/Kg	1	10/18/2018 3:36:19 PM	41049
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	10/18/2018 3:36:19 PM	41049

Refer to the QC Summary report and 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 **1810903**
Date Reported: **10/22/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: P1
Project: SST
Collection Date: 10/12/2018 2:10:00 PM
Lab ID: 1810903-003 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/19/2018 2:25:33 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/19/2018 12:57:57 PM	41069
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2018 12:57:57 PM	41069
Surr: DNOP	107	50.6-138		%Rec	1	10/19/2018 12:57:57 PM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/18/2018 3:59:07 PM	41049
Surr: BFB	97.3	15-316		%Rec	1	10/18/2018 3:59:07 PM	41049
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/18/2018 3:59:07 PM	41049
Toluene	ND	0.049		mg/Kg	1	10/18/2018 3:59:07 PM	41049
Ethylbenzene	ND	0.049		mg/Kg	1	10/18/2018 3:59:07 PM	41049
Xylenes, Total	ND	0.097		mg/Kg	1	10/18/2018 3:59:07 PM	41049
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	10/18/2018 3:59:07 PM	41049

Refer to the QC Summary report and 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 **1810903**
Date Reported: **10/22/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: P2
Project: SST
Collection Date: 10/12/2018 2:20:00 PM
Lab ID: 1810903-004 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/19/2018 2:37:57 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/19/2018 1:22:26 PM	41069
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/19/2018 1:22:26 PM	41069
Surr: DNOP	123	50.6-138		%Rec	1	10/19/2018 1:22:26 PM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/18/2018 7:46:49 PM	41049
Surr: BFB	93.2	15-316		%Rec	1	10/18/2018 7:46:49 PM	41049
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	10/18/2018 7:46:49 PM	41049
Toluene	ND	0.049		mg/Kg	1	10/18/2018 7:46:49 PM	41049
Ethylbenzene	ND	0.049		mg/Kg	1	10/18/2018 7:46:49 PM	41049
Xylenes, Total	ND	0.098		mg/Kg	1	10/18/2018 7:46:49 PM	41049
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	10/18/2018 7:46:49 PM	41049

Refer to the QC Summary report and 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 **1810903**
Date Reported: **10/22/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: P3
Project: SST
Collection Date: 10/12/2018 2:30:00 PM
Lab ID: 1810903-005 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	10/19/2018 2:50:22 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/19/2018 1:47:05 PM	41069
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/19/2018 1:47:05 PM	41069
Surr: DNOP	107	50.6-138		%Rec	1	10/19/2018 1:47:05 PM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/18/2018 8:09:24 PM	41049
Surr: BFB	99.8	15-316		%Rec	1	10/18/2018 8:09:24 PM	41049
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.023		mg/Kg	1	10/18/2018 8:09:24 PM	41049
Toluene	ND	0.047		mg/Kg	1	10/18/2018 8:09:24 PM	41049
Ethylbenzene	ND	0.047		mg/Kg	1	10/18/2018 8:09:24 PM	41049
Xylenes, Total	ND	0.094		mg/Kg	1	10/18/2018 8:09:24 PM	41049
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	10/18/2018 8:09:24 PM	41049

Refer to the QC Summary report and 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 **1810903**
Date Reported: **10/22/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: P4
Project: SST
Collection Date: 10/12/2018 2:40:00 PM
Lab ID: 1810903-006 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	39	30		mg/Kg	20	10/19/2018 3:02:47 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/19/2018 2:11:36 PM	41069
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/19/2018 2:11:36 PM	41069
Surr: DNOP	109	50.6-138		%Rec	1	10/19/2018 2:11:36 PM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/18/2018 8:32:09 PM	41049
Surr: BFB	97.9	15-316		%Rec	1	10/18/2018 8:32:09 PM	41049
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	10/18/2018 8:32:09 PM	41049
Toluene	ND	0.047		mg/Kg	1	10/18/2018 8:32:09 PM	41049
Ethylbenzene	ND	0.047		mg/Kg	1	10/18/2018 8:32:09 PM	41049
Xylenes, Total	ND	0.093		mg/Kg	1	10/18/2018 8:32:09 PM	41049
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	10/18/2018 8:32:09 PM	41049

Refer to the QC Summary report and 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810903**

22-Oct-18

Client: Souder, Miller & Associates

Project: SST

Sample ID	**MB-41095**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**41095**	RunNo:	**55013**					
Prep Date:	**10/19/2018**	Analysis Date:	**10/19/2018**	SeqNo:	**1830297**	Units:	**mg/Kg**			

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

Sample ID	**LCS-41095**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**41095**	RunNo:	**55013**					
Prep Date:	**10/19/2018**	Analysis Date:	**10/19/2018**	SeqNo:	**1830298**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810903**

22-Oct-18

Client: Souder, Miller & Associates

Project: SST

Sample ID	**LCS-41069**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**41069**		RunNo:	**55020**				
Prep Date:	**10/18/2018**	Analysis Date:	**10/19/2018**		SeqNo:	**1829137**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.5	70	130			
Surr: DNOP	4.9		5.000		97.2	50.6	138			

Sample ID	**MB-41069**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**41069**		RunNo:	**55020**				
Prep Date:	**10/18/2018**	Analysis Date:	**10/19/2018**		SeqNo:	**1829139**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		111	50.6	138			

Sample ID	**1810903-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**R5**	Batch ID:	**41069**		RunNo:	**55020**				
Prep Date:	**10/18/2018**	Analysis Date:	**10/19/2018**		SeqNo:	**1829141**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.7	48.26	0	94.0	53.5	126			
Surr: DNOP	5.1		4.826		105	50.6	138			

Sample ID	**1810903-001AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**R5**	Batch ID:	**41069**		RunNo:	**55020**				
Prep Date:	**10/18/2018**	Analysis Date:	**10/19/2018**		SeqNo:	**1829142**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.9	49.55	0	96.0	53.5	126	4.77	21.7	
Surr: DNOP	5.3		4.955		106	50.6	138	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810903**

22-Oct-18

Client: Souder, Miller & Associates

Project: SST

Sample ID	**MB-41049**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**41049**	RunNo:	**54965**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827768**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.3	15	316			

Sample ID	**LCS-41049**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**41049**	RunNo:	**54965**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827769**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	75.9	131			
Surr: BFB	1100		1000		105	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810903**

22-Oct-18

Client: Souder, Miller & Associates

Project: SST

Sample ID	**MB-41049**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**41049**	RunNo:	**54965**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827795**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	**LCS-41049**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**41049**	RunNo:	**54965**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827796**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	77.3	128			
Toluene	1.0	0.050	1.000	0	103	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	99.9	80.7	127			
Xylenes, Total	3.0	0.10	3.000	0	98.7	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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: 1810903 RcptNo: 1

Received By: **Victoria Zellar** 10/17/2018 9:35:00 AM Victoria Zellar

Completed By: **Anne Thorne** 10/17/2018 10:55:29 AM Anne Thorne

Reviewed By: JJ 10-17-18

Labeled by: JAB 10/17/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted) 10/17/18

Adjusted? _____

Checked by: JAB

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	5.7	Good	Yes			
2	1.4	Good	Yes			

Chain-of-Custody Record

Client: SMA

Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5 day

Project Name: SST

Project #:

Project Manager: Austin Weyant

Sampler: LC

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.7, 1.4 2 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1810903	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-,Cl^-,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
10-12-18	1:50	Soil	RS	4oz		201	X		X					X								
	2:00		R6			202																
	2:10		P1			203																
	2:20		P2			204																
	2:30		P3			205																
	2:40		P4			206																

Date:	Time:	Relinquished by:	Received by:	Date	Time
10/16/18	2:00			10/16/18	1440
Date:	Time:	Relinquished by:	Received by:	Date	Time
10/16/18	1940		Courier VV2 10117.18 9:35	10/17/18	9:35

Remarks: Mtx 6

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

October 23, 2018

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

RE: SST OrderNo.: 1810912

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 8 sample(s) on 10/17/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com 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 **1810912**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: Pad P1
Project: SST
Collection Date: 10/12/2018 11:30:00 AM
Lab ID: 1810912-001 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/19/2018 3:15:12 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/19/2018 10:38:30 AM	41069
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/19/2018 10:38:30 AM	41069
Surr: DNOP	100	50.6-138		%Rec	1	10/19/2018 10:38:30 AM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/18/2018 10:48:14 AM	41063
Surr: BFB	90.9	15-316		%Rec	1	10/18/2018 10:48:14 AM	41063
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/18/2018 10:48:14 AM	41063
Toluene	ND	0.047		mg/Kg	1	10/18/2018 10:48:14 AM	41063
Ethylbenzene	ND	0.047		mg/Kg	1	10/18/2018 10:48:14 AM	41063
Xylenes, Total	ND	0.094		mg/Kg	1	10/18/2018 10:48:14 AM	41063
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	1	10/18/2018 10:48:14 AM	41063

Refer to the QC Summary report and 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 **1810912**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1
Project: SST
Collection Date: 10/12/2018 12:00:00 PM
Lab ID: 1810912-002 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/19/2018 3:52:26 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/19/2018 11:02:21 AM	41069
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/19/2018 11:02:21 AM	41069
Surr: DNOP	97.6	50.6-138		%Rec	1	10/19/2018 11:02:21 AM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/18/2018 11:58:53 AM	41063
Surr: BFB	88.8	15-316		%Rec	1	10/18/2018 11:58:53 AM	41063
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/18/2018 11:58:53 AM	41063
Toluene	ND	0.049		mg/Kg	1	10/18/2018 11:58:53 AM	41063
Ethylbenzene	ND	0.049		mg/Kg	1	10/18/2018 11:58:53 AM	41063
Xylenes, Total	ND	0.097		mg/Kg	1	10/18/2018 11:58:53 AM	41063
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	10/18/2018 11:58:53 AM	41063

Refer to the QC Summary report and 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 **1810912**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2
Project: SST
Collection Date: 10/12/2018 12:50:00 PM
Lab ID: 1810912-003 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/19/2018 4:04:51 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/19/2018 11:26:16 AM	41069
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2018 11:26:16 AM	41069
Surr: DNOP	102	50.6-138		%Rec	1	10/19/2018 11:26:16 AM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/18/2018 1:09:33 PM	41063
Surr: BFB	88.8	15-316		%Rec	1	10/18/2018 1:09:33 PM	41063
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	10/18/2018 1:09:33 PM	41063
Toluene	ND	0.047		mg/Kg	1	10/18/2018 1:09:33 PM	41063
Ethylbenzene	ND	0.047		mg/Kg	1	10/18/2018 1:09:33 PM	41063
Xylenes, Total	ND	0.094		mg/Kg	1	10/18/2018 1:09:33 PM	41063
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	10/18/2018 1:09:33 PM	41063

Refer to the QC Summary report and 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 **1810912**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3
Project: SST
Collection Date: 10/12/2018 1:00:00 PM
Lab ID: 1810912-004 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/19/2018 4:17:16 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/19/2018 11:50:17 AM	41069
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2018 11:50:17 AM	41069
Surr: DNOP	101	50.6-138		%Rec	1	10/19/2018 11:50:17 AM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/18/2018 1:32:57 PM	41063
Surr: BFB	88.0	15-316		%Rec	1	10/18/2018 1:32:57 PM	41063
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	10/18/2018 1:32:57 PM	41063
Toluene	ND	0.050		mg/Kg	1	10/18/2018 1:32:57 PM	41063
Ethylbenzene	ND	0.050		mg/Kg	1	10/18/2018 1:32:57 PM	41063
Xylenes, Total	ND	0.10		mg/Kg	1	10/18/2018 1:32:57 PM	41063
Surr: 4-Bromofluorobenzene	92.3	80-120		%Rec	1	10/18/2018 1:32:57 PM	41063

Refer to the QC Summary report and 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 **1810912**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: R1
Project: SST
Collection Date: 10/12/2018 1:10:00 PM
Lab ID: 1810912-005 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	76	30		mg/Kg	20	10/19/2018 4:29:40 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/19/2018 12:14:25 PM	41069
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2018 12:14:25 PM	41069
Surr: DNOP	98.4	50.6-138		%Rec	1	10/19/2018 12:14:25 PM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/18/2018 1:56:20 PM	41063
Surr: BFB	91.6	15-316		%Rec	1	10/18/2018 1:56:20 PM	41063
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	10/18/2018 1:56:20 PM	41063
Toluene	ND	0.050		mg/Kg	1	10/18/2018 1:56:20 PM	41063
Ethylbenzene	ND	0.050		mg/Kg	1	10/18/2018 1:56:20 PM	41063
Xylenes, Total	ND	0.10		mg/Kg	1	10/18/2018 1:56:20 PM	41063
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	10/18/2018 1:56:20 PM	41063

Refer to the QC Summary report and 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 **1810912**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: R2
Project: SST
Collection Date: 10/12/2018 1:20:00 PM
Lab ID: 1810912-006 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	180	30		mg/Kg	20	10/19/2018 4:42:04 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/19/2018 12:38:38 PM	41069
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/19/2018 12:38:38 PM	41069
Surr: DNOP	98.4	50.6-138		%Rec	1	10/19/2018 12:38:38 PM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/18/2018 2:19:42 PM	41063
Surr: BFB	89.4	15-316		%Rec	1	10/18/2018 2:19:42 PM	41063
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/18/2018 2:19:42 PM	41063
Toluene	ND	0.047		mg/Kg	1	10/18/2018 2:19:42 PM	41063
Ethylbenzene	ND	0.047		mg/Kg	1	10/18/2018 2:19:42 PM	41063
Xylenes, Total	ND	0.095		mg/Kg	1	10/18/2018 2:19:42 PM	41063
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	10/18/2018 2:19:42 PM	41063

Refer to the QC Summary report and 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 **1810912**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: R3
Project: SST
Collection Date: 10/12/2018 1:30:00 PM
Lab ID: 1810912-007 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	220	30		mg/Kg	20	10/19/2018 4:54:30 PM	41095
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/19/2018 1:02:53 PM	41069
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/19/2018 1:02:53 PM	41069
Surr: DNOP	97.7	50.6-138		%Rec	1	10/19/2018 1:02:53 PM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/18/2018 2:43:08 PM	41063
Surr: BFB	87.5	15-316		%Rec	1	10/18/2018 2:43:08 PM	41063
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	10/18/2018 2:43:08 PM	41063
Toluene	ND	0.049		mg/Kg	1	10/18/2018 2:43:08 PM	41063
Ethylbenzene	ND	0.049		mg/Kg	1	10/18/2018 2:43:08 PM	41063
Xylenes, Total	ND	0.099		mg/Kg	1	10/18/2018 2:43:08 PM	41063
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	10/18/2018 2:43:08 PM	41063

Refer to the QC Summary report and 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 **1810912**
Date Reported: **10/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: R4
Project: SST
Collection Date: 10/12/2018 1:40:00 PM
Lab ID: 1810912-008 **Matrix:** SOIL **Received Date:** 10/17/2018 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	180	30		mg/Kg	20	10/22/2018 2:58:19 PM	41115
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/19/2018 1:27:16 PM	41069
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2018 1:27:16 PM	41069
Surr: DNOP	115	50.6-138		%Rec	1	10/19/2018 1:27:16 PM	41069
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/18/2018 3:06:29 PM	41063
Surr: BFB	88.5	15-316		%Rec	1	10/18/2018 3:06:29 PM	41063
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/18/2018 3:06:29 PM	41063
Toluene	ND	0.049		mg/Kg	1	10/18/2018 3:06:29 PM	41063
Ethylbenzene	ND	0.049		mg/Kg	1	10/18/2018 3:06:29 PM	41063
Xylenes, Total	ND	0.097		mg/Kg	1	10/18/2018 3:06:29 PM	41063
Surr: 4-Bromofluorobenzene	93.3	80-120		%Rec	1	10/18/2018 3:06:29 PM	41063

Refer to the QC Summary report and 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810912**

23-Oct-18

Client: Souder, Miller & Associates

Project: SST

Sample ID	**MB-41095**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**41095**	RunNo:	**55013**					
Prep Date:	**10/19/2018**	Analysis Date:	**10/19/2018**	SeqNo:	**1830297**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-41095**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**41095**	RunNo:	**55013**					
Prep Date:	**10/19/2018**	Analysis Date:	**10/19/2018**	SeqNo:	**1830298**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.4	90	110			

Sample ID	**MB-41115**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**41115**	RunNo:	**55062**					
Prep Date:	**10/22/2018**	Analysis Date:	**10/22/2018**	SeqNo:	**1831098**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-41115**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**41115**	RunNo:	**55062**					
Prep Date:	**10/22/2018**	Analysis Date:	**10/22/2018**	SeqNo:	**1831099**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810912**

23-Oct-18

Client: Souder, Miller & Associates

Project: SST

Sample ID	**LCS-41069**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**41069**		RunNo:	**55020**				
Prep Date:	**10/18/2018**	Analysis Date:	**10/19/2018**		SeqNo:	**1829137**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.5	70	130			
Surr: DNOP	4.9		5.000		97.2	50.6	138			

Sample ID	**MB-41069**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**41069**		RunNo:	**55020**				
Prep Date:	**10/18/2018**	Analysis Date:	**10/19/2018**		SeqNo:	**1829139**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		111	50.6	138			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810912**

23-Oct-18

Client: Souder, Miller & Associates

Project: SST

Sample ID	**MB-41063**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**41063**	RunNo:	**54964**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827736**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		90.4	15	316			

Sample ID	**LCS-41063**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**41063**	RunNo:	**54964**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827737**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	75.9	131			
Surr: BFB	1100		1000		106	15	316			

Sample ID	**1810912-002AMS**	SampType:	**MS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**L1**	Batch ID:	**41063**	RunNo:	**54964**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827740**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.8	24.25	0	120	77.8	128			
Surr: BFB	1000		969.9		103	15	316			

Sample ID	**1810912-002AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**L1**	Batch ID:	**41063**	RunNo:	**54964**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827741**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.7	23.65	0	125	77.8	128	2.01	20	
Surr: BFB	990		946.1		105	15	316	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810912**

23-Oct-18

Client: Souder, Miller & Associates

Project: SST

Sample ID	**MB-41063**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**41063**	RunNo:	**54964**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827753**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	80	120			

Sample ID	**LCS-41063**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**41063**	RunNo:	**54964**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827754**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.2	77.3	128			
Toluene	0.96	0.050	1.000	0	96.1	79.2	125			
Ethylbenzene	0.97	0.050	1.000	0	97.2	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	97.6	81.6	129			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.9	80	120			

Sample ID	**1810912-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**Pad P1**	Batch ID:	**41063**	RunNo:	**54964**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827756**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	0.9872	0	96.1	68.5	133			
Toluene	1.0	0.049	0.9872	0	102	75	130			
Ethylbenzene	1.0	0.049	0.9872	0	103	79.4	128			
Xylenes, Total	3.1	0.099	2.962	0	104	77.3	131			
Surr: 4-Bromofluorobenzene	0.95		0.9872		96.1	80	120			

Sample ID	**1810912-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**Pad P1**	Batch ID:	**41063**	RunNo:	**54964**					
Prep Date:	**10/17/2018**	Analysis Date:	**10/18/2018**	SeqNo:	**1827757**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.024	0.9625	0	99.2	68.5	133	0.681	20	
Toluene	1.0	0.048	0.9625	0	106	75	130	0.953	20	
Ethylbenzene	1.0	0.048	0.9625	0	108	79.4	128	2.36	20	
Xylenes, Total	3.1	0.096	2.887	0	109	77.3	131	1.49	20	
Surr: 4-Bromofluorobenzene	0.94		0.9625		97.8	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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: 1810912 RcptNo: 1

Received By: Victoria Zellar 10/17/2018 9:35:00 AM Victoria Zellar

Completed By: Anne Thome 10/17/2018 1:06:08 PM Anne Thome

Reviewed By: JAB 10/17/18 10/17/18

Labeled by: TO

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 10/17/18
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<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 ☐	Checked by:
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

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	5.7	Good	Yes			
2	1.4	Good	Yes			

Chain-of-Custody Record

Client: SMA
Carlsbad
Mailing Address:
Phone #:
email or Fax#:
QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 5 day
Project Name: SST
Project #:
Project Manager: Austin Weyd
Sampler: LM
On Ice: ☑ Yes ☐ No
Sample Temperature: 5.7, 1.4 2 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
10/12/18	11:30	Soil	Pad P1	4oz		1810912-001	X		X					X				
	12:00		L1			-002												
	12:50		L2			-003												
	1:00		L3			-004												
	1:10		R1			-005												
	1:20		R2			-006												
	1:30		R3			-007												
	1:40		R4			-008												

Date	Time	Relinquished by:	Received by:	Date	Time
10/16/18	2:00			10/16/18	1422
10/16/18	1900		Courier VVZ 10/17/18 9:35	10/17/18	9:35

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 D

SITE ASSESSMENT/CHARACTERIZATION

Form C-141
Page 3

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?	~167 (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.

Form C-141
Page 4

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: 10/12/18

email: JHurt@matadorresources.com Telephone: 972-371-5499

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: 10/12/18

email: JHurt@matadorresources.com Telephone: 972-371-5499

OCD Only

Received by: Date:

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Date:

APPENDIX E
EXCAVATION PHOTO LOG

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

Road Excavation

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

Pad Excavation

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

Off-Road Excavation

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 164844

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 164844
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	2/3/2023