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

September 13, 2019

#5E27499-BG4A

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

SUBJECT: REMEDIATION CLOSURE REPORT FOR THE STERLING 20 STATE 1H RELEASE (2RP-5091), CARLSBAD, NEW MEXICO

Dear Mr. Hamlet:

On behalf of Marathon Oil Permian LLC (Marathon), 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 Sterling 20 State 1H site. The site is in Unit O, Section 17, Township 23S, Range 27E, Eddy County, New Mexico, on State 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	Sterling 20 State 1H	Company	Marathon Oil Permian, LLC
API Number	30-015-42731	Location	32.29810545º -104.20840165º
Incident Number	2RP-5091		
Estimated Date of Release	November 11, 2018	Date Reported to NMOCD	November 11, 2018
Land Owner	State	Reported To	NMOCD District 2, NMLSO
Source of Release	Gun barrel tank		
Released Volume	80 bbls	Released Material	Crude Oil
Recovered Volume	72 bbls	Net Release	8 bbls
NMOCD Closure Criteria	<50 feet to groundwater		

1.0 Background

On November 11, 2018, an enardo valve on the gun barrel tank failed which caused a release of approximately 80 bbls of crude oil. Approximately 72 bbls remained within the lined tank containment and 8 bbls were released outside of the containment area affecting the immediate area around the containment. Approximately 72 bbls were recovered from the lined tank containment. The liner integrity was inspected and found to be compromised where plastic welding failed along the liner seam.

2.0 Site Information and Closure Criteria

The Sterling 20 State 1H is located approximately 8.5 miles southeast of Carlsbad, New Mexico on State land.

As summarized in Table 2 and illustrated in Figure 1, depth to groundwater in the area is estimated to be seventy-five (75) feet below grade surface (bgs). There are no 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 1/4/2019). The nearest significant watercourse is an irrigation canal located approximately 1,500 feet to the east of Sterling 20 State 1H.

The site is located within a 100-year floodplain; therefore, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of less than 50 feet bgs.

Per the approved Remediation Plan (February 12, 2019), NMOCD approved a deferral per 19.15.29.12.B.(2), which allows the area between the north and east sides of the battery and adjacent pipelines and the area beneath the battery to remain in place.

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 December 12, 2018, SMA personnel arrived on site in response to the release associated with the Sterling 20 State 1H. 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 2000 photoionization detector (PID).

A total of five (5) sample locations (L1-L5) were investigated using a hand-auger, to depths up to six (6) inches bgs. A total of five (5) 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 sampling results.

On January 22, 2019, SMA personnel returned to the location with a drill rig to further delineate the location. One borehole location (BH1) was drilled to nine feet bgs. A total of four (4) samples were collected for laboratory analysis using the methods listed above.

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).

In the workplan dated February 12, 2019 , SMA proposed excavating and removing contaminated soil in the impacted area at L1 and L2 to approximately 9 feet bgs, to excavate by hand the areas around L3, L4, and L5 to the extent safe and practicable, and to defer impacted areas beneath the battery. On February 15, 2019, NMOCD approved the workplan.

4.0 Soil Remediation Summary

In accordance with the approved workplan, from dates February 28, 2019 to March 4, 2019, SMA returned to the site to guide the excavation of contaminated soil. After approval from area utilities via 811, SMA guided the excavation activities by collecting soil samples for field screening. Samples were

screened 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 February 26, 2019 that closure samples were expected to be collected in two (2) business days. NMOCD was notified again on February 28, 2019 that closure sampling would continue.

SMA conducted confirmation sampling of the walls and base of the excavation. The area around sample locations CS1 and CS1b were excavated to a depth of 17 feet bgs, sample location CS2 was excavated to a depth of 5 feet bgs, and sample locations CS3 and CS4 were excavated to a depth of 3 feet bgs The confirmation samples were collected from within the excavation in accordance with the sampling protocol included in Appendix C. Confirmation samples were comprised of five-point composites of the base (CS1-CS4) and walls (SW1-SW4).

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

All samples meet the Closure Criteria with the exception of CS4 and SW4, both of which were excavated to the extent possible, and were pre-approved by NMOCD to defer. 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 R360 near Hobbs, NM, 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 Heather Patterson at 575-689-8801 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:

Heather Patterson
Project Scientist

Shawna Chubbuck
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

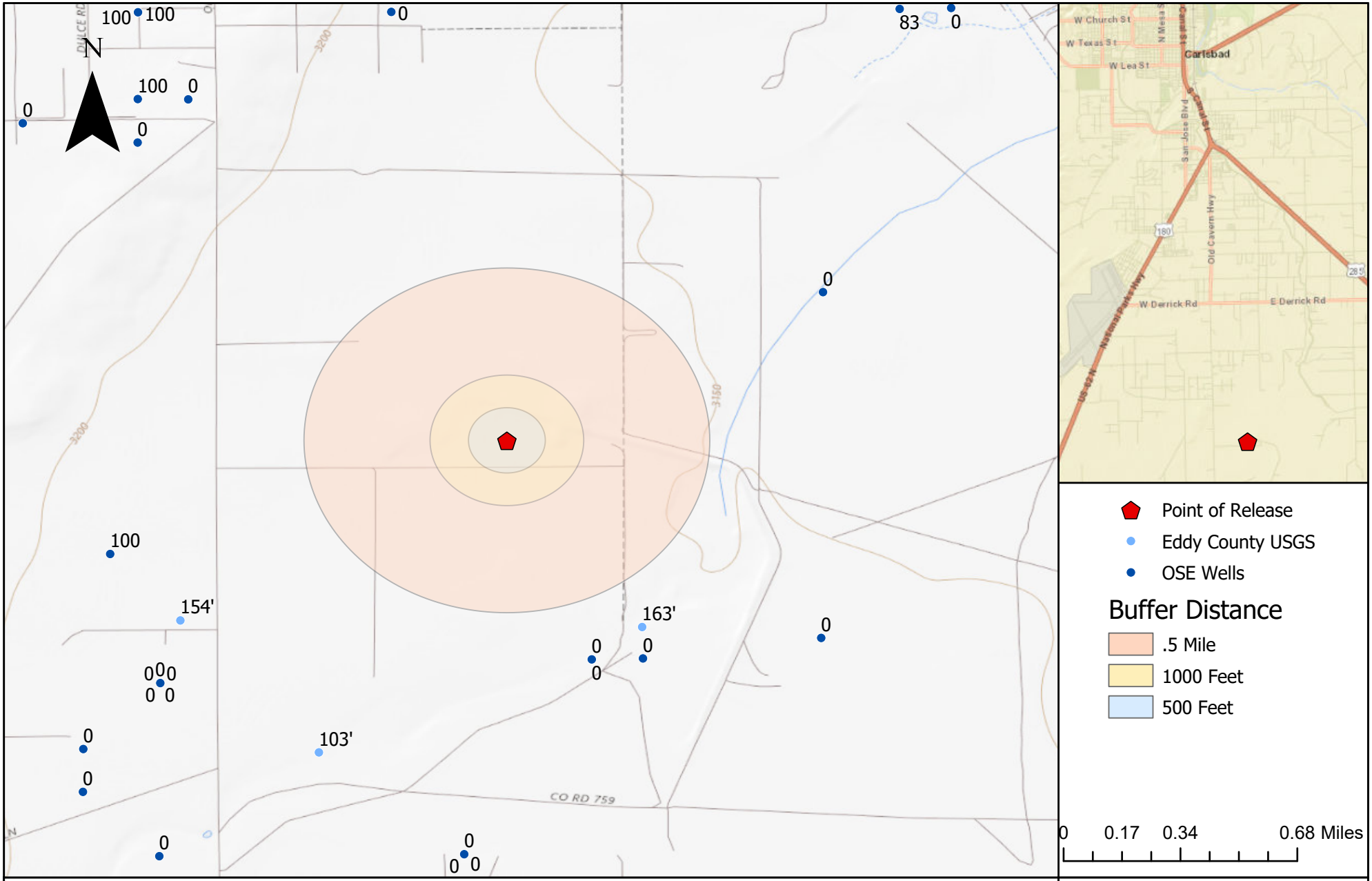
Tables:

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

Appendices:

Appendix A: Form C141
Appendix B: NMOSE Wells Report
Appendix C: Photo Documentation
Appendix D: Laboratory Analytical Reports

FIGURES



Regional Vicinity & Wellhead Protection Map
Sterling 20 State 1H - Marathon
Sec 17 T23S R27E, New Mexico

Figure 1

\\CBO10\Projects\5-Marathon MSA 2019 (5E27950)\GIS\ARCGIS\MARATHON_MIT.aprx

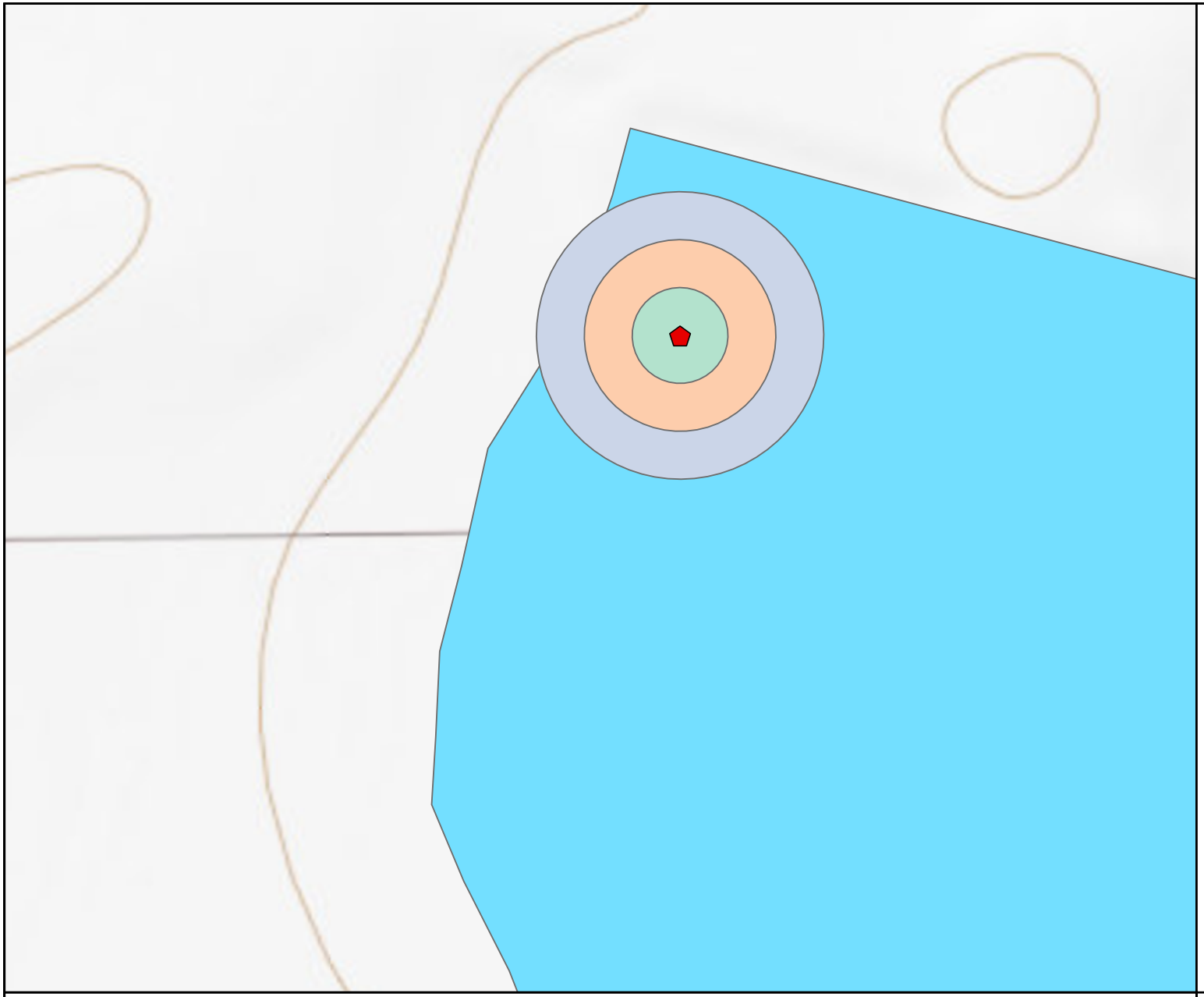
Date Saved: 2/11/2019

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

Drawn Heather Patterson
Date 2/11/2019
Checked _____
Approved _____

SMA

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



Legend

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

Buffer Distance

- 100 Feet
- 200 Feet
- 300 Feet

N

0 112.5 225 450 Feet

Surface Water Protection Map
Sterling 20 State 1H - Marathon
Sec 17 T23S R27E, New Mexico

Figure 2

\\CBO10\Projects\5-Marathon MSA 2019 (5E27950)\GIS\ARCGIS\MARATHON_MIT.aprx

Date Saved: 2/11/2019

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

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Date 2/11/2019
Checked
Approved

SMA

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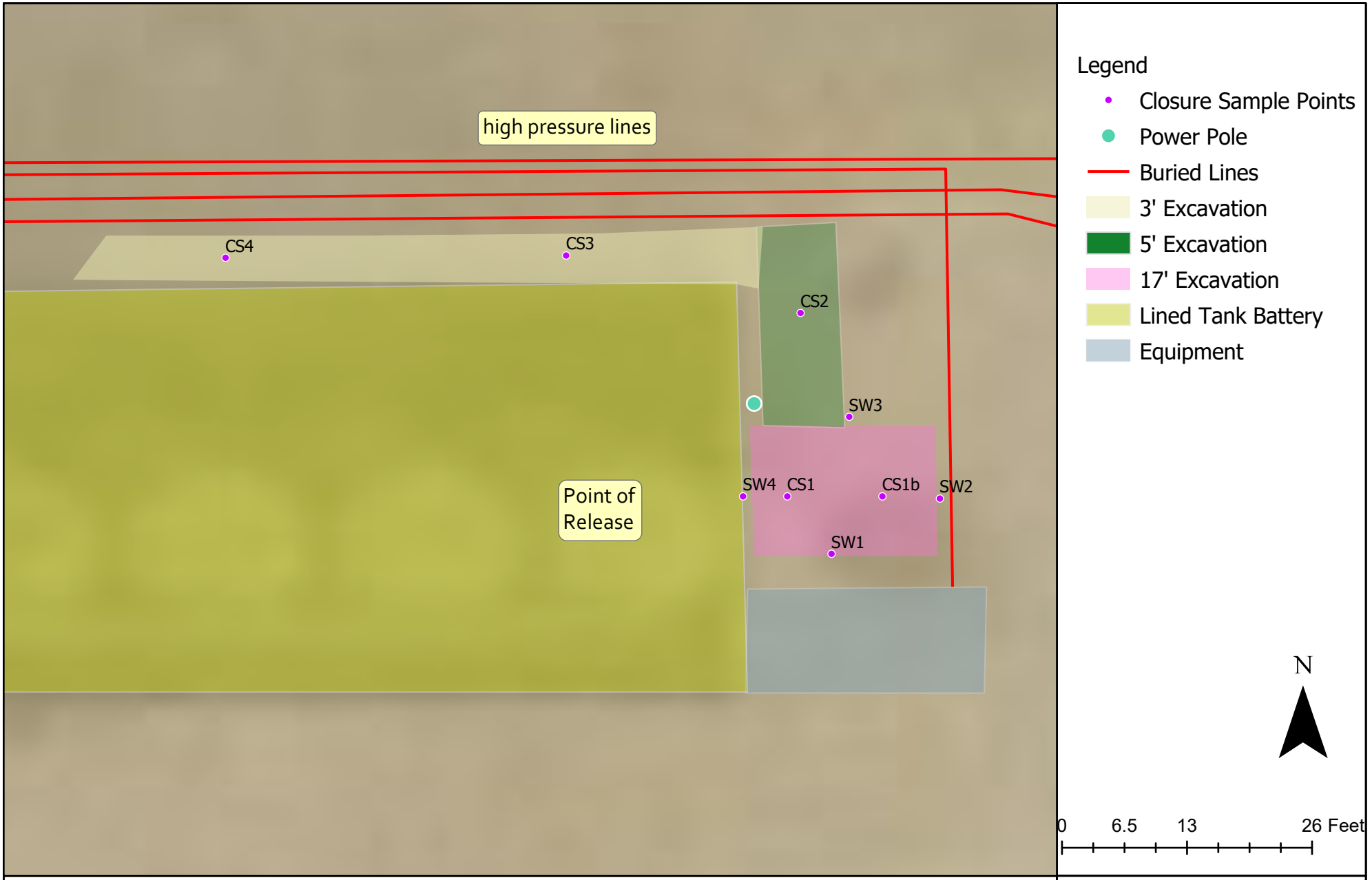

Site and Sample location Map
Sterling 20 State 1H- Marathon Oil LLC
Sec 17 T23S R27E, New Mexico

Figure 3

\\CBO10\Projects\5-Marathon MSA 2019 (5E27950)\GIS\ARCGIS\MARATHON_MIT.aprx

Date Saved: 6/13/2019

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

Drawn *Heather Patterson*
Date 6/13/2019
Checked
Approved

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

TABLES

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	75	NMOSE
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	0	Figure 1, USGS Map
Hortizontal Distance to Nearest Significant Watercourse (ft)	1500	Figure 1, USGS 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	X	600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	**yes or no**	**if yes, then**				
<300' from continuously flowing watercourse or other significant watercourse?	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?	yes					

Table 3:
Summary of Sample Results

Marathon Oil Perian LLC
Sterling 20 State 1H (2RP-5091)

Initial Samples

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria				50	10				100	600
L1/BH1	12/12/2018	0.5	excavate	196	2	2,700	18,000	8,200	28,900	<30
	1/22/2019	4	excavate	<0.23	<0.024	8.1	780	320	1108.1	--
	1/22/2019	6	excavate	<0.23	<0.024	<4.8	540	240	780	--
	1/22/2019	8	excavate	<0.23	<0.025	<4.9	62	<48	62	--
	1/22/2019	9	excavate	<0.23	<0.025	<4.9	150	79	229	<30
L2	12/12/2018	0.5	excavate	348	4	3,400	15,000	5,800	24,200	<30
L3	12/12/2018	0.5	excavate	150.8	3.1	2,400	18,000	6,600	27,000	<30
L4	12/12/2018	0.5	excavate	145.8	2.2	2,500	17,000	6,300	25,800	<30
L5	12/12/2018	0.5	excavate	155.7	1.6	2,200	14,000	4,300	20,500	<30

"--" = Not Analyzed

Closure Samples

Sample ID	Sample Date	Depth (feet bgs)	Action Taken	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				100	600
CS1	3/4/2019	12	excavated	4.34	<0.023	100	1,400	480	1,980	<60
	4/3/2019	16.5	excavated	<0.23	<0.025	<20.0	392	171	563	<20
	4/10/2019	17	in-situ	<0.23	<0.025	<4.9	<9.9	<49	<64	73
CS1b	4/3/2019	16	excavated	<0.23	<0.025	<20.0	33.5	<50.0	33.5	<20
	4/10/2019	17	in-situ	<0.23	<0.025	<5.0	<9.7	<49	<64	<60
CS2	3/4/2019	1	excavated	6.16	<0.024	110	2,200	770	3080	<60
	4/5/2019	5	in-situ	<0.23	<0.023	<4.7	<9.8	<49	<64	74
CS3	3/4/2019	1	excavated	52.58	0.18	900	17000	6300	23300	<60
	4/9/2019	3	in-situ	<0.23	<0.024	<4.7	35	60	95	<60
CS4	3/4/2019	0.5	excavated	5.02	<0.024	92	12,000	4,900	16,992	<60
	4/9/2019	3	defer	<0.23	<0.025	<5.0	240	180	420	<60
SW1	2/28/2019	0-17	in-situ	<0.23	<0.024	<4.9	<10	<50	<65	<60
SW2	2/28/2019	0-17	in-situ	<0.23	<0.023	<4.7	<9.8	<49	<64	<60
SW3	2/28/2019	0-17	in-situ	<0.23	<0.024	<4.7	<9.6	<48	<63	<60
SW4	2/28/2019	0-12	excavated	17.2	<0.025	630	4800	1600	7030	<60
	4/3/2019	0-16	defer	<0.23	<0.025	<20.0	76.8	63.5	140.3	<20

SMA

APPENDIX A
FORM 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	NAB1833955064
District RP	2RP-5091
Facility ID	
Application ID	pAB1833954671

Release Notification

Responsible Party

Responsible Party Marathon Oil Permian LLC	OGRID 372098
Contact Name Callie Karrigan	Contact Telephone 575-297-0956
Contact email cnkarrigan@marathonoil.com	Incident # *(assigned by OCD)* NAB1833955064
Contact mailing address 4111 Tidwell Road, Carlsbad New Mexico, 88220	

Location of Release Source

Latitude 32.287857 Longitude -104.205223
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Sterling State No. 1	Site Type Oil and gas drilling facility
Date Release Discovered 11/11/18	API# *(if applicable)* 30-015-31849

Unit Letter	Section	Township	Range	County
I	20	23S	27E	Eddy

Surface Owner: ☑ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

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) 80	Volume Recovered (bbls) 72
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) 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

Operator reported standing fluids in containment due to fluids exiting out of the enardo valve on the gun barrel tank. Approximately 80 barrels of oil was released and the majority contained in lined tank containment. Approximately 8 barrels of oil was released outside of the containment and affected the immediate area around the containment. Upon investigation, it was found that the gun barrel to slop tank isolation valve was closed, enabling the gun barrel to overfill and exit out the enardo.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1833955064
District RP	2RP-5091
Facility ID	
Application ID	pAB1833954671

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? Release exceed 25 bbls.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Maria Pruett, Mike Bratcher, Jim Griswold and Ryan Mann via email by Callie Karrigan 11/12/18 1:51 pm

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:

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: Callie Karrigan Title: HES Professional

Signature: Callie Karrigan Date: 11/26/18

email: cnkarrigan@marathonoil.com Telephone: 575-297-0956

OCD Only

Received by: Amelia Barramente Date: 12/05/2018

State of New Mexico
Oil Conservation Division

Incident ID	nAB1833955064
District RP	2RP-5091
Facility ID	
Application ID	pAB1833954671

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?	75 (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	nAB1833955064
District RP	2RP-5091
Facility ID	
Application ID	pAB1833954671

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: __Callie Karrigan_____ Title: _____HES Professional_____

Signature:_____*Callie Karrigan* _____ Date: ___2/12/2019_____

email: ___cnkarrigan@marathonoil.com_____ Telephone: ___575-297-0956_____

OCD Only

Received by: Robert Hamlet Date: 2/15/2019

State of New Mexico
Oil Conservation Division

Incident ID	nAB1833955064
District RP	2RP-5091
Facility ID	
Application ID	pAB1833954671

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: _____ Callie Karrigan _____ Title: _ HES Professional_____

Signature: _____*Callie Karrigan* _____ Date: ____2/12/2019_____

email: _____ cnkarrigan@marathonoil.com _____ Telephone: ___575-297-0956_____

OCD Only

Received by: Robert Hamlet Date: 2/15/2019

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

Signature: _____ Date: 2/15/2019

APPENDIX B
NMOSE WELLS REPORT

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01261		CUB	ED				21	23S	27E	575780	3572889*	1521	250		
C 01195		C	ED			2	19	23S	27E	572958	3573260*	1646	180	100	80
C 01781		C	ED		2	4	19	23S	27E	573161	3572659*	1752			
C 01781 POD2		C	ED		2	4	19	23S	27E	573161	3572659*	1752	210		
C 01781 POD3		C	ED		2	4	19	23S	27E	573161	3572659*	1752	210		
C 01618		C	ED	4	4	4	07	23S	27E	573252	3575384*	2070	250		
C 02377		C	ED			2	29	23S	27E	574575	3571666*	2088	232	170	62
C 03005		C	ED	3	4	4	07	23S	27E	573052	3575384*	2199	140	100	40
C 04044 POD1		CUB	ED	3	2	3	09	23S	27E	575504	3575907	2363	290	150	140
C 02453		C	ED	4	4	2	29	23S	27E	574876	3571372*	2407	210	175	35
C 03301		C	ED	3	3	4	07	23S	27E	572597	3575268	2454	375		
C 01632		C	ED	3	2	4	07	23S	27E	573050	3575789*	2515	162	100	62
C 01632 CLW197648	O	C	ED	3	2	4	07	23S	27E	573050	3575789*	2515	162	100	62
C 01632 POD2		C	ED	3	2	4	07	23S	27E	573050	3575789*	2515	173	100	73
C 02112		C	ED	1	3	4	13	21S	24E	573831	3571337	2515	182	119	63
C 00195		CUB	ED	4	1	4	09	23S	27E	576069	3575827*	2582	128	83	45
C 01071		C	ED			1	08	23S	27E	573751	3576499*	2852	279	95	184
C 02191		C	ED			1	08	23S	27E	573751	3576499*	2852	252	75	177
C 00187		C	ED	1	1	4	15	23S	27E	577380	3574509	2949	210	125	85
C 00623		C	ED		2	1	15	23S	27E	577189	3575142*	3000	200		
C 03736 POD1		C	ED	2	2	4	13	23S	26E	571677	3574793	3035			
C 02300		CUB	ED			3	07	23S	27E	572160	3575676*	3050	402		
C 03892 POD1		C	ED	1	2	1	08	23S	27E	573846	3576764	3086	148	54	94
C 02510		C	ED	1	2	1	08	23S	27E	573848	3576806*	3126	350	350	0
C 00508 CLW225089	O	CUB	ED	4	1	3	10	23S	27E	576877	3575839*	3140	234	28	206
C 02326		C	ED			2	07	23S	27E	572948	3576491*	3160	140	99	41

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

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 00420	C	CUB	ED	4	2	09	23S	27E	576370	3576337*		3171	2151		

Average Depth to Water: **119 feet**

Minimum Depth: **28 feet**

Maximum Depth: **350 feet**

Record Count: 27

UTMNAD83 Radius Search (in meters):

Easting (X): 574528.79 **Northing (Y):** 3573754.32 **Radius:** 3200

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

APPENDIX C
PHOTO DOCUMENTATION

Photo Log

Photo Taken April 3, 2019

Facing south

32.2981, -104.2084

APPENDIX D

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

December 26, 2018

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

RE: Sterling OrderNo.: 1812912

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/15/2018 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-0.5
Project: Sterling
Collection Date: 12/12/2018 10:05:00 AM
Lab ID: 1812912-001 **Matrix:** SOIL **Received Date:** 12/15/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	12/20/2018 12:33:20 PM	42231
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	18000	940		mg/Kg	100	12/18/2018 5:01:28 PM	42154
Motor Oil Range Organics (MRO)	8200	4700		mg/Kg	100	12/18/2018 5:01:28 PM	42154
Surr: DNOP	0	50.6-138	S	%Rec	100	12/18/2018 5:01:28 PM	42154
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	2700	96		mg/Kg	20	12/18/2018 11:49:50 AM	42148
Surr: BFB	498	73.8-119	S	%Rec	20	12/18/2018 11:49:50 AM	42148
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	2.0	0.48		mg/Kg	20	12/18/2018 11:49:50 AM	42148
Toluene	43	0.96		mg/Kg	20	12/18/2018 11:49:50 AM	42148
Ethylbenzene	11	0.96		mg/Kg	20	12/18/2018 11:49:50 AM	42148
Xylenes, Total	140	1.9		mg/Kg	20	12/18/2018 11:49:50 AM	42148
Surr: 4-Bromofluorobenzene	123	80-120	S	%Rec	20	12/18/2018 11:49:50 AM	42148

Refer to the QC Summary report and 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: L2-0.5
Project: Sterling
Collection Date: 12/12/2018 10:20:00 AM
Lab ID: 1812912-002 **Matrix:** SOIL **Received Date:** 12/15/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	12/20/2018 1:10:33 PM	42231
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	15000	940		mg/Kg	100	12/18/2018 5:25:50 PM	42154
Motor Oil Range Organics (MRO)	5800	4700		mg/Kg	100	12/18/2018 5:25:50 PM	42154
Surr: DNOP	0	50.6-138	S	%Rec	100	12/18/2018 5:25:50 PM	42154
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	3400	99		mg/Kg	20	12/18/2018 12:12:37 PM	42148
Surr: BFB	586	73.8-119	S	%Rec	20	12/18/2018 12:12:37 PM	42148
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	4.0	0.50		mg/Kg	20	12/18/2018 12:12:37 PM	42148
Toluene	54	0.99		mg/Kg	20	12/18/2018 12:12:37 PM	42148
Ethylbenzene	13	0.99		mg/Kg	20	12/18/2018 12:12:37 PM	42148
Xylenes, Total	150	2.0		mg/Kg	20	12/18/2018 12:12:37 PM	42148
Surr: 4-Bromofluorobenzene	127	80-120	S	%Rec	20	12/18/2018 12:12:37 PM	42148

Refer to the QC Summary report and 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: L3-0.5
Project: Sterling
Collection Date: 12/12/2018 10:30:00 AM
Lab ID: 1812912-003 **Matrix:** SOIL **Received Date:** 12/15/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	12/20/2018 1:47:47 PM	42231
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	18000	990		mg/Kg	100	12/18/2018 5:50:05 PM	42154
Motor Oil Range Organics (MRO)	6600	4900		mg/Kg	100	12/18/2018 5:50:05 PM	42154
Surr: DNOP	0	50.6-138	S	%Rec	100	12/18/2018 5:50:05 PM	42154
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	2400	93		mg/Kg	20	12/18/2018 12:35:25 PM	42148
Surr: BFB	463	73.8-119	S	%Rec	20	12/18/2018 12:35:25 PM	42148
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	3.1	0.46		mg/Kg	20	12/18/2018 12:35:25 PM	42148
Toluene	39	0.93		mg/Kg	20	12/18/2018 12:35:25 PM	42148
Ethylbenzene	8.7	0.93		mg/Kg	20	12/18/2018 12:35:25 PM	42148
Xylenes, Total	100	1.9		mg/Kg	20	12/18/2018 12:35:25 PM	42148
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	20	12/18/2018 12:35:25 PM	42148

Refer to the QC Summary report and 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: L4-0.5
Project: Sterling
Collection Date: 12/12/2018 10:48:00 AM
Lab ID: 1812912-004 **Matrix:** SOIL **Received Date:** 12/15/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	12/20/2018 2:00:11 PM	42231
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	17000	920		mg/Kg	100	12/20/2018 11:18:14 AM	42154
Motor Oil Range Organics (MRO)	6300	4600		mg/Kg	100	12/20/2018 11:18:14 AM	42154
Surr: DNOP	0	50.6-138	S	%Rec	100	12/20/2018 11:18:14 AM	42154
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	2500	99		mg/Kg	20	12/18/2018 12:58:07 PM	42148
Surr: BFB	466	73.8-119	S	%Rec	20	12/18/2018 12:58:07 PM	42148
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	2.2	0.50		mg/Kg	20	12/18/2018 12:58:07 PM	42148
Toluene	35	0.99		mg/Kg	20	12/18/2018 12:58:07 PM	42148
Ethylbenzene	8.6	0.99		mg/Kg	20	12/18/2018 12:58:07 PM	42148
Xylenes, Total	100	2.0		mg/Kg	20	12/18/2018 12:58:07 PM	42148
Surr: 4-Bromofluorobenzene	128	80-120	S	%Rec	20	12/18/2018 12:58:07 PM	42148

Refer to the QC Summary report and 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: L5-0.5
Project: Sterling
Collection Date: 12/12/2018 10:50:00 AM
Lab ID: 1812912-005 **Matrix:** SOIL **Received Date:** 12/15/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	12/20/2018 2:12:36 PM	42231
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	14000	480		mg/Kg	50	12/19/2018 11:14:52 PM	42154
Motor Oil Range Organics (MRO)	4300	2400		mg/Kg	50	12/19/2018 11:14:52 PM	42154
Surr: DNOP	0	50.6-138	S	%Rec	50	12/19/2018 11:14:52 PM	42154
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	2200	97		mg/Kg	20	12/18/2018 11:12:00 PM	42148
Surr: BFB	440	73.8-119	S	%Rec	20	12/18/2018 11:12:00 PM	42148
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	1.6	0.49		mg/Kg	20	12/18/2018 11:12:00 PM	42148
Toluene	35	0.97		mg/Kg	20	12/18/2018 11:12:00 PM	42148
Ethylbenzene	9.1	0.97		mg/Kg	20	12/18/2018 11:12:00 PM	42148
Xylenes, Total	110	1.9		mg/Kg	20	12/18/2018 11:12:00 PM	42148
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	20	12/18/2018 11:12:00 PM	42148

Refer to the QC Summary report and 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#: **1812912**

26-Dec-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-42231**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**42231**	RunNo:	**56495**					
Prep Date:	**12/20/2018**	Analysis Date:	**12/20/2018**	SeqNo:	**1890343**	Units:	**mg/Kg**			

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

Sample ID	**LCS-42231**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**42231**	RunNo:	**56495**					
Prep Date:	**12/20/2018**	Analysis Date:	**12/20/2018**	SeqNo:	**1890344**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	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#: **1812912**

26-Dec-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**LCS-42154**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**42154**		RunNo:	**56409**				
Prep Date:	**12/17/2018**	Analysis Date:	**12/18/2018**		SeqNo:	**1886087**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.5	70	130			
Surr: DNOP	4.1		5.000		81.7	50.6	138			

Sample ID	**MB-42154**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**42154**		RunNo:	**56409**				
Prep Date:	**12/17/2018**	Analysis Date:	**12/18/2018**		SeqNo:	**1886088**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		88.1	50.6	138			

Sample ID	**LCS-42188**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**42188**		RunNo:	**56437**				
Prep Date:	**12/18/2018**	Analysis Date:	**12/19/2018**		SeqNo:	**1887450**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.0		5.000		80.3	50.6	138			

Sample ID	**MB-42188**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**42188**		RunNo:	**56437**				
Prep Date:	**12/18/2018**	Analysis Date:	**12/19/2018**		SeqNo:	**1887451**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.6		10.00		85.5	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#: **1812912**

26-Dec-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-42148**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**42148**	RunNo:	**56430**					
Prep Date:	**12/17/2018**	Analysis Date:	**12/18/2018**	SeqNo:	**1886658**	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	880		1000		87.8	73.8	119			

Sample ID	**LCS-42148**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**42148**	RunNo:	**56430**					
Prep Date:	**12/17/2018**	Analysis Date:	**12/18/2018**	SeqNo:	**1886659**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.2	80.1	123			
Surr: BFB	1000		1000		102	73.8	119			

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#: **1812912**

26-Dec-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-42148**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**42148**	RunNo:	**56430**					
Prep Date:	**12/17/2018**	Analysis Date:	**12/18/2018**	SeqNo:	**1886689**	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	0.98		1.000		98.1	80	120			

Sample ID	**LCS-42148**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**42148**	RunNo:	**56430**					
Prep Date:	**12/17/2018**	Analysis Date:	**12/18/2018**	SeqNo:	**1886690**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.025	1.000	0	80.5	80	120			
Toluene	0.90	0.050	1.000	0	90.5	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.9	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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: **1812912** RcptNo: **1**

Received By: **Erin Melendrez** **12/15/2018 9:40:00 AM**

Completed By: **Erin Melendrez** **12/15/2018 10:56:44 AM**

Reviewed By: DU 12-17-18

LB: DAD 12/17/18

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)

Adjusted? _____

Checked by: DAD 12/17/18

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	1.6	Good	Yes			
2	2.7	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 day turn
☐ Standard ☐ Rush

Project Name: Sterling

Project #:

Project Manager: Austin Weyant

Sampler: C. Parker

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 1.6°C, 2.7°C

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 Name	Container Type and #	Preservative Type	HEAL No. 1812912	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)
12/14/18	1005	Soil	L1-0.5	402		-001	X	X					X			
	1020		L2-0.5			-002	X	X					X			
	1030		L3-0.5			-003	X	X					X			
	1048		L4-0.5			-004	X	X					X			
	1050		L5-0.5			-005	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
		Cash Rock			12/14/18	0830
Date: 12/14/18	Time: 1900	Relinquished by:	Received by:	Via: Courier	Date: 12/15/18	Time: 0940

Remarks: Marathon

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
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TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 29, 2019

Heather Patterson

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

RE: Sterling OrderNo.: 1901885

Dear Heather Patterson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 1/23/2019 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 **1901885**
Date Reported: **1/29/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: 4'
Project: Sterling
Collection Date: 1/22/2019 12:45:00 PM
Lab ID: 1901885-001 **Matrix:** SOIL **Received Date:** 1/23/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	780	9.4		mg/Kg	1	1/25/2019 4:40:53 PM	42786
Motor Oil Range Organics (MRO)	320	47		mg/Kg	1	1/25/2019 4:40:53 PM	42786
Surr: DNOP	109	50.6-138		%Rec	1	1/25/2019 4:40:53 PM	42786
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	8.1	4.7		mg/Kg	1	1/25/2019 3:32:24 AM	42770
Surr: BFB	166	73.8-119	S	%Rec	1	1/25/2019 3:32:24 AM	42770
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/25/2019 3:32:24 AM	42770
Toluene	ND	0.047		mg/Kg	1	1/25/2019 3:32:24 AM	42770
Ethylbenzene	ND	0.047		mg/Kg	1	1/25/2019 3:32:24 AM	42770
Xylenes, Total	ND	0.094		mg/Kg	1	1/25/2019 3:32:24 AM	42770
Surr: 4-Bromofluorobenzene	92.1	80-120		%Rec	1	1/25/2019 3:32:24 AM	42770

Refer to the QC Summary report and 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: 6'
Project: Sterling
Collection Date: 1/22/2019 12:50:00 PM
Lab ID: 1901885-002 **Matrix:** SOIL **Received Date:** 1/23/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	540	9.4		mg/Kg	1	1/25/2019 5:05:04 PM	42786
Motor Oil Range Organics (MRO)	240	47		mg/Kg	1	1/25/2019 5:05:04 PM	42786
Surr: DNOP	106	50.6-138		%Rec	1	1/25/2019 5:05:04 PM	42786
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/25/2019 3:55:40 AM	42770
Surr: BFB	138	73.8-119	S	%Rec	1	1/25/2019 3:55:40 AM	42770
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/25/2019 3:55:40 AM	42770
Toluene	ND	0.048		mg/Kg	1	1/25/2019 3:55:40 AM	42770
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2019 3:55:40 AM	42770
Xylenes, Total	ND	0.097		mg/Kg	1	1/25/2019 3:55:40 AM	42770
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	1/25/2019 3:55:40 AM	42770

Refer to the QC Summary report and 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: 8'
Project: Sterling
Collection Date: 1/22/2019 12:55:00 PM
Lab ID: 1901885-003 **Matrix:** SOIL **Received Date:** 1/23/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	62	9.6		mg/Kg	1	1/25/2019 5:29:14 PM	42786
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/25/2019 5:29:14 PM	42786
Surr: DNOP	86.9	50.6-138		%Rec	1	1/25/2019 5:29:14 PM	42786
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/25/2019 4:18:54 AM	42770
Surr: BFB	111	73.8-119		%Rec	1	1/25/2019 4:18:54 AM	42770
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/25/2019 4:18:54 AM	42770
Toluene	ND	0.049		mg/Kg	1	1/25/2019 4:18:54 AM	42770
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2019 4:18:54 AM	42770
Xylenes, Total	ND	0.099		mg/Kg	1	1/25/2019 4:18:54 AM	42770
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	1/25/2019 4:18:54 AM	42770

Refer to the QC Summary report and 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: 9'
Project: Sterling
Collection Date: 1/22/2019 1:00:00 PM
Lab ID: 1901885-004 **Matrix:** SOIL **Received Date:** 1/23/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	1/28/2019 4:57:30 PM	42842
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	150	9.7		mg/Kg	1	1/25/2019 5:53:17 PM	42786
Motor Oil Range Organics (MRO)	79	48		mg/Kg	1	1/25/2019 5:53:17 PM	42786
Surr: DNOP	86.1	50.6-138		%Rec	1	1/25/2019 5:53:17 PM	42786
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/25/2019 4:42:07 AM	42770
Surr: BFB	98.8	73.8-119		%Rec	1	1/25/2019 4:42:07 AM	42770
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	1/25/2019 4:42:07 AM	42770
Toluene	ND	0.049		mg/Kg	1	1/25/2019 4:42:07 AM	42770
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2019 4:42:07 AM	42770
Xylenes, Total	ND	0.098		mg/Kg	1	1/25/2019 4:42:07 AM	42770
Surr: 4-Bromofluorobenzene	92.7	80-120		%Rec	1	1/25/2019 4:42:07 AM	42770

Refer to the QC Summary report and 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#: **1901885**

29-Jan-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-42842**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**42842**	RunNo:	**57302**					
Prep Date:	**1/28/2019**	Analysis Date:	**1/28/2019**	SeqNo:	**1917392**	Units:	**mg/Kg**			

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

Sample ID	**LCS-42842**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**42842**	RunNo:	**57302**					
Prep Date:	**1/28/2019**	Analysis Date:	**1/28/2019**	SeqNo:	**1917393**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	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#: **1901885**

29-Jan-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID **LCS-42786**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **42786**	RunNo: **57250**
Prep Date: **1/24/2019**	Analysis Date: **1/25/2019**	SeqNo: **1915186** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.3	63.9	124			
Surr: DNOP	4.7		5.000		93.9	50.6	138			

Sample ID **MB-42786**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **42786**	RunNo: **57250**
Prep Date: **1/24/2019**	Analysis Date: **1/25/2019**	SeqNo: **1915187** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		104	50.6	138			

Sample ID **1901885-004AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **9'**	Batch ID: **42786**	RunNo: **57250**
Prep Date: **1/24/2019**	Analysis Date: **1/25/2019**	SeqNo: **1916312** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	180	9.5	47.30	152.7	60.7	53.5	126			
Surr: DNOP	3.9		4.730		82.7	50.6	138			

Sample ID **1901885-004AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **9'**	Batch ID: **42786**	RunNo: **57250**
Prep Date: **1/24/2019**	Analysis Date: **1/25/2019**	SeqNo: **1916313** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	200	9.5	47.57	152.7	98.0	53.5	126	9.41	21.7	
Surr: DNOP	4.3		4.757		90.2	50.6	138	0	0	

Sample ID **LCS-42818**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **42818**	RunNo: **57295**
Prep Date: **1/25/2019**	Analysis Date: **1/28/2019**	SeqNo: **1917277** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		93.3	50.6	138			

Sample ID **MB-42818**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **42818**	RunNo: **57295**
Prep Date: **1/25/2019**	Analysis Date: **1/28/2019**	SeqNo: **1917278** Units: **%Rec**

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

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#: **1901885**
29-Jan-19

Client: Souder, Miller & Associates
Project: Sterling

Sample ID	**MB-42818**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**42818**		RunNo:	**57295**				
Prep Date:	**1/25/2019**	Analysis Date:	**1/28/2019**		SeqNo:	**1917278**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		90.6	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#: **1901885**

29-Jan-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-42770**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**42770**	RunNo:	**57224**					
Prep Date:	**1/23/2019**	Analysis Date:	**1/24/2019**	SeqNo:	**1914524**	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	970		1000		96.5	73.8	119			

Sample ID	**LCS-42770**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**42770**	RunNo:	**57224**					
Prep Date:	**1/23/2019**	Analysis Date:	**1/24/2019**	SeqNo:	**1914525**	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	113	80.1	123			
Surr: BFB	1100		1000		110	73.8	119			

Sample ID	**MB-42805**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**42805**	RunNo:	**57264**					
Prep Date:	**1/24/2019**	Analysis Date:	**1/25/2019**	SeqNo:	**1915632**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.4	73.8	119			

Sample ID	**LCS-42805**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**42805**	RunNo:	**57264**					
Prep Date:	**1/24/2019**	Analysis Date:	**1/25/2019**	SeqNo:	**1915633**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		108	73.8	119			

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#: **1901885**

29-Jan-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-42770**	SampType: **MBLK**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID: **42770**		RunNo: **57224**					
Prep Date:	**1/23/2019**	Analysis Date: **1/24/2019**		SeqNo: **1914566**		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	0.96		1.000		95.6	80	120			

Sample ID	**LCS-42770**	SampType: **LCS**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID: **42770**		RunNo: **57224**					
Prep Date:	**1/23/2019**	Analysis Date: **1/24/2019**		SeqNo: **1914567**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	93.8	80	120			
Toluene	0.97	0.050	1.000	0	96.8	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.3	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.1	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.9	80	120			

Sample ID	**MB-42805**	SampType: **MBLK**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID: **42805**		RunNo: **57264**					
Prep Date:	**1/24/2019**	Analysis Date: **1/25/2019**		SeqNo: **1915665**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		95.8	80	120			

Sample ID	**LCS-42805**	SampType: **LCS**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID: **42805**		RunNo: **57264**					
Prep Date:	**1/24/2019**	Analysis Date: **1/25/2019**		SeqNo: **1915666**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		99.1	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: **1901885** RcptNo: 1

Received By: **Desiree Dominguez** **1/23/2019 8:50:00 AM** DD

Completed By: **Thom Maybee** **1/23/2019 11:48:36 AM** 1/23/19

Reviewed By: ENH

LB: DAD 1/23/19

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by:

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Not Present			

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: 5 day turn
☐ Standard ☐ Rush

Project Name: Sterling

Project #:

Project Manager: H. Patterson

Sampler: HP

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 4.4°C

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 Name	Container Type and #	Preservative Type	HEAL No. 1901885	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, NO3, NO2, PO4, SO4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1-22-19	12:45	Soil	4'	4oz		-001	X	X									
	12:50		6'			-002	X	X									
	12:55		8'			-003	X	X									
	1:00		9'			-004	X	X						X			

Date	Time	Relinquished by	Received by	Via	Date	Time
1.22.19	1:45	Samantha Watson			1/22/19	1900
1/22/19	1900			Courier	1/23/19	8:50

Remarks: Marathon

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

March 11, 2019

Heather Patterson

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

RE: Sterling OrderNo.: 1903070

Dear Heather Patterson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/2/2019 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Sterling
Collection Date: 2/28/2019 3:18:00 PM
Lab ID: 1903070-001 **Matrix:** SOIL **Received Date:** 3/2/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	3/9/2019 12:46:20 AM	43578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/5/2019 6:13:16 PM	43440
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/5/2019 6:13:16 PM	43440
Surr: DNOP	85.8	70-130		%Rec	1	3/5/2019 6:13:16 PM	43440
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/6/2019 12:20:51 AM	43474
Surr: BFB	90.2	73.8-119		%Rec	1	3/6/2019 12:20:51 AM	43474
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/6/2019 12:20:51 AM	43474
Toluene	ND	0.049		mg/Kg	1	3/6/2019 12:20:51 AM	43474
Ethylbenzene	ND	0.049		mg/Kg	1	3/6/2019 12:20:51 AM	43474
Xylenes, Total	ND	0.097		mg/Kg	1	3/6/2019 12:20:51 AM	43474
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	3/6/2019 12:20:51 AM	43474

Refer to the QC Summary report and 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: SW2
Project: Sterling
Collection Date: 2/28/2019 3:24:00 PM
Lab ID: 1903070-002 **Matrix:** SOIL **Received Date:** 3/2/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	3/9/2019 1:23:33 AM	43578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/5/2019 6:35:29 PM	43440
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/5/2019 6:35:29 PM	43440
Surr: DNOP	82.5	70-130		%Rec	1	3/5/2019 6:35:29 PM	43440
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/6/2019 1:53:52 AM	43474
Surr: BFB	85.6	73.8-119		%Rec	1	3/6/2019 1:53:52 AM	43474
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/6/2019 1:53:52 AM	43474
Toluene	ND	0.047		mg/Kg	1	3/6/2019 1:53:52 AM	43474
Ethylbenzene	ND	0.047		mg/Kg	1	3/6/2019 1:53:52 AM	43474
Xylenes, Total	ND	0.094		mg/Kg	1	3/6/2019 1:53:52 AM	43474
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	3/6/2019 1:53:52 AM	43474

Refer to the QC Summary report and 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: SW3
Project: Sterling
Collection Date: 2/28/2019 3:35:00 PM
Lab ID: 1903070-003 **Matrix:** SOIL **Received Date:** 3/2/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	3/9/2019 1:35:58 AM	43578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/5/2019 6:57:31 PM	43440
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/5/2019 6:57:31 PM	43440
Surr: DNOP	86.9	70-130		%Rec	1	3/5/2019 6:57:31 PM	43440
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/6/2019 2:17:07 AM	43474
Surr: BFB	88.6	73.8-119		%Rec	1	3/6/2019 2:17:07 AM	43474
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/6/2019 2:17:07 AM	43474
Toluene	ND	0.047		mg/Kg	1	3/6/2019 2:17:07 AM	43474
Ethylbenzene	ND	0.047		mg/Kg	1	3/6/2019 2:17:07 AM	43474
Xylenes, Total	ND	0.094		mg/Kg	1	3/6/2019 2:17:07 AM	43474
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	1	3/6/2019 2:17:07 AM	43474

Refer to the QC Summary report and 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: SW4
Project: Sterling
Collection Date: 2/28/2019 3:48:00 PM
Lab ID: 1903070-004 **Matrix:** SOIL **Received Date:** 3/2/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	3/9/2019 1:48:23 AM	43578
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	4800	99		mg/Kg	10	3/6/2019 11:36:54 AM	43440
Motor Oil Range Organics (MRO)	1600	500		mg/Kg	10	3/6/2019 11:36:54 AM	43440
Surr: DNOP	0	70-130	S	%Rec	10	3/6/2019 11:36:54 AM	43440
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	630	49		mg/Kg	10	3/6/2019 1:05:46 PM	43474
Surr: BFB	401	73.8-119	S	%Rec	10	3/6/2019 1:05:46 PM	43474
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	3/6/2019 2:40:19 AM	43474
Toluene	1.2	0.049		mg/Kg	1	3/6/2019 2:40:19 AM	43474
Ethylbenzene	ND	0.049		mg/Kg	1	3/6/2019 2:40:19 AM	43474
Xylenes, Total	16	0.99		mg/Kg	10	3/6/2019 1:05:46 PM	43474
Surr: 4-Bromofluorobenzene	303	80-120	S	%Rec	1	3/6/2019 2:40:19 AM	43474

Refer to the QC Summary report and 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#: **1903070**

11-Mar-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID: **MB-43578**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **43578**	RunNo: **58228**
Prep Date: **3/8/2019**	Analysis Date: **3/8/2019**	SeqNo: **1953611** Units: **mg/Kg**

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

Sample ID: **LCS-43578**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **43578**	RunNo: **58228**
Prep Date: **3/8/2019**	Analysis Date: **3/8/2019**	SeqNo: **1953612** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation 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#: **1903070**

11-Mar-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID: **LCS-43440**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **43440**	RunNo: **58110**
Prep Date: **3/1/2019**	Analysis Date: **3/5/2019**	SeqNo: **1949927** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	63.9	124			
Surr: DNOP	4.3		5.000		85.7	70	130			

Sample ID: **MB-43440**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **43440**	RunNo: **58110**
Prep Date: **3/1/2019**	Analysis Date: **3/5/2019**	SeqNo: **1949928** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.8		10.00		98.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1903070**

11-Mar-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID: **MB-43474**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **43474**	RunNo: **58117**
Prep Date: **3/4/2019**	Analysis Date: **3/5/2019**	SeqNo: **1949360** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.7	73.8	119			

Sample ID: **LCS-43474**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **43474**	RunNo: **58117**
Prep Date: **3/4/2019**	Analysis Date: **3/5/2019**	SeqNo: **1949361** 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	106	80.1	123			
Surr: BFB	1000		1000		104	73.8	119			

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#: **1903070**

11-Mar-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID: **MB-43474**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **43474**	RunNo: **58117**
Prep Date: **3/4/2019**	Analysis Date: **3/5/2019**	SeqNo: **1949390** 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	0.99		1.000		99.0	80	120			

Sample ID: **LCS-43474**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **43474**	RunNo: **58117**
Prep Date: **3/4/2019**	Analysis Date: **3/5/2019**	SeqNo: **1949391** 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	80	120			
Toluene	1.1	0.050	1.000	0	107	80	120			
Ethylbenzene	1.1	0.050	1.000	0	108	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	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: **1903070** RcptNo: 1

Received By: **Desiree Dominguez** **3/2/2019 9:00:00 AM** DD

Completed By: **Isaiah Ortiz** **3/4/2019 7:51:41 AM** I-Ox

Reviewed By: DAD 3/4/19
CB: YG 3/4/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (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: YG 3/4/19 (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 days turn
☐ Standard ☐ **Rush**

Project Name: Sterling

Project #:

Project Manager: Heather Patterson

Sampler: HP

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.7 - 0.4 = 0.3°C

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 Name	Container Type and #	Preservative Type	HEAL No. 1903070	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)
2/28/19	3:18	Soil	SW1	4oz		-001	X	X					X			
	3:24		SW2			-002	X	X					X			
	3:35		SW3			-003	X	X					X			
	3:48		SW4			-004	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3.1.19	1:00				3/1/19	1430
3/1/19	1900			courier	3/2/19	9:00

Remarks:

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

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

March 13, 2019

Heather Patterson

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

RE: Sterling OrderNo.: 1903207

Dear Heather Patterson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/6/2019 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1903207**
Date Reported: **3/13/2019**

CLIENT: Souder, Miller & Associates
Client Sample ID: CS1
Project: Sterling
Collection Date: 3/4/2019 1:00:00 PM
Lab ID: 1903207-001 **Matrix:** SOIL **Received Date:** 3/6/2019 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	3/11/2019 4:04:36 PM	43603
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	1400	50		mg/Kg	5	3/12/2019 1:35:46 PM	43561
Motor Oil Range Organics (MRO)	480	250		mg/Kg	5	3/12/2019 1:35:46 PM	43561
Surr: DNOP	155	70-130	S	%Rec	5	3/12/2019 1:35:46 PM	43561
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	100	4.7		mg/Kg	1	3/7/2019 9:52:39 AM	43530
Surr: BFB	780	73.8-119	S	%Rec	1	3/7/2019 9:52:39 AM	43530
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.023		mg/Kg	1	3/7/2019 9:52:39 AM	43530
Toluene	0.35	0.047		mg/Kg	1	3/7/2019 9:52:39 AM	43530
Ethylbenzene	0.29	0.047		mg/Kg	1	3/7/2019 9:52:39 AM	43530
Xylenes, Total	3.7	0.093		mg/Kg	1	3/7/2019 9:52:39 AM	43530
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	1	3/7/2019 9:52:39 AM	43530

Refer to the QC Summary report and 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: CS2
Project: Sterling
Collection Date: 3/4/2019 1:15:00 PM
Lab ID: 1903207-002 **Matrix:** SOIL **Received Date:** 3/6/2019 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	3/11/2019 5:06:38 PM	43603
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	2200	97		mg/Kg	10	3/11/2019 5:30:36 PM	43561
Motor Oil Range Organics (MRO)	770	490		mg/Kg	10	3/11/2019 5:30:36 PM	43561
Surr: DNOP	0	70-130	S	%Rec	10	3/11/2019 5:30:36 PM	43561
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	110	4.8		mg/Kg	1	3/7/2019 11:03:03 AM	43530
Surr: BFB	814	73.8-119	S	%Rec	1	3/7/2019 11:03:03 AM	43530
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	3/7/2019 11:03:03 AM	43530
Toluene	0.26	0.048		mg/Kg	1	3/7/2019 11:03:03 AM	43530
Ethylbenzene	0.40	0.048		mg/Kg	1	3/7/2019 11:03:03 AM	43530
Xylenes, Total	5.5	0.096		mg/Kg	1	3/7/2019 11:03:03 AM	43530
Surr: 4-Bromofluorobenzene	126	80-120	S	%Rec	1	3/7/2019 11:03:03 AM	43530

Refer to the QC Summary report and 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: CS3
Project: Sterling
Collection Date: 3/4/2019 1:30:00 PM
Lab ID: 1903207-003 **Matrix:** SOIL **Received Date:** 3/6/2019 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	3/11/2019 5:19:03 PM	43603
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	17000	960		mg/Kg	100	3/11/2019 5:54:52 PM	43561
Motor Oil Range Organics (MRO)	6300	4800		mg/Kg	100	3/11/2019 5:54:52 PM	43561
Surr: DNOP	0	70-130	S	%Rec	100	3/11/2019 5:54:52 PM	43561
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	900	240		mg/Kg	50	3/8/2019 2:10:15 PM	43530
Surr: BFB	194	73.8-119	S	%Rec	50	3/8/2019 2:10:15 PM	43530
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.18	0.024		mg/Kg	1	3/7/2019 12:13:06 PM	43530
Toluene	4.7	0.048		mg/Kg	1	3/7/2019 12:13:06 PM	43530
Ethylbenzene	1.7	0.048		mg/Kg	1	3/7/2019 12:13:06 PM	43530
Xylenes, Total	46	4.8		mg/Kg	50	3/8/2019 2:10:15 PM	43530
Surr: 4-Bromofluorobenzene	395	80-120	S	%Rec	1	3/7/2019 12:13:06 PM	43530

Refer to the QC Summary report and 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: CS4
Project: Sterling
Collection Date: 3/4/2019 1:45:00 PM
Lab ID: 1903207-004 **Matrix:** SOIL **Received Date:** 3/6/2019 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	3/11/2019 5:31:27 PM	43603
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	12000	200		mg/Kg	20	3/11/2019 6:19:23 PM	43561
Motor Oil Range Organics (MRO)	4900	1000		mg/Kg	20	3/11/2019 6:19:23 PM	43561
Surr: DNOP	0	70-130	S	%Rec	20	3/11/2019 6:19:23 PM	43561
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	92	4.7		mg/Kg	1	3/7/2019 1:00:12 PM	43530
Surr: BFB	681	73.8-119	S	%Rec	1	3/7/2019 1:00:12 PM	43530
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	3/7/2019 1:00:12 PM	43530
Toluene	0.34	0.047		mg/Kg	1	3/7/2019 1:00:12 PM	43530
Ethylbenzene	0.28	0.047		mg/Kg	1	3/7/2019 1:00:12 PM	43530
Xylenes, Total	4.4	0.094		mg/Kg	1	3/7/2019 1:00:12 PM	43530
Surr: 4-Bromofluorobenzene	121	80-120	S	%Rec	1	3/7/2019 1:00:12 PM	43530

Refer to the QC Summary report and 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#: **1903207**

13-Mar-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID: **MB-43603**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **43603**	RunNo: **58259**
Prep Date: **3/11/2019**	Analysis Date: **3/11/2019**	SeqNo: **1954599** Units: **mg/Kg**

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

Sample ID: **LCS-43603**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **43603**	RunNo: **58259**
Prep Date: **3/11/2019**	Analysis Date: **3/11/2019**	SeqNo: **1954600** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	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#: **1903207**

13-Mar-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID: **MB-43561**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **43561**	RunNo: **58215**
Prep Date: **3/7/2019**	Analysis Date: **3/8/2019**	SeqNo: **1952829** 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	12		10.00		118	70	130			

Sample ID: **LCS-43561**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **43561**	RunNo: **58215**
Prep Date: **3/7/2019**	Analysis Date: **3/8/2019**	SeqNo: **1952877** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	107	63.9	124			
Surr: DNOP	5.5		5.000		110	70	130			

Sample ID: **LCS-43624**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **43624**	RunNo: **58283**
Prep Date: **3/12/2019**	Analysis Date: **3/12/2019**	SeqNo: **1955221** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.7	70	130			

Sample ID: **MB-43624**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **43624**	RunNo: **58283**
Prep Date: **3/12/2019**	Analysis Date: **3/12/2019**	SeqNo: **1955222** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		104	70	130			

Sample ID: **LCS-43617**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **43617**	RunNo: **58283**
Prep Date: **3/11/2019**	Analysis Date: **3/12/2019**	SeqNo: **1955417** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		103	70	130			

Sample ID: **MB-43617**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **43617**	RunNo: **58283**
Prep Date: **3/11/2019**	Analysis Date: **3/12/2019**	SeqNo: **1955418** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1903207**

13-Mar-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID: **LCS-43530**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **43530**	RunNo: **58169**
Prep Date: **3/6/2019**	Analysis Date: **3/7/2019**	SeqNo: **1950867** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	80.1	123			
Surr: BFB	1100		1000		107	73.8	119			

Sample ID: **MB-43530**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **43530**	RunNo: **58169**
Prep Date: **3/6/2019**	Analysis Date: **3/7/2019**	SeqNo: **1950899** 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	960		1000		95.6	73.8	119			

Sample ID: **LCS-43554**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **43554**	RunNo: **58206**
Prep Date: **3/7/2019**	Analysis Date: **3/8/2019**	SeqNo: **1952124** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		106	73.8	119			

Sample ID: **1903207-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CS1**	Batch ID: **43530**	RunNo: **58169**
Prep Date: **3/6/2019**	Analysis Date: **3/7/2019**	SeqNo: **1952199** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	130	4.9	24.30	103.2	127	69.1	142			
Surr: BFB	7700		971.8		790	73.8	119			S

Sample ID: **1903207-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CS1**	Batch ID: **43530**	RunNo: **58169**
Prep Date: **3/6/2019**	Analysis Date: **3/7/2019**	SeqNo: **1952201** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	150	5.0	24.80	103.2	193	69.1	142	12.0	20	S
Surr: BFB	8400		992.1		849	73.8	119	0	0	S

Sample ID: **MB-43554**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **43554**	RunNo: **58206**
Prep Date: **3/7/2019**	Analysis Date: **3/8/2019**	SeqNo: **1952417** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		95.8	73.8	119			

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#: **1903207**

13-Mar-19

Client: Souder, Miller & Associates

Project: Sterling

Sample ID: **LCS-43530**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **43530**	RunNo: **58169**
Prep Date: **3/6/2019**	Analysis Date: **3/7/2019**	SeqNo: **1950868** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.0	80	120			
Toluene	0.98	0.050	1.000	0	98.3	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.9	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	80	120			

Sample ID: **MB-43530**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **43530**	RunNo: **58169**
Prep Date: **3/6/2019**	Analysis Date: **3/7/2019**	SeqNo: **1950900** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: **1903207-002AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CS2**	Batch ID: **43530**	RunNo: **58169**
Prep Date: **3/6/2019**	Analysis Date: **3/7/2019**	SeqNo: **1952219** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.023	0.9191	0.01096	99.9	63.9	127			
Toluene	1.3	0.046	0.9191	0.2596	112	69.9	131			
Ethylbenzene	1.4	0.046	0.9191	0.4035	114	71	132			
Xylenes, Total	9.0	0.092	2.757	5.513	127	71.8	131			
Surr: 4-Bromofluorobenzene	1.1		0.9191		125	80	120			S

Sample ID: **1903207-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CS2**	Batch ID: **43530**	RunNo: **58169**
Prep Date: **3/6/2019**	Analysis Date: **3/7/2019**	SeqNo: **1952220** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.024	0.9625	0.01096	101	63.9	127	5.82	20	
Toluene	1.2	0.048	0.9625	0.2596	103	69.9	131	3.34	20	
Ethylbenzene	1.4	0.048	0.9625	0.4035	106	71	132	1.63	20	
Xylenes, Total	7.8	0.096	2.887	5.513	78.7	71.8	131	14.6	20	
Surr: 4-Bromofluorobenzene	1.2		0.9625		121	80	120	0	0	S

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: **1903207** RcptNo: **1**

Received By: **Isaiah Ortiz** **3/6/2019 9:10:00 AM** I-OX

Completed By: **Victoria Zellar** **3/6/2019 9:52:54 AM** Victoria Zellar

Reviewed By: DAD 3/6/19

labeled by YG 3/6/19

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 ☑	YG 3/6/19
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 ☐	
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	1.7	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 5 day

Project Name: Sterling

Project #:

Project Manager: H. Patterson

Sampler: HP

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.9-2

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. 1903207	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)
3.4.19	1:00	soil	CS1	4oz		-001	X	X					X			
	1:15		CS2			-002	X	X					X			
	1:30		CS3			-003	X	X					X			
	1:45		CS4			-004	X	X					X			

Date	Time	Relinquished by	Received by	Via	Date	Time
3.4.19	3:00	Samantha Watson			3/5/19	1500
3/5/19	1900			Courier	3/6/19	0910

Remarks: Marathon

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.

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Souder Miller & Associates

Samples Received: 4/5/2019
Job Number: 03117-0014
Work Order: P904017
Project Name/Location: Sterling 1H

Report Reviewed By: _____ Date: 4/8/19

Walter Hinchman, Laboratory Director

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
CS1-16.5	P904017-01A	Solid	04/03/19	04/05/19	Glass Jar, 4 oz.
SW4	P904017-02A	Solid	04/03/19	04/05/19	Glass Jar, 4 oz.
CS 1.5-16	P904017-03A	Solid	04/03/19	04/05/19	Glass Jar, 4 oz.

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

CS1-16.5

P904017-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic Compounds by 8260									
Benzene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*101 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8260B*	
Surrogate: Toluene-d8		*97.7 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8260B*	
Surrogate: Bromofluorobenzene		*99.1 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8260B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8015D	
Diesel Range Organics (C10-C28)	**392**	25.0	mg/kg	1	1914026	04/05/19	04/05/19	EPA 8015D	
Oil Range Organics (C28-C40)	**171**	50.0	mg/kg	1	1914026	04/05/19	04/05/19	EPA 8015D	
Surrogate: n-Nonane		*102 %*		*50-200*	*1914026*	*04/05/19*	*04/05/19*	*EPA 8015D*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8015D*	
Surrogate: Toluene-d8		*97.7 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8015D*	
Surrogate: Bromofluorobenzene		*99.1 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1914028	04/05/19	04/05/19	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

SW4

P904017-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic Compounds by 8260									
Benzene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*95.0 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8260B*	
Surrogate: Toluene-d8		*101 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8260B*	
Surrogate: Bromofluorobenzene		*97.3 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8260B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8015D	
Diesel Range Organics (C10-C28)	**76.8**	25.0	mg/kg	1	1914026	04/05/19	04/05/19	EPA 8015D	
Oil Range Organics (C28-C40)	**63.5**	50.0	mg/kg	1	1914026	04/05/19	04/05/19	EPA 8015D	
Surrogate: n-Nonane		*93.7 %*		*50-200*	*1914026*	*04/05/19*	*04/05/19*	*EPA 8015D*	
Surrogate: 1,2-Dichloroethane-d4		*95.0 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8015D*	
Surrogate: Toluene-d8		*101 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8015D*	
Surrogate: Bromofluorobenzene		*97.3 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1914028	04/05/19	04/05/19	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

CS 1.5-16

P904017-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic Compounds by 8260									
Benzene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*97.5 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8260B*	
Surrogate: Toluene-d8		*99.3 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8260B*	
Surrogate: Bromofluorobenzene		*97.1 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8260B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1914025	04/05/19	04/07/19	EPA 8015D	
Diesel Range Organics (C10-C28)	**33.5**	25.0	mg/kg	1	1914026	04/05/19	04/05/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1914026	04/05/19	04/05/19	EPA 8015D	
Surrogate: n-Nonane		*88.5 %*		*50-200*	*1914026*	*04/05/19*	*04/05/19*	*EPA 8015D*	
Surrogate: 1,2-Dichloroethane-d4		*97.5 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8015D*	
Surrogate: Toluene-d8		*99.3 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8015D*	
Surrogate: Bromofluorobenzene		*97.1 %*		*70-130*	*1914025*	*04/05/19*	*04/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1914028	04/05/19	04/05/19	EPA 300.0/9056A	

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1914025 - Purge and Trap EPA 5030A										
Blank (1914025-BLK1)				Prepared: 04/05/19 1 Analyzed: 04/07/19 1						
Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 1,2-Dichloroethane-d4	*0.484*		"	*0.500*		*96.7*	*70-130*			
Surrogate: Toluene-d8	*0.496*		"	*0.500*		*99.1*	*70-130*			
Surrogate: Bromofluorobenzene	*0.480*		"	*0.500*		*96.0*	*70-130*			
LCS (1914025-BS1)				Prepared: 04/05/19 1 Analyzed: 04/07/19 1						
Benzene	2.43	0.0250	mg/kg	2.50		97.2	70-130			
Toluene	2.41	0.0250	"	2.50		96.4	70-130			
Ethylbenzene	2.38	0.0250	"	2.50		95.2	70-130			
p,m-Xylene	4.67	0.0500	"	5.00		93.3	70-130			
o-Xylene	2.30	0.0250	"	2.50		92.2	70-130			
Total Xylenes	6.97	0.0250	"	7.50		92.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.484*		"	*0.500*		*96.8*	*70-130*			
Surrogate: Toluene-d8	*0.503*		"	*0.500*		*101*	*70-130*			
Surrogate: Bromofluorobenzene	*0.494*		"	*0.500*		*98.8*	*70-130*			
Matrix Spike (1914025-MS1)		**Source: P904017-01**		Prepared: 04/05/19 1 Analyzed: 04/07/19 1						
Benzene	2.41	0.0250	mg/kg	2.50	ND	96.3	48-131			
Toluene	2.32	0.0250	"	2.50	ND	92.7	48-130			
Ethylbenzene	2.30	0.0250	"	2.50	ND	92.0	45-135			
p,m-Xylene	4.50	0.0500	"	5.00	ND	90.0	43-135			
o-Xylene	2.24	0.0250	"	2.50	ND	89.5	43-135			
Total Xylenes	6.74	0.0250	"	7.50	ND	89.9	43-135			
Surrogate: 1,2-Dichloroethane-d4	*0.487*		"	*0.500*		*97.4*	*70-130*			
Surrogate: Toluene-d8	*0.489*		"	*0.500*		*97.8*	*70-130*			
Surrogate: Bromofluorobenzene	*0.488*		"	*0.500*		*97.5*	*70-130*			
Matrix Spike Dup (1914025-MSD1)		**Source: P904017-01**		Prepared: 04/05/19 1 Analyzed: 04/07/19 1						
Benzene	2.51	0.0250	mg/kg	2.50	ND	100	48-131	4.01	23	
Toluene	2.46	0.0250	"	2.50	ND	98.3	48-130	5.93	24	
Ethylbenzene	2.45	0.0250	"	2.50	ND	98.1	45-135	6.33	27	
p,m-Xylene	4.78	0.0500	"	5.00	ND	95.6	43-135	5.96	27	
o-Xylene	2.39	0.0250	"	2.50	ND	95.7	43-135	6.72	27	
Total Xylenes	7.17	0.0250	"	7.50	ND	95.6	43-135	6.21	27	
Surrogate: 1,2-Dichloroethane-d4	*0.507*		"	*0.500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.504*		"	*0.500*		*101*	*70-130*			

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1914025 - Purge and Trap EPA 5030A										
Matrix Spike Dup (1914025-MSD1)	**Source: P904017-01**		Prepared: 04/05/19 1 Analyzed: 04/07/19 1							
Surrogate: Bromofluorobenzene	*0.511*		*mg/kg*	*0.500*		*102*	*70-130*			

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1914025 - Purge and Trap EPA 5030A										
Blank (1914025-BLK1)				Prepared: 04/05/19 1 Analyzed: 04/07/19 1						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	*0.484*		*"*	*0.500*		*96.7*	*70-130*			
Surrogate: Toluene-d8	*0.496*		*"*	*0.500*		*99.1*	*70-130*			
Surrogate: Bromofluorobenzene	*0.480*		*"*	*0.500*		*96.0*	*70-130*			
LCS (1914025-BS2)				Prepared: 04/05/19 1 Analyzed: 04/07/19 1						
Gasoline Range Organics (C6-C10)	47.1	20.0	mg/kg	50.0		94.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.486*		*"*	*0.500*		*97.1*	*70-130*			
Surrogate: Toluene-d8	*0.501*		*"*	*0.500*		*100*	*70-130*			
Surrogate: Bromofluorobenzene	*0.496*		*"*	*0.500*		*99.1*	*70-130*			
Matrix Spike (1914025-MS2)		**Source: P904017-01**		Prepared: 04/05/19 1 Analyzed: 04/07/19 1						
Gasoline Range Organics (C6-C10)	52.7	20.0	mg/kg	50.0	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.484*		*"*	*0.500*		*96.8*	*70-130*			
Surrogate: Toluene-d8	*0.495*		*"*	*0.500*		*99.0*	*70-130*			
Surrogate: Bromofluorobenzene	*0.500*		*"*	*0.500*		*99.9*	*70-130*			
Matrix Spike Dup (1914025-MSD2)		**Source: P904017-01**		Prepared: 04/05/19 1 Analyzed: 04/07/19 1						
Gasoline Range Organics (C6-C10)	50.5	20.0	mg/kg	50.0	ND	101	70-130	4.39	20	
Surrogate: 1,2-Dichloroethane-d4	*0.475*		*"*	*0.500*		*94.9*	*70-130*			
Surrogate: Toluene-d8	*0.498*		*"*	*0.500*		*99.5*	*70-130*			
Surrogate: Bromofluorobenzene	*0.496*		*"*	*0.500*		*99.1*	*70-130*			

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1914026 - DRO Extraction EPA 3570										
Blank (1914026-BLK1)				Prepared & Analyzed: 04/05/19 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	*55.5*		*"*	*50.0*		*111*	*50-200*			
LCS (1914026-BS1)				Prepared & Analyzed: 04/05/19 1						
Diesel Range Organics (C10-C28)	505	25.0	mg/kg	500		101	38-132			
Surrogate: n-Nonane	*47.7*		*"*	*50.0*		*95.5*	*50-200*			
Matrix Spike (1914026-MS1)		**Source: P904017-01**		Prepared: 04/05/19 1 Analyzed: 04/05/19 2						
Diesel Range Organics (C10-C28)	882	25.0	mg/kg	500	392	98.0	38-132			
Surrogate: n-Nonane	*49.0*		*"*	*50.0*		*97.9*	*50-200*			
Matrix Spike Dup (1914026-MSD1)		**Source: P904017-01**		Prepared: 04/05/19 1 Analyzed: 04/05/19 2						
Diesel Range Organics (C10-C28)	899	25.0	mg/kg	500	392	101	38-132	1.93	20	
Surrogate: n-Nonane	*48.9*		*"*	*50.0*		*97.9*	*50-200*			

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1914028 - Anion Extraction EPA 300.0/9056A										
Blank (1914028-BLK1)				Prepared & Analyzed: 04/05/19 1						
Chloride	ND	20.0	mg/kg							
LCS (1914028-BS1)				Prepared & Analyzed: 04/05/19 1						
Chloride	254	20.0	mg/kg	250		102	90-110			
Matrix Spike (1914028-MS1)		**Source: P904017-02**		Prepared: 04/05/19 1 Analyzed: 04/05/19 2						
Chloride	261	20.0	mg/kg	250	ND	104	80-120			
Matrix Spike Dup (1914028-MSD1)		**Source: P904017-02**		Prepared: 04/05/19 1 Analyzed: 04/05/19 2						
Chloride	267	20.0	mg/kg	250	ND	107	80-120	2.42	20	

Souder Miller & Associates	Project Name:	Sterling 1H	
401 W. Broadway	Project Number:	03117-0014	**Reported:**
Farmington NM, 87401	Project Manager:	Heather Patterson	04/08/19 14:26

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

2D

Page 1 of 1

Chain of Custody

Project Information

Client: SM A
Project: Sterling 1H
Project Manager: Heather Patterson
Address: 2015 Halagueno St
City, State, Zip Carlsbad NM 88220
Phone: 575-200-5343
Email: heather.patterson@sm-energy.com

Report Attention

Report due by: 2 day turn
Attention: Heather Patterson
Address: 20. S Halagueno
City, State, Zip Carlsbad NM 88220
Phone: 575-200-5343
Email: heather.patterson@sm-energy.com

Lab Use Only

Lab WO# P904017
Job Number 03117-0014

TAT

1D | 3D

EPA Program

RCRA | CWA | SDWA

State

NM | CO | UT | AZ

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1					Remarks
12:52	4/3/19	Soil	4oz	CS1-16.5	1	X	X	X									
1:30	"	S	"	SW4	2	X	X	X									
1:55	"	S	"	CS1.5-16	3	X	X	X									

Additional Instructions: Note: Marathon

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

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

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Samantha Watson	4.4.19	9:00	Courtney Stovall	4-4-19	10:15
Fed Ex	4-5-19	9.00 AM	Raina Lopez	4-5-19	9:00 AM

Lab Use Only
Received on ice: (Y) / N
T1 T2 T3
AVG Temp °C 4

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

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

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com laboratory@envirotech-inc.com

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

April 16, 2019

Heather Patterson

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

RE: Sterling 1H OrderNo.: 1904566

Dear Heather Patterson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/10/2019 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: C2-5
Project: Sterling 1H
Collection Date: 4/5/2019 1:38:00 PM
Lab ID: 1904566-001 **Matrix:** SOIL **Received Date:** 4/10/2019 10:07:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	74	60		mg/Kg	20	4/15/2019 2:13:22 PM	44331
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/15/2019 12:11:02 PM	44321
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/15/2019 12:11:02 PM	44321
Surr: DNOP	94.9	70-130		%Rec	1	4/15/2019 12:11:02 PM	44321
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/14/2019 9:02:35 PM	44274
Surr: BFB	90.4	73.8-119		%Rec	1	4/14/2019 9:02:35 PM	44274
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/14/2019 9:02:35 PM	44274
Toluene	ND	0.047		mg/Kg	1	4/14/2019 9:02:35 PM	44274
Ethylbenzene	ND	0.047		mg/Kg	1	4/14/2019 9:02:35 PM	44274
Xylenes, Total	ND	0.093		mg/Kg	1	4/14/2019 9:02:35 PM	44274
Surr: 4-Bromofluorobenzene	90.0	80-120		%Rec	1	4/14/2019 9:02:35 PM	44274

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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 at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: C3-3
Project: Sterling 1H
Collection Date: 4/9/2019 4:30:00 PM
Lab ID: 1904566-002 **Matrix:** SOIL **Received Date:** 4/10/2019 10:07:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	4/15/2019 2:50:35 PM	44331
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	35	9.4		mg/Kg	1	4/15/2019 1:17:45 PM	44321
Motor Oil Range Organics (MRO)	60	47		mg/Kg	1	4/15/2019 1:17:45 PM	44321
Surr: DNOP	103	70-130		%Rec	1	4/15/2019 1:17:45 PM	44321
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/14/2019 9:26:04 PM	44274
Surr: BFB	91.6	73.8-119		%Rec	1	4/14/2019 9:26:04 PM	44274
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/14/2019 9:26:04 PM	44274
Toluene	ND	0.047		mg/Kg	1	4/14/2019 9:26:04 PM	44274
Ethylbenzene	ND	0.047		mg/Kg	1	4/14/2019 9:26:04 PM	44274
Xylenes, Total	ND	0.095		mg/Kg	1	4/14/2019 9:26:04 PM	44274
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	4/14/2019 9:26:04 PM	44274

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: C4-3
Project: Sterling 1H
Collection Date: 4/9/2019 4:45:00 PM
Lab ID: 1904566-003 **Matrix:** SOIL **Received Date:** 4/10/2019 10:07:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	4/15/2019 3:27:49 PM	44331
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	240	9.9		mg/Kg	1	4/15/2019 1:39:48 PM	44321
Motor Oil Range Organics (MRO)	180	49		mg/Kg	1	4/15/2019 1:39:48 PM	44321
Surr: DNOP	104	70-130		%Rec	1	4/15/2019 1:39:48 PM	44321
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/14/2019 9:49:33 PM	44274
Surr: BFB	90.8	73.8-119		%Rec	1	4/14/2019 9:49:33 PM	44274
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/14/2019 9:49:33 PM	44274
Toluene	ND	0.050		mg/Kg	1	4/14/2019 9:49:33 PM	44274
Ethylbenzene	ND	0.050		mg/Kg	1	4/14/2019 9:49:33 PM	44274
Xylenes, Total	ND	0.10		mg/Kg	1	4/14/2019 9:49:33 PM	44274
Surr: 4-Bromofluorobenzene	90.4	80-120		%Rec	1	4/14/2019 9:49:33 PM	44274

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: C1-17
Project: Sterling 1H
Collection Date: 4/10/2019 8:31:00 AM
Lab ID: 1904566-004 **Matrix:** SOIL **Received Date:** 4/10/2019 10:07:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	73	60		mg/Kg	20	4/15/2019 3:40:13 PM	44331
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/15/2019 2:02:15 PM	44321
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/15/2019 2:02:15 PM	44321
Surr: DNOP	85.6	70-130		%Rec	1	4/15/2019 2:02:15 PM	44321
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/14/2019 10:13:02 PM	44274
Surr: BFB	89.8	73.8-119		%Rec	1	4/14/2019 10:13:02 PM	44274
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/14/2019 10:13:02 PM	44274
Toluene	ND	0.049		mg/Kg	1	4/14/2019 10:13:02 PM	44274
Ethylbenzene	ND	0.049		mg/Kg	1	4/14/2019 10:13:02 PM	44274
Xylenes, Total	ND	0.099		mg/Kg	1	4/14/2019 10:13:02 PM	44274
Surr: 4-Bromofluorobenzene	89.2	80-120		%Rec	1	4/14/2019 10:13:02 PM	44274

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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 at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: C1B-17
Project: Sterling 1H
Collection Date: 4/10/2019 8:43:00 AM
Lab ID: 1904566-005 **Matrix:** SOIL **Received Date:** 4/10/2019 10:07:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	4/15/2019 3:52:38 PM	44331
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/15/2019 2:24:18 PM	44321
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/15/2019 2:24:18 PM	44321
Surr: DNOP	71.0	70-130		%Rec	1	4/15/2019 2:24:18 PM	44321
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/14/2019 10:36:27 PM	44274
Surr: BFB	92.4	73.8-119		%Rec	1	4/14/2019 10:36:27 PM	44274
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/14/2019 10:36:27 PM	44274
Toluene	ND	0.050		mg/Kg	1	4/14/2019 10:36:27 PM	44274
Ethylbenzene	ND	0.050		mg/Kg	1	4/14/2019 10:36:27 PM	44274
Xylenes, Total	ND	0.10		mg/Kg	1	4/14/2019 10:36:27 PM	44274
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	4/14/2019 10:36:27 PM	44274

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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 at testcode

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904566**

16-Apr-19

Client: Souder, Miller & Associates

Project: Sterling 1H

Sample ID: **MB-44331**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **44331**	RunNo: **59168**
Prep Date: **4/15/2019**	Analysis Date: **4/15/2019**	SeqNo: **1992101** Units: **mg/Kg**

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

Sample ID: **LCS-44331**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **44331**	RunNo: **59168**
Prep Date: **4/15/2019**	Analysis Date: **4/15/2019**	SeqNo: **1992102** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904566**

16-Apr-19

Client: Souder, Miller & Associates

Project: Sterling 1H

Sample ID: **LCS-44321** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **44321** RunNo: **59146**

Prep Date: **4/12/2019** Analysis Date: **4/15/2019** SeqNo: **1991064** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.4	63.9	124			
Surr: DNOP	4.3		5.000		85.4	70	130			

Sample ID: **MB-44321** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **44321** RunNo: **59146**

Prep Date: **4/12/2019** Analysis Date: **4/15/2019** SeqNo: **1991065** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.1	70	130			

Sample ID: **1904566-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **C2-5** Batch ID: **44321** RunNo: **59146**

Prep Date: **4/12/2019** Analysis Date: **4/15/2019** SeqNo: **1991201** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.7	48.50	8.023	85.2	53.5	126			
Surr: DNOP	4.5		4.850		92.8	70	130			

Sample ID: **1904566-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **C2-5** Batch ID: **44321** RunNo: **59146**

Prep Date: **4/12/2019** Analysis Date: **4/15/2019** SeqNo: **1991202** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	9.8	49.02	8.023	92.4	53.5	126	7.74	21.7	
Surr: DNOP	4.4		4.902		88.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904566**

16-Apr-19

Client: Souder, Miller & Associates

Project: Sterling 1H

Sample ID: **MB-44274**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **44274**	RunNo: **59134**
Prep Date: **4/10/2019**	Analysis Date: **4/14/2019**	SeqNo: **1990660** 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	940		1000		93.7	73.8	119			

Sample ID: **LCS-44274**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **44274**	RunNo: **59134**
Prep Date: **4/10/2019**	Analysis Date: **4/14/2019**	SeqNo: **1990661** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	80.1	123			
Surr: BFB	1100		1000		107	73.8	119			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904566**

16-Apr-19

Client: Souder, Miller & Associates

Project: Sterling 1H

Sample ID: **MB-44274**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **44274**	RunNo: **59134**
Prep Date: **4/10/2019**	Analysis Date: **4/14/2019**	SeqNo: **1990691** 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	0.93		1.000		92.6	80	120			

Sample ID: **LCS-44274**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **44274**	RunNo: **59134**
Prep Date: **4/10/2019**	Analysis Date: **4/14/2019**	SeqNo: **1990692** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.7	80	120			
Toluene	0.94	0.050	1.000	0	94.3	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.1	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.3	80	120			
Surr: 4-Bromofluorobenzene	0.93		1.000		92.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
H	Holding times for preparation or analysis exceeded
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

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: **1904566** RcptNo: **1**

Received By: **Erin Melendrez** **4/10/2019 10:07:00 AM**

Completed By: **Yazmine Garduno** **4/10/2019 11:33:40 AM**

Reviewed By: YG 4/10/19

LB: JJC 4-10-19

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 ☑	# of preserved bottles checked for pH: (<2 or >12 unless noted)
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	Adjusted?
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 ☐	Checked by: JJC 4-10-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Yes			

Chain-of-Custody Record

Client: SMT

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 day turn
☐ Standard ☐ Rush

Project Name: Sterling 1H

Project #:

Project Manager: Heather Patton

Sampler: DD / HP

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 4.9°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. 1904566	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)
4/5/19	1:38	Soil	C2 -5	4oz		-001	X	X					X			
4/9/19	4:30	"	C3 -3	"		-002	X	X					X			
4/9/19	4:45	"	C4 -3	"		-003	X	X					X			
4/10/19	8:31	"	C1 -17	"		-004	X	X					X			
4/10/19	8:43	"	C1B -17	"		-005	X	X					X			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/9/19	1400				4/9/19	1900
4/9/19	1900			Via: courier	4/10/19	1007

Remarks:

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.