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	nAB182233389
District RP	2RP4725
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Marathon Oil Permian	OGRID 372098
Contact Name Callie Karrigan	Contact Telephone 405-202-1028 (cell) 575-297-0956 (office)
Contact email cnkarrigan@marathonoil.com	Incident # *(assigned by OCD)*
Contact mailing address 5555 San Felipe St, Houston Texas 77056	

Location of Release Source

Latitude 32.2985 Longitude -104.2086

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Sterling 20 State 1H	Site Type Oil and Gas Production Facilities
Date Release Discovered 4/17/2018	API# *(if applicable)* 30-015-42731

Unit Letter	Section	Township	Range	County
O	17	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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 5.18	Volume Recovered (bbls) 4.5
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Flowback Operator reported that the free water knock out (FWKO) lost supply gas, not allowing the vessel to dump fluids. The FWKO high leveled and
traveled down the flare line, sending fluids out the flare and an overspray. Fluid also released from the back pressure valve on the FWKO inside
containment, releasing an estimated 3.50 barrels. Overspray traveled from the flare on and off location

State of New Mexico
Oil Conservation Division

Incident ID	nAB1812233389
District RP	2RP-4725
Facility ID	
Application ID	

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

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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: _1/24/2019_____

email: ___cnkarrigan@marathonoil.com_____ Telephone: __575-297-0956_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAB1812233389
District RP	2RP-4725
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	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
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	nAB1812233389
District RP	2RP-4725
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: __Melodie Sanjari_____ Title: _____HES Professional_____

Signature:_____ *Melodie Sanjari*_____ Date: ___6/20/2023_____

email: ___msanjari@marathonoil.com_____ Telephone: ___575-988-8752_____

OCD Only

Received by: ____Jocelyn Harimon_____ Date: ___06/26/2023___

Deferral not approved 06/26/2023 Jocelyn Harimon

State of New Mexico
Oil Conservation Division

Incident ID	nAB1812233389
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Melodie Sanjari Title: Environmental Professional

Signature: Melodie Sanjari Date 10/5/2023

email: msanjari@marathonoil.com Telephone: 575-988-8753

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Ashley Maxwell Date: 10/06/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

J/ Harimon requested additional sample at L8 for 1' bgs for TPH only. Addtl. Samples p. 113. Lab table on p. 122. Labs p. 202.

From: Maxwell, Ashley, EMNRD
To: Sanjari, Melodie (MRO)
Subject: RE: [External] The Oil Conservation Division (OCD) has rejected the application, Application ID: 230831
Date: Monday, September 25, 2023 7:13:03 AM

Good Morning Mel,

Jocelyn is no longer with the OCD. She moved on the NMED. Please submit the samples via the OCD portal and I will keep an eye out for the submission.

Thanks!
Ashley

Ashley Maxwell • Environmental Specialist
Environmental Bureau Projects Group
EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87110
505.635.5000 | Ashley.Maxwell@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
Sent: Sunday, September 24, 2023 10:59 PM
To: Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>
Subject: Fwd: [External] The Oil Conservation Division (OCD) has rejected the application, Application ID: 230831

Get Outlook for iOS

From: Sanjari, Melodie (MRO) <msanjari@marathonoil.com>
Sent: Wednesday, September 20, 2023 1:59:18 PM
To: Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
Subject: RE: [External] The Oil Conservation Division (OCD) has rejected the application, Application ID: 230831

Hey there Jocelyn,

We have collected and analyzed the additional sample you required for incident nAB1812233389, L8 at 1 foot bgs for TPH. Would you like me resubmit via the portal or am I able to provide it via email?

Thanks!

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

nAB1812233389

January 24, 2019

#5E27499-BG4

NMOCD District 2
Mr. Mike Bratcher
811 S. First St.
Artesia, New Mexico 88210

SUBJECT: REMEDIATION Deferral REPORT FOR THE STERLING 20 STATE 1H RELEASE (2RP-4725), CARLSBAD, NEW MEXICO

Dear Mr. Bratcher:

On behalf of Marathon Oil Permian LLC (Marathon), Souder, Miller & Associates (SMA) has prepared this Remediation Deferral 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	32.29810545° -104.20840165°
Incident Number	2RP-4725		
Estimated Date of Release	04/17/2018	Date Reported to NMOCD	04/17/2018
Land Owner	State	Reported To	NMOCD District 2, NMSLO
Source of Release	Flare		
Released Volume	5.18 bbls	Released Material	Produced Water
Recovered Volume	4.50 bbls	Net Release	0.68
NMOCD Closure Criteria	51-100 feet to groundwater Area now mapped as high Karst Potential - OCD requires <50 criteria.		
SMA Response Dates	July 06, August 2, September 26 & 28, and October 1. 2018		

1.0 Background

On April 17, 2018, a free water knock out (FWKO) lost supply, which caused an accumulation of fluids that ultimately traveled down the flare line resulting in a release of fluids from the flair and causing overspray. Fluid was also released from the back-pressure valve on the FWKO inside the containment releasing an estimated 3.5 bbl. Overspray from the flare traveled on and off location. Standing fluids in containment were recovered via vac truck. Absorbent material was used to recover excess fluids and the containment liner was washed. The liner integrity was inspected with no damage or breach of the liner found. The area of the overspray was surface scraped to six (6) inches.

Figure 1 illustrates the site vicinity, Figure 2 illustrates the site and release location. The initial C-141 form is included in Appendix A.

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 7/9/2018). The nearest significant watercourse is an irrigation canal located approximately 1,500 feet to the east of Sterling 20 State 1H.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater of less than 50', due to the 2020 change in the area from medium Karst potential to high Karst potential, as required by NM OCD.

3.0 Release Characterization Activities and Findings

On July 6, 2018, SMA personnel arrived on site in response to the release associated with 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.

On August 2, 2018, SMA performed further site delineation activities by collecting soil samples with the aid of a backhoe service around the release site and throughout the visibly surface stained area. Soil samples were field-screened for chlorides using an electrical conductivity (EC) measurement device.

A total of nine (9) sample locations (L1-L9) were investigated using excavated test pits, to depths up to three (3) to four (4) feet bgs. A minimum of two samples were collected at each sampling location and field-screened using the methods previously stated. A total of twenty-nine (29) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Table 3 itemizes the samples and field-screening results. Locations for all samples are depicted on Figure 2.

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).

Results indicated that an area approximately 236 feet long by up to 94 feet wide and anywhere from 0.5 to 2 feet deep had been impacted.

In the approved workplan, SMA proposed excavating and removing contaminated soil in the impacted area approximately 0.5 to 3.5 feet bgs. On September 26, 2018, NMOCD approved the work plan and the proposed closure sampling plan.

4.0 Soil Remediation Summary

On September 26, 2018 SMA arrived on site to guide the excavation and removal of contaminated soil. After approval from area utilities via 811 SMA guided the excavation per the approved work plan. Samples were screened for chloride using an electrical conductivity (EC) measurement device. The walls and base were excavated until field screening results indicated that NMOCD Closure Criteria and reclamation standards for chlorides were met. NMOCD was notified on September 24, 2018 that closure samples were expected to be collected in two (2) business days.

On September 28 and October 1, 2018 SMA conducted confirmation sampling of the excavation. Excavation depths are outlined in Table 3. Confirmation samples were collected from the eleven (L1-L11) locations at the base of the excavation to confirm the vertical extent and eleven (SW1-SW11) from the sidewalls to confirm the lateral extent. The samples were collected according to the sampling protocol included in Appendix C. This sampling protocol was pre-approved by NMOCD.

Figure 2 shows the extent and depths of the excavation and sample locations. All field screening and laboratory results are summarized in Table 3. Laboratory reports are included in Appendix D.

~~In addition to meeting the Closure Criteria, the top; four (4) feet of impacted areas of the well pad meet the Reclamation requirement of 19.15.2913(D)(1).~~ Contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil was transported and disposed of at 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 575-200-5343 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Heather Patterson
Staff Scientist

Reviewed by:

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map
Figure 2: Site and Sample Location Map

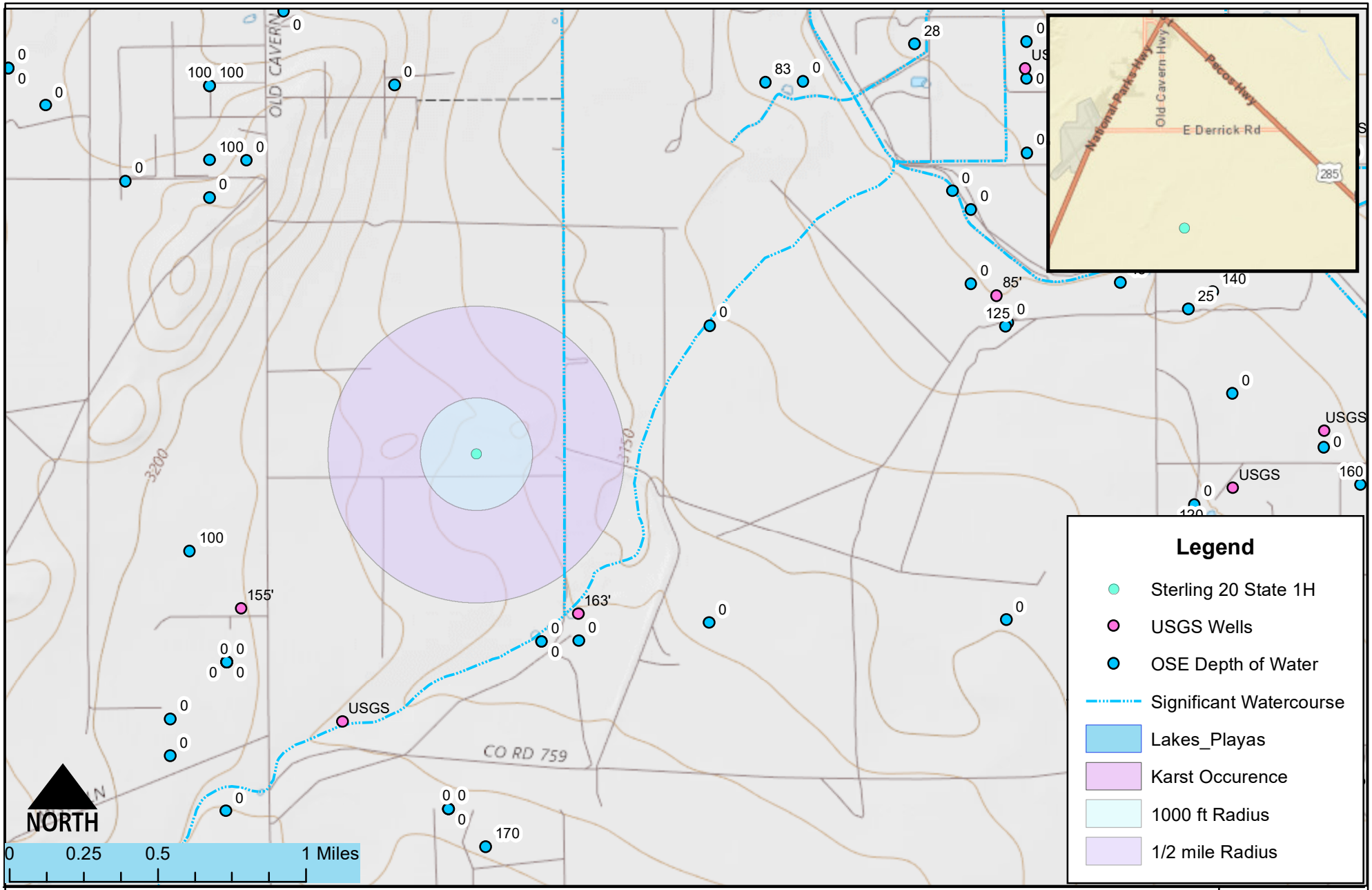
Tables:

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

Appendices:

Appendix A: Form C141
Appendix B: NMOSE Wells Report
Appendix C: Sampling Protocol, Field Notes and Photo Documentation
Appendix D: Laboratory Analytical Reports

FIGURES



Vicinity and Well Head Protection Map
Sterling 20 State 1H - Marathon
S 17-T23S-R27E, New Mexico

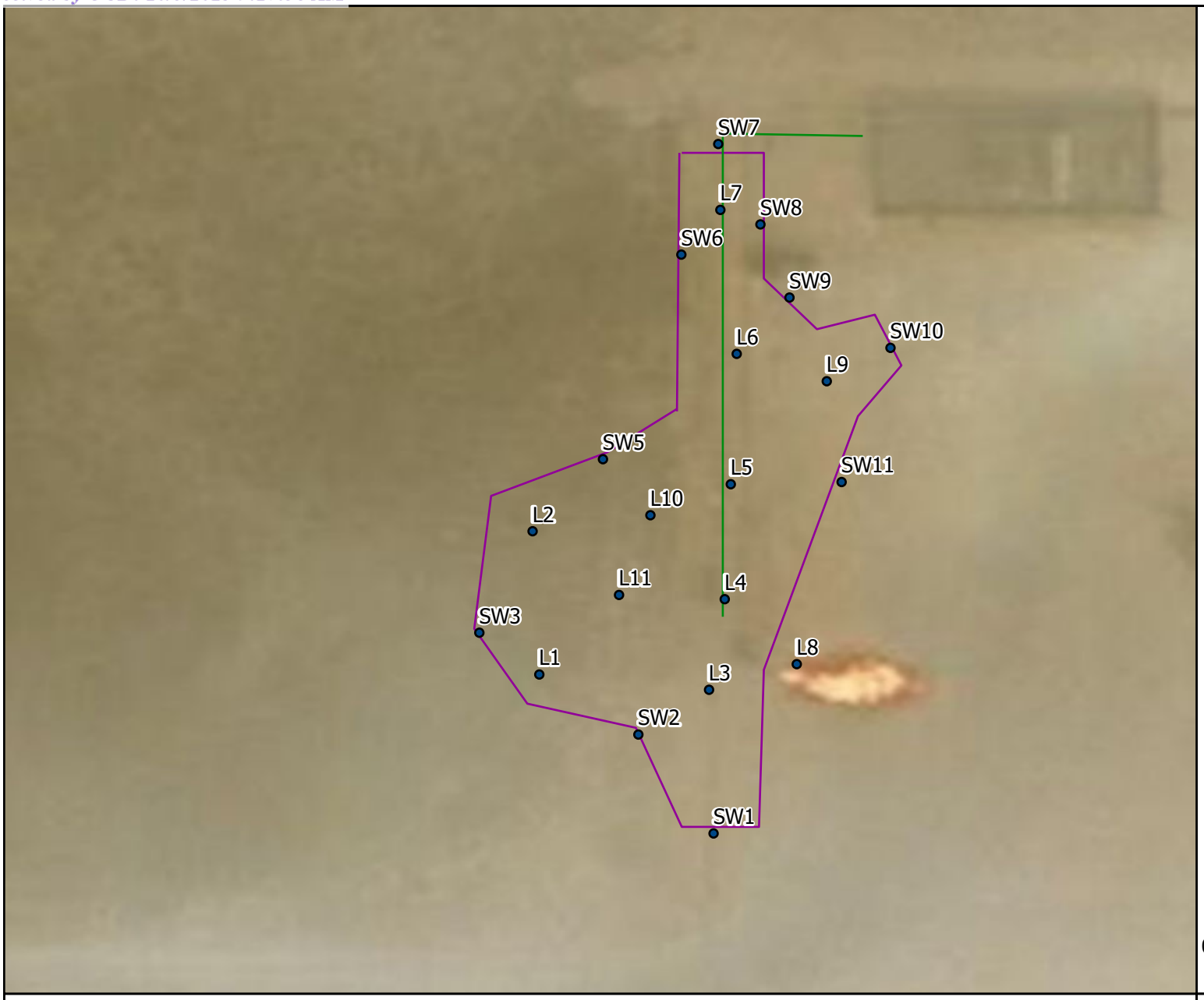
Figure 1

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

Date Saved: 9/24/2018

Drawn Heather Patterson
Checked
Approved

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



Legend

- Sample Locations
- Flare Line
- Excavated Area

N

0 22.5 45 90 Feet

Site Location Map
Sterling 20 State 1H- Marathon
Sec 27 T23S R27E Eddy County , New Mexico

Figure 2

\\CBO10\Projects\5-XTO 2019 MSA On Call Services (5E27960)\GIS\ARCGIS\MISC_MIT.aprx

Date Saved: 1/21/2019

Revisions

By: _____ Date: _____ Descr: _____

By: _____ Date: _____ Descr: _____

Drawn Heather Patterson
Date 1/24/2019
Checked
Approved

SMA

201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689-7040
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TABLES

Table 2:

Marathon
Sterling 20 State 1H (2RP-4725)

High Karst - <50' - 6/20/2023

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
Hortizontal Distance to Nearest Significant Watercourse (ft)	1500	Figure 1

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		**Closure Criteria (units in mg/kg)**				
		Chloride *numerical limit or background, whichever is greater	**TPH**	**GRO + DRO**	**BTEX**	**Benzene**
< 50' BGS		600	100		50	10
51' to 100'	X	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?	No					

SMA #

Table 3:
Summary of Initial Sample Results

Marathon oil Permian, LLC
Sterling 20 State 1H (2RP-4725)

Initial Sampling Event

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- Field Screens (ppm)	Cl- Laboratory mg/Kg
NMOCD Closure Criteria				50	10				1000/2500		600/20,000*
L1	7/6/2018	0.5	excavate	<0.225	<0.025	<5.0	<9.9	<50	<64.9	--	**810**
	8/2/2018	1	excavate	--	--	--	--	--	--	995	--
	8/2/2018	2	in-situ	--	--	--	--	--	--	485	530
	8/2/2018	3	in-situ	--	--	--	--	--	--	428	390
L2	7/6/2018	0.5	excavate	<.21	<0.023	<4.7	<9.9	<49	<63.6	--	**2,500**
	8/2/2018	1	excavate	--	--	--	--	--	--	513	**1,600**
	8/2/2018	2	excavate	--	--	--	--	--	--	1463	--
	8/2/2018	3	in-situ	--	--	--	--	--	--	400	350
	8/2/2018	4	in-situ	--	--	--	--	--	--	<270	83
L3	7/6/2018	0.5	excavate	<0.221	<0.025	<4.9	180	110	295	--	6,400
	8/2/2018	1	in-situ	--	--	--	--	--	--	1307	--
	8/2/2018	2	in-situ	--	--	--	--	--	--	<270	<30
	8/2/2018	3	in-situ	--	--	--	--	--	--	<270	--
L4	7/6/2018	0.5	excavate	<0.207	<0.023	<4.6	430	300	735	--	4,000
	8/2/2018	1	in-situ	--	--	--	--	--	--	400	480
	8/2/2018	2	in-situ	--	--	--	--	--	--	272	320
L5	7/6/2018	0.5	excavate	<0.219	<0.024	98	8,600	3,400	**12,098**	--	95
	8/2/2018	1	excavate	--	--	1200	2,400	7,500	**11,100**	--	--
	8/2/2018	2	excavate	--	--	99	1,100	400	**1,599**	--	--
	8/2/2018	3	in-situ	--	--	18	170	68	256	--	--
	8/2/2018	4	in-situ	--	--	<4.8	<9.3	<47	<62	--	--
L6	7/6/2018	0.5	in-situ	<0.024	<0.212	<4.7	<9.8	<49	<63.5	--	94

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- Field Screens (ppm)	Cl- Laboratory mg/Kg
NMOCD Closure Criteria				50	10				1000/2500		600/20,000*
L7	7/6/2018	0.5	excavate	<0.023	<0.207	<4.6	5,100	2,500	**7,605**	--	3,200
	8/2/2018	1	in-situ	--	--	<5.0	<9.9	<50	<65	<270	35
	8/2/2018	2	in-situ	--	--	--	--	--	--	1520	1,600
	8/2/2018	3	in-situ	--	--	--	--	--	--	627	910
	8/2/2018	4	in-situ	--	--	--	--	--	--	<270	130
L8	7/6/2018	0.5	in-situ	0.024	<0.216	<4.8	210	100	315	--	210
L9	7/6/2018	0.5	excavate	<0.024	<0.214	**20**	**16,000**	**<990**	**17,010**	--	2,500
	8/2/2018	1	excavate	--	--	--	--	--	--	1250	--
	8/2/2018	2	excavate	--	--	180	5400	<450	**5580**	372	390
	8/2/2018	3	in-situ	--	--	<4.8	44	<49	44	<270	95
BG1	8/2/2018	0.5	in-situ	--	--	--	--	--	--	<270	--
BG2	8/2/2018	0.5	in-situ	--	--	--	--	--	--	<270	--
SW1	8/2/2018	sidewall	in-situ	--	--	<4.8	<9.3	<46	<61	<270	<30
SW2	8/2/2018	sidewall	in-situ	--	--	--	--	--	--	<270	540
SW3	8/2/2018	sidewall	excavate	--	--	--	--	--	--	357	**950**
SW4	8/2/2018	sidewall	in-situ	--	--	<4.8	<9.8	<49	<64	<270	31
SW5	8/2/2018	sidewall	in-situ	--	--	--	--	--	--	<270	610
SW6	8/2/2018	sidewall	in-situ	--	--	--	--	--	--	<270	110
SW7	8/2/2018	sidewall	in-situ	--	--	<4.7	<9.2	<46	<61	<270	<30
SW8	8/2/2018	sidewall	in-situ	--	--	<4.6	<9.4	<47	<62	<270	<30
SW9	8/2/2018	sidewall	in-situ	--	--	--	--	--	--	357	380
SW10	8/2/2018	sidewall	in-situ	--	--	<4.8	63	<46	63	<270	220
SW11	8/2/2018	sidewall	in-situ	--	--	<5.0	<9.5	<48	<63	--	640

Closure Sampling Event

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- Laboratory mg/Kg
NMOCD Closure Criteria				50	10	1000			2500	600/10,000*
L1	9/26/2018	1	in-situ	--	--	--	--	--	--	<30
L2	9/26/2018	2	in-situ	--	--	--	--	--	--	<30
L3	9/26/2018	0.5	in-situ	--	--	--	--	--	--	<30
L4	9/26/2018	0.5	requesting deferral	--	--	--	--	--	--	2,600
L5	9/26/2018	2	in-situ	<0.23	<0.024	<4.9	11	<4.9	11	180
L6	9/26/2018	0.5	in-situ	--	--	--	--	--	--	50
L7	9/28/2018	0.5	requesting deferral	<0.23	<0.024	<4.9	520	610	1,130	<30
L8	9/28/2018	0.5	in-situ	--	--	--	--	--	--	200
L9	10/1/2018	2	in-situ	<0.23	<0.024	<4.8	<10	<50	<64.8	140
L10	9/28/2018	2	in-situ	--	--	--	--	--	--	86
L11	9/28/2018	2	in-situ	--	--	--	--	--	--	140
SW1	9/28/2018	sidewall	in-situ	--	--	--	--	--	--	<30
SW3	9/28/2018	sidewall	in-situ	<0.23	<0.024	<4.7	<9.7	<48	<63	140
SW10	9/28/2018	sidewall	in-situ	<0.23	<0.025	<5.0	<9.6	<48	<62.6	170

APPENDIX A
FORM C141

RECEIVED

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

APR 30 2018

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

DISTRICT II-ARTESIA O.C.D.

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

NAB1812233389

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Marathon Oil Permian LLC 372098	Contact Callie Karrigan
Address 5555 San Felipe Street, Houston, Texas 77056	Telephone No. 405-202-1028 (cell) 575-297-0956 (office)
Facility Name: Sterling 20 State 1H	Facility Type Oil and gas production facilities

Surface: Owner: state	Mineral: Owner: state	API No. : 30-015-42731

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	17	23S	27E	240	south	1950	east	Eddy

Latitude 32.2985.**Longitude** -104.2086

NATURE OF RELEASE

Type of Release: produced water	Volume of Release 5.18 bbl	Volume Recovered: 4.50 bbl
Source of Release: flare	Date and Hour of Occurrence 04/17/2018 6:00 am	Date and Hour of Discovery 04/17/2018 6:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Eddy County – Mike Bratcher and Crystal Weaver, SLO – Ryan Mann	
By Whom? Callie Karrigan	Date and Hour 04/17/2018 3:15 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
Not applicable.

Describe Cause of Problem and Remedial Action Taken.*
Flowback Operator reported that the free water knock out (FWKO) lost supply gas, not allowing the vessel to dump fluids. The FWKO high leveled and traveled down the flare line, sending fluids out the flare and an overspray. Fluid also released from the back pressure valve on the FWKO inside containment, releasing an estimated 3.50 barrels. Overspray traveled from the flare on and off location (see attached survey).

Describe Area Affected and Cleanup Action Taken.*
Standing fluids in containment were recovered via vac track. Absorbent material was used to recover excess fluids and the liner was washed. The liner integrity was inspected with no damage or breach of the liner. The offsite release has been marked off for clean-up. The area will be scraped 0-6 inches with soil samples taken for lab analysis. The affected area will be backfilled and seeded.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Callie Karrigan Signature:	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Signed By Mike Bratcher
Printed Name: Callie Karrigan	
Title: HES Environmental Professional	Approval Date: 5/1/18 Expiration Date: N/A
E-mail Address: cnkarrigan@marathonoil.com	Conditions of Approval: See attached Attached ☑ 2RP-4725
Date: 04/30/2018 Phone: 405-202-1028(cell) 575-297-0956 (office)	

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 4/30/2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4725 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 5/30/2018. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

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	nAB182233389
District RP	2RP4725
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Marathon Oil Permian	OGRID 372098
Contact Name Callie Karrigan	Contact Telephone 405-202-1028 (cell) 575-297-0956 (office)
Contact email cnkarrigan@marathonoil.com	Incident # *(assigned by OCD)*
Contact mailing address 5555 San Felipe St, Houston Texas 77056	

Location of Release Source

Latitude 32.2985 Longitude -104.2086
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Sterling 20 State 1H	Site Type Oil and Gas Production Facilities
Date Release Discovered 4/17/2018	API# *(if applicable)* 30-015-42731

Unit Letter	Section	Township	Range	County
O	17	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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 5.18	Volume Recovered (bbls) 4.5
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Flowback Operator reported that the free water knock out (FWKO) lost supply gas, not allowing the vessel to dump fluids. The FWKO high leveled and
traveled down the flare line, sending fluids out the flare and an overspray. Fluid also released from the back pressure valve on the FWKO inside
containment, releasing an estimated 3.50 barrels. Overspray traveled from the flare on and off location

State of New Mexico
Oil Conservation Division

Incident ID	nAB1812233389
District RP	2RP-4725
Facility ID	
Application ID	

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

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

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

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

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

If all the actions described above have not been undertaken, explain why:

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: _1/24/2019_____

email: ___cnkarrigan@marathonoil.com_____ Telephone: __575-297-0956_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAB1812233389
District RP	2RP-4725
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	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
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	nAB1812233389
District RP	2RP-4725
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: __Melodie Sanjari_____ Title: _____HES Professional_____

Signature:_____ *Melodie Sanjari*_____ Date: ___6/20/2023_____

email: ___msanjari@marathonoil.com_____ Telephone: ___575-988-8752_____

OCD Only

Received by: ____Jocelyn Harimon_____ Date: ___06/26/2023___

Deferral not approved 06/26/2023 Jocelyn Harimon

APPENDIX B
NMOSE WELLS REPORT

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

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	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		

Average Depth to Water: **139 feet**

Minimum Depth: **100 feet**

Maximum Depth: **175 feet**

Record Count: 11

UTMNAD83 Radius Search (in meters):

Easting (X): 574528.79 **Northing (Y):** 3573754.32 **Radius:** 2500

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

APPENDIX C

SAMPLING PROTOCOL, FIELD NOTES AND PHOTO DOCUMENTATION

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

Sampling Protocol

Representatives from SMA chose the Judgmental Sampling Method as described in EPA's Final Sampling Guidance for SW-846, 2002 to adequately quantify contaminant concentrations on the Sterling 20 State 1H Location. The utility of this particular method functions on the sufficient knowledge of the contaminant, which we possess. This design is also useful when identifying the composition of a release, which we have documented. In addition, this sampling design was chosen for this project because of the locations uniform soil type and the several operational considerations that precluded the implementation of a different statistical design.

The soil samples were collected in laboratory supplied containers in accordance with this sampling protocol, immediately placed on ice and sent under standard chain-of-custody protocols to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico for analysis. A total of twenty-nine (29) 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.

Sampling Analysis Field Quality Assurance Procedures

A unique sample numbering was used to identify each sample collected and designated for on-site and off-site laboratory analysis. The purpose of this numbering scheme was to provide a tracking system for the retrieval of analytical and field data on each sample. Sample identification numbers were recorded on sample labels or tags, field notes, chain-of-custody records (COC) and all other applicable documentation used during the project. Sample labels were affixed to all sample containers during sampling activities. Information was recorded on each sample container label at the time of sample collection. The information recorded on the labels were as follows: sample identification number; sample type (discrete or composite); site name and area/location number; analysis to be performed; type of chemical preservative present in container; date and time of sample collection; and sample collector's name and initials. All samples were packed in ice in an approved rigid body container, custody sealed signed and shipped to the appropriate laboratory via insured currier service.

COC procedures implemented for the project provided documentation of the handling of each sample from the time of collection until completion of laboratory analysis. A COC form serves as a legal record of possession of the sample. A sample is considered to be under custody if one or more of the following criteria are met: the sample is in the sampler's possession; the sample is in the sampler's view after being in possession; the sample was in the sampler's possession and then was placed into a locked area to prevent tampering; and/or the sample is in a designated secure area. Custody was documented throughout the project field sampling activities by a chain-of custody form initiated each day during which samples are collected. Container custody seals placed on either individual samples or on the rigid body container were used to ensure that no sample tampering occurs between the time the samples are placed into the containers and the time the containers are opened for analysis at the laboratory. Container custody seals were signed and dated by the individual responsible for completing the COC form contained within the container.

Photograph Log

Photo Taken 09/26/2018

Facing East

32°17'54.95"N 104°12'31.39"W

Photograph Log

Photo Taken 09/27/2018

Facing North

32°17'54.69"N 104°12'31.13"W

Photograph Log

Photo Taken 09/28/2018

Facing North

32°17'54.64"N 104°12'31.09"W

Photograph Log

Photo Taken 09/28/2018

Facing North

32°17'54.63"N 104°12'31.07"W

APPENDIX D

LABORATORY ANALYTICAL REPORTS

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

July 19, 2018

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

RE: Sterling OrderNo.: 1807382

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 9 sample(s) on 7/10/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1807382**
Date Reported: **7/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-0.5
Project: Sterling
Collection Date: 7/6/2018 11:25:00 AM
Lab ID: 1807382-001 **Matrix:** SOIL **Received Date:** 7/10/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	810	30		mg/Kg	20	7/17/2018 7:31:49 AM	39212
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/14/2018 7:46:28 AM	39158
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/14/2018 7:46:28 AM	39158
Surr: DNOP	95.7	70-130		%Rec	1	7/14/2018 7:46:28 AM	39158
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/12/2018 1:08:04 AM	39133
Surr: BFB	82.3	15-316		%Rec	1	7/12/2018 1:08:04 AM	39133
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	7/12/2018 1:08:04 AM	39133
Benzene	ND	0.025		mg/Kg	1	7/12/2018 1:08:04 AM	39133
Toluene	ND	0.050		mg/Kg	1	7/12/2018 1:08:04 AM	39133
Ethylbenzene	ND	0.050		mg/Kg	1	7/12/2018 1:08:04 AM	39133
Xylenes, Total	ND	0.10		mg/Kg	1	7/12/2018 1:08:04 AM	39133
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	7/12/2018 1:08:04 AM	39133

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

Qualifiers:

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

Analytical Report
Lab Order **1807382**
Date Reported: **7/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-0.5
Project: Sterling
Collection Date: 7/6/2018 11:35:00 AM
Lab ID: 1807382-002 **Matrix:** SOIL **Received Date:** 7/10/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	2500	150		mg/Kg	100	7/17/2018 6:10:48 PM	39246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/14/2018 8:08:31 AM	39158
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2018 8:08:31 AM	39158
Surr: DNOP	84.6	70-130		%Rec	1	7/14/2018 8:08:31 AM	39158
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/12/2018 1:31:22 AM	39133
Surr: BFB	81.4	15-316		%Rec	1	7/12/2018 1:31:22 AM	39133
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	0.093		mg/Kg	1	7/12/2018 1:31:22 AM	39133
Benzene	ND	0.023		mg/Kg	1	7/12/2018 1:31:22 AM	39133
Toluene	ND	0.047		mg/Kg	1	7/12/2018 1:31:22 AM	39133
Ethylbenzene	ND	0.047		mg/Kg	1	7/12/2018 1:31:22 AM	39133
Xylenes, Total	ND	0.093		mg/Kg	1	7/12/2018 1:31:22 AM	39133
Surr: 4-Bromofluorobenzene	92.4	80-120		%Rec	1	7/12/2018 1:31:22 AM	39133

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

Qualifiers:

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

Analytical Report
Lab Order **1807382**
Date Reported: **7/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-0.5
Project: Sterling
Collection Date: 7/6/2018 11:45:00 AM
Lab ID: 1807382-003 **Matrix:** SOIL **Received Date:** 7/10/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	6400	300		mg/Kg	200	7/17/2018 6:23:13 PM	39246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	180	10		mg/Kg	1	7/14/2018 8:31:04 AM	39158
Motor Oil Range Organics (MRO)	110	50		mg/Kg	1	7/14/2018 8:31:04 AM	39158
Surr: DNOP	103	70-130		%Rec	1	7/14/2018 8:31:04 AM	39158
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/12/2018 1:54:38 AM	39133
Surr: BFB	80.6	15-316		%Rec	1	7/12/2018 1:54:38 AM	39133
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	7/12/2018 1:54:38 AM	39133
Benzene	ND	0.025		mg/Kg	1	7/12/2018 1:54:38 AM	39133
Toluene	ND	0.049		mg/Kg	1	7/12/2018 1:54:38 AM	39133
Ethylbenzene	ND	0.049		mg/Kg	1	7/12/2018 1:54:38 AM	39133
Xylenes, Total	ND	0.098		mg/Kg	1	7/12/2018 1:54:38 AM	39133
Surr: 4-Bromofluorobenzene	89.4	80-120		%Rec	1	7/12/2018 1:54:38 AM	39133

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

Qualifiers:

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

Analytical Report
Lab Order **1807382**
Date Reported: **7/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-0.5
Project: Sterling
Collection Date: 7/6/2018 11:55:00 AM
Lab ID: 1807382-004 **Matrix:** SOIL **Received Date:** 7/10/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	4000	150		mg/Kg	100	7/17/2018 6:35:38 PM	39246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	430	9.9		mg/Kg	1	7/14/2018 9:37:43 AM	39158
Motor Oil Range Organics (MRO)	300	50		mg/Kg	1	7/14/2018 9:37:43 AM	39158
Surr: DNOP	108	70-130		%Rec	1	7/14/2018 9:37:43 AM	39158
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/12/2018 2:17:56 AM	39133
Surr: BFB	85.2	15-316		%Rec	1	7/12/2018 2:17:56 AM	39133
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	0.092		mg/Kg	1	7/12/2018 2:17:56 AM	39133
Benzene	ND	0.023		mg/Kg	1	7/12/2018 2:17:56 AM	39133
Toluene	ND	0.046		mg/Kg	1	7/12/2018 2:17:56 AM	39133
Ethylbenzene	ND	0.046		mg/Kg	1	7/12/2018 2:17:56 AM	39133
Xylenes, Total	ND	0.092		mg/Kg	1	7/12/2018 2:17:56 AM	39133
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	7/12/2018 2:17:56 AM	39133

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

Qualifiers:

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

Analytical Report
Lab Order **1807382**
Date Reported: **7/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5-0.5
Project: Sterling
Collection Date: 7/6/2018 12:05:00 PM
Lab ID: 1807382-005 **Matrix:** SOIL **Received Date:** 7/10/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	95	30		mg/Kg	20	7/17/2018 2:27:26 PM	39246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	8600	97		mg/Kg	10	7/14/2018 11:28:56 AM	39158
Motor Oil Range Organics (MRO)	3400	480		mg/Kg	10	7/14/2018 11:28:56 AM	39158
Surr: DNOP	0	70-130	S	%Rec	10	7/14/2018 11:28:56 AM	39158
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	98	4.9		mg/Kg	1	7/12/2018 2:41:10 AM	39133
Surr: BFB	714	15-316	S	%Rec	1	7/12/2018 2:41:10 AM	39133
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	7/12/2018 2:41:10 AM	39133
Benzene	ND	0.024		mg/Kg	1	7/12/2018 2:41:10 AM	39133
Toluene	ND	0.049		mg/Kg	1	7/12/2018 2:41:10 AM	39133
Ethylbenzene	ND	0.049		mg/Kg	1	7/12/2018 2:41:10 AM	39133
Xylenes, Total	0.41	0.097		mg/Kg	1	7/12/2018 2:41:10 AM	39133
Surr: 4-Bromofluorobenzene	120	80-120		%Rec	1	7/12/2018 2:41:10 AM	39133

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

Qualifiers:

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

Analytical Report
Lab Order **1807382**
Date Reported: **7/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L6-0.5
Project: Sterling
Collection Date: 7/6/2018 12:15:00 PM
Lab ID: 1807382-006 **Matrix:** SOIL **Received Date:** 7/10/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	94	30		mg/Kg	20	7/17/2018 3:04:40 PM	39246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/14/2018 12:35:19 PM	39158
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2018 12:35:19 PM	39158
Surr: DNOP	98.3	70-130		%Rec	1	7/14/2018 12:35:19 PM	39158
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/12/2018 3:04:19 AM	39133
Surr: BFB	88.3	15-316		%Rec	1	7/12/2018 3:04:19 AM	39133
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.094		mg/Kg	1	7/12/2018 3:04:19 AM	39133
Benzene	ND	0.024		mg/Kg	1	7/12/2018 3:04:19 AM	39133
Toluene	ND	0.047		mg/Kg	1	7/12/2018 3:04:19 AM	39133
Ethylbenzene	ND	0.047		mg/Kg	1	7/12/2018 3:04:19 AM	39133
Xylenes, Total	ND	0.094		mg/Kg	1	7/12/2018 3:04:19 AM	39133
Surr: 4-Bromofluorobenzene	96.4	80-120		%Rec	1	7/12/2018 3:04:19 AM	39133

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

Qualifiers:

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

Analytical Report
Lab Order **1807382**
Date Reported: **7/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-0.5
Project: Sterling
Collection Date: 7/6/2018 12:25:00 PM
Lab ID: 1807382-007 **Matrix:** SOIL **Received Date:** 7/10/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	3200	150		mg/Kg	100	7/17/2018 7:12:51 PM	39246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	5100	99		mg/Kg	10	7/14/2018 12:57:33 PM	39158
Motor Oil Range Organics (MRO)	2500	490		mg/Kg	10	7/14/2018 12:57:33 PM	39158
Surr: DNOP	0	70-130	S	%Rec	10	7/14/2018 12:57:33 PM	39158
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/12/2018 3:27:32 AM	39133
Surr: BFB	109	15-316		%Rec	1	7/12/2018 3:27:32 AM	39133
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.092		mg/Kg	1	7/12/2018 3:27:32 AM	39133
Benzene	ND	0.023		mg/Kg	1	7/12/2018 3:27:32 AM	39133
Toluene	ND	0.046		mg/Kg	1	7/12/2018 3:27:32 AM	39133
Ethylbenzene	ND	0.046		mg/Kg	1	7/12/2018 3:27:32 AM	39133
Xylenes, Total	ND	0.092		mg/Kg	1	7/12/2018 3:27:32 AM	39133
Surr: 4-Bromofluorobenzene	94.0	80-120		%Rec	1	7/12/2018 3:27:32 AM	39133

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

Qualifiers:

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

Analytical Report
Lab Order **1807382**
Date Reported: **7/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L8-0.5
Project: Sterling
Collection Date: 7/6/2018 12:35:00 PM
Lab ID: 1807382-008 **Matrix:** SOIL **Received Date:** 7/10/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	210	30		mg/Kg	20	7/17/2018 3:29:29 PM	39246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	210	10		mg/Kg	1	7/14/2018 2:04:08 PM	39158
Motor Oil Range Organics (MRO)	100	50		mg/Kg	1	7/14/2018 2:04:08 PM	39158
Surr: DNOP	105	70-130		%Rec	1	7/14/2018 2:04:08 PM	39158
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/12/2018 3:50:50 AM	39133
Surr: BFB	84.4	15-316		%Rec	1	7/12/2018 3:50:50 AM	39133
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	7/12/2018 3:50:50 AM	39133
Benzene	ND	0.024		mg/Kg	1	7/12/2018 3:50:50 AM	39133
Toluene	ND	0.048		mg/Kg	1	7/12/2018 3:50:50 AM	39133
Ethylbenzene	ND	0.048		mg/Kg	1	7/12/2018 3:50:50 AM	39133
Xylenes, Total	ND	0.096		mg/Kg	1	7/12/2018 3:50:50 AM	39133
Surr: 4-Bromofluorobenzene	95.8	80-120		%Rec	1	7/12/2018 3:50:50 AM	39133

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

Qualifiers:

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

Analytical Report
Lab Order **1807382**
Date Reported: **7/19/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L9-0.5
Project: Sterling
Collection Date: 7/6/2018 12:45:00 PM
Lab ID: 1807382-009 **Matrix:** SOIL **Received Date:** 7/10/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	2500	75		mg/Kg	50	7/17/2018 7:25:16 PM	39246
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	16000	200		mg/Kg	20	7/16/2018 5:32:43 PM	39158
Motor Oil Range Organics (MRO)	ND	990		mg/Kg	20	7/16/2018 5:32:43 PM	39158
Surr: DNOP	0	70-130	S	%Rec	20	7/16/2018 5:32:43 PM	39158
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	20	4.7		mg/Kg	1	7/12/2018 4:14:12 AM	39133
Surr: BFB	294	15-316		%Rec	1	7/12/2018 4:14:12 AM	39133
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	0.095		mg/Kg	1	7/12/2018 4:14:12 AM	39133
Benzene	ND	0.024		mg/Kg	1	7/12/2018 4:14:12 AM	39133
Toluene	ND	0.047		mg/Kg	1	7/12/2018 4:14:12 AM	39133
Ethylbenzene	ND	0.047		mg/Kg	1	7/12/2018 4:14:12 AM	39133
Xylenes, Total	ND	0.095		mg/Kg	1	7/12/2018 4:14:12 AM	39133
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	7/12/2018 4:14:12 AM	39133

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807382**

19-Jul-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-39212**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**39212**	RunNo:	**52749**					
Prep Date:	**7/16/2018**	Analysis Date:	**7/17/2018**	SeqNo:	**1732696**	Units:	**mg/Kg**			

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

Sample ID	**LCS-39212**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**39212**	RunNo:	**52749**					
Prep Date:	**7/16/2018**	Analysis Date:	**7/17/2018**	SeqNo:	**1732697**	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			

Sample ID	**MB-39246**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**39246**	RunNo:	**52750**					
Prep Date:	**7/17/2018**	Analysis Date:	**7/17/2018**	SeqNo:	**1733779**	Units:	**mg/Kg**			

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

Sample ID	**LCS-39246**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**39246**	RunNo:	**52750**					
Prep Date:	**7/17/2018**	Analysis Date:	**7/17/2018**	SeqNo:	**1733780**	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#: **1807382**

19-Jul-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-39158**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID:	**39158**	RunNo:	**52652**					
Prep Date:	**7/11/2018**	Analysis Date:	**7/12/2018**	SeqNo:	**1728319**	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	9.5		10.00		95.2	70	130			

Sample ID	**LCS-39158**	SampType:	**LCS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID:	**39158**	RunNo:	**52652**					
Prep Date:	**7/11/2018**	Analysis Date:	**7/12/2018**	SeqNo:	**1728320**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	70	130			
Surr: DNOP	4.6		5.000		91.3	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#: **1807382**

19-Jul-18

Client: Souder, Miller & Associates
Project: Sterling

Sample ID	**MB-39120**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**39120**	RunNo:	**52630**					
Prep Date:	**7/10/2018**	Analysis Date:	**7/11/2018**	SeqNo:	**1727168**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		93.5	15	316			

Sample ID	**LCS-39120**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**39120**	RunNo:	**52630**					
Prep Date:	**7/10/2018**	Analysis Date:	**7/11/2018**	SeqNo:	**1727169**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		105	15	316			

Sample ID	**MB-39133**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**39133**	RunNo:	**52630**					
Prep Date:	**7/10/2018**	Analysis Date:	**7/11/2018**	SeqNo:	**1727188**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		101	15	316			

Sample ID	**LCS-39133**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**39133**	RunNo:	**52630**					
Prep Date:	**7/10/2018**	Analysis Date:	**7/11/2018**	SeqNo:	**1727189**	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	102	75.9	131			
Surr: BFB	1000		1000		104	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807382**

19-Jul-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-39120**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**39120**	RunNo:	**52630**					
Prep Date:	**7/10/2018**	Analysis Date:	**7/11/2018**	SeqNo:	**1727210**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	**LCS-39120**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**39120**	RunNo:	**52630**					
Prep Date:	**7/10/2018**	Analysis Date:	**7/11/2018**	SeqNo:	**1727211**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	**MB-39133**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**39133**	RunNo:	**52630**					
Prep Date:	**7/10/2018**	Analysis Date:	**7/11/2018**	SeqNo:	**1727221**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	**LCS-39133**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**39133**	RunNo:	**52630**					
Prep Date:	**7/10/2018**	Analysis Date:	**7/11/2018**	SeqNo:	**1727222**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.92	0.10	1.000	0	92.2	70.1	121			
Benzene	0.97	0.025	1.000	0	97.0	77.3	128			
Toluene	0.99	0.050	1.000	0	99.4	79.2	125			
Ethylbenzene	0.99	0.050	1.000	0	98.6	80.7	127			
Xylenes, Total	3.0	0.10	3.000	0	101	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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: 1807382 RcptNo: 1

Received By: Isaiah Ortiz 7/10/2018 9:00:00 AM IO

Completed By: Isaiah Ortiz 7/10/2018 11:56:35 AM IO

Reviewed By: ENM 7/10/18 Labeled by: JAB 07/10/18

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? 07/10/18
Checked by: JAB

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

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

Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 5 day

Project Name: Sterling

Project #:

Project Manager: Austin Weyant

Sampler: HMP

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1807382	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
7/6/18	11:25	soil	L1-0.5	4oz		-001	X		X					X				
	11:35		L2-0.5			-002	X		X					X				
	11:45		L3-0.5			-003	X		X					X				
	11:55		L4-0.5			-004	X		X					X				
	12:05		L5-0.5			-005	X		X					X				
	12:15		L6-0.5			-006	X		X					X				
	12:25		L7-0.5			-007	X		X					X				
	12:35		L8-0.5			-008	X		X					X				
	12:45		L9-0.5			-009	X		X					X				

Date	Time	Relinquished by:	Received by:	Date	Time
7/6/18	1400			7/6/18	1400
7/6/18	1900		courier	7/6/18	0900

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

August 15, 2018

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

RE: Sterling OrderNo.: 1808257

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 29 sample(s) on 8/4/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-2
Project: Sterling
Collection Date: 8/2/2018 8:11:00 AM
Lab ID: 1808257-001 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	530	30		mg/Kg	20	8/7/2018 10:37:48 PM	39649

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-3
Project: Sterling
Collection Date: 8/2/2018 8:15:00 AM
Lab ID: 1808257-002 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	390	30		mg/Kg	20	8/7/2018 10:50:13 PM	39649

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-1
Project: Sterling
Collection Date: 8/2/2018 8:18:00 AM
Lab ID: 1808257-003 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1600	75		mg/Kg	50	8/10/2018 10:07:21 PM	39649

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-3
Project: Sterling
Collection Date: 8/2/2018 8:25:00 AM
Lab ID: 1808257-004 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	350	30		mg/Kg	20	8/7/2018 11:15:03 PM	39649

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-4
Project: Sterling
Collection Date: 8/2/2018 8:30:00 AM
Lab ID: 1808257-005 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	83	30		mg/Kg	20	8/8/2018 5:48:17 PM	39676

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-2
Project: Sterling
Collection Date: 8/2/2018 8:45:00 AM
Lab ID: 1808257-006 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	8/8/2018 6:25:30 PM	39676

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-1
Project: Sterling
Collection Date: 8/2/2018 9:00:00 AM
Lab ID: 1808257-007 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	480	30		mg/Kg	20	8/8/2018 6:37:55 PM	39676

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-2
Project: Sterling
Collection Date: 8/2/2018 9:05:00 AM
Lab ID: 1808257-008 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	320	30		mg/Kg	20	8/8/2018 6:50:20 PM	39676

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5-1
Project: Sterling
Collection Date: 8/2/2018 9:20:00 AM
Lab ID: 1808257-009 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	1200	24		mg/Kg	5	8/7/2018 6:56:15 PM	39617
Surr: BFB	109	70-130		%Rec	5	8/7/2018 6:56:15 PM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	7500	100		mg/Kg	10	8/8/2018 5:02:43 PM	39630
Motor Oil Range Organics (MRO)	2400	500		mg/Kg	10	8/8/2018 5:02:43 PM	39630
Surr: DNOP	0	50.6-138	S	%Rec	10	8/8/2018 5:02:43 PM	39630

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5-2
Project: Sterling
Collection Date: 8/2/2018 9:25:00 AM
Lab ID: 1808257-010 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	99	4.8		mg/Kg	1	8/7/2018 9:38:40 PM	39617
Surr: BFB	122	70-130		%Rec	1	8/7/2018 9:38:40 PM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	1100	47		mg/Kg	5	8/9/2018 3:36:17 PM	39630
Motor Oil Range Organics (MRO)	400	230		mg/Kg	5	8/9/2018 3:36:17 PM	39630
Surr: DNOP	113	50.6-138		%Rec	5	8/9/2018 3:36:17 PM	39630

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

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5-3
Project: Sterling
Collection Date: 8/2/2018 9:30:00 AM
Lab ID: 1808257-011 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	18	4.9		mg/Kg	1	8/7/2018 10:01:45 PM	39617
Surr: BFB	121	70-130		%Rec	1	8/7/2018 10:01:45 PM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	170	10		mg/Kg	1	8/8/2018 7:30:58 PM	39630
Motor Oil Range Organics (MRO)	68	51		mg/Kg	1	8/8/2018 7:30:58 PM	39630
Surr: DNOP	85.8	50.6-138		%Rec	1	8/8/2018 7:30:58 PM	39630

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5-4
Project: Sterling
Collection Date: 8/2/2018 9:35:00 AM
Lab ID: 1808257-012 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/7/2018 10:24:47 PM	39617
Surr: BFB	117	70-130		%Rec	1	8/7/2018 10:24:47 PM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/8/2018 8:44:59 PM	39630
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/8/2018 8:44:59 PM	39630
Surr: DNOP	95.7	50.6-138		%Rec	1	8/8/2018 8:44:59 PM	39630

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-1
Project: Sterling
Collection Date: 8/2/2018 9:47:00 AM
Lab ID: 1808257-013 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	35	30		mg/Kg	20	8/8/2018 7:02:45 PM	39676
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/7/2018 10:47:54 PM	39617
Surr: BFB	114	70-130		%Rec	1	8/7/2018 10:47:54 PM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/8/2018 9:59:18 PM	39630
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/8/2018 9:59:18 PM	39630
Surr: DNOP	87.5	50.6-138		%Rec	1	8/8/2018 9:59:18 PM	39630

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-2
Project: Sterling
Collection Date: 8/2/2018 9:49:00 AM
Lab ID: 1808257-014 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1600	75		mg/Kg	50	8/10/2018 10:19:45 PM	39676

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-3
Project: Sterling
Collection Date: 8/2/2018 9:50:00 AM
Lab ID: 1808257-015 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	910	30		mg/Kg	20	8/8/2018 7:52:22 PM	39676

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-4
Project: Sterling
Collection Date: 8/2/2018 9:58:00 AM
Lab ID: 1808257-016 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	130	30		mg/Kg	20	8/8/2018 8:04:46 PM	39676

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Sterling
Collection Date: 8/2/2018 10:10:00 AM
Lab ID: 1808257-017 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	8/8/2018 8:17:11 PM	39676
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/7/2018 11:10:57 PM	39617
Surr: BFB	111	70-130		%Rec	1	8/7/2018 11:10:57 PM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	10	9.3		mg/Kg	1	8/8/2018 11:13:23 PM	39630
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/8/2018 11:13:23 PM	39630
Surr: DNOP	87.5	50.6-138		%Rec	1	8/8/2018 11:13:23 PM	39630

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L9-2
Project: Sterling
Collection Date: 8/2/2018 10:33:00 AM
Lab ID: 1808257-018 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	390	30		mg/Kg	20	8/8/2018 8:29:35 PM	39676
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	180	23		mg/Kg	5	8/7/2018 11:34:02 PM	39617
Surr: BFB	171	70-130	S	%Rec	5	8/7/2018 11:34:02 PM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	5500	90		mg/Kg	10	8/9/2018 4:01:00 PM	39630
Motor Oil Range Organics (MRO)	ND	450	D	mg/Kg	10	8/9/2018 4:01:00 PM	39630
Surr: DNOP	0	50.6-138	S	%Rec	10	8/9/2018 4:01:00 PM	39630

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L9-3
Project: Sterling
Collection Date: 8/2/2018 10:36:00 AM
Lab ID: 1808257-019 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	95	30		mg/Kg	20	8/8/2018 8:42:00 PM	39676
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/7/2018 11:57:08 PM	39617
Surr: BFB	120	70-130		%Rec	1	8/7/2018 11:57:08 PM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	44	9.7		mg/Kg	1	8/9/2018 1:41:21 AM	39630
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/9/2018 1:41:21 AM	39630
Surr: DNOP	86.3	50.6-138		%Rec	1	8/9/2018 1:41:21 AM	39630

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: Sterling
Collection Date: 8/2/2018 10:45:00 AM
Lab ID: 1808257-020 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	540	30		mg/Kg	20	8/8/2018 8:54:25 PM	39676

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW3
Project: Sterling
Collection Date: 8/2/2018 10:50:00 AM
Lab ID: 1808257-021 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	950	75		mg/Kg	50	8/9/2018 2:06:17 PM	39689

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW4
Project: Sterling
Collection Date: 8/2/2018 11:25:00 AM
Lab ID: 1808257-022 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	31	30		mg/Kg	20	8/9/2018 2:43:30 PM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/8/2018 12:20:13 AM	39617
Surr: BFB	113	70-130		%Rec	1	8/8/2018 12:20:13 AM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/9/2018 3:19:47 AM	39630
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/9/2018 3:19:47 AM	39630
Surr: DNOP	64.8	50.6-138		%Rec	1	8/9/2018 3:19:47 AM	39630

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW5
Project: Sterling
Collection Date: 8/2/2018 1:15:00 AM
Lab ID: 1808257-023 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	610	30		mg/Kg	20	8/9/2018 2:55:54 PM	39689

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW6
Project: Sterling
Collection Date: 8/2/2018 1:18:00 AM
Lab ID: 1808257-024 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	110	30		mg/Kg	20	8/9/2018 3:08:19 PM	39689

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW7
Project: Sterling
Collection Date: 8/2/2018 1:45:00 AM
Lab ID: 1808257-025 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	8/9/2018 3:20:43 PM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/8/2018 12:43:12 AM	39617
Surr: BFB	117	70-130		%Rec	1	8/8/2018 12:43:12 AM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/9/2018 4:33:28 AM	39630
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/9/2018 4:33:28 AM	39630
Surr: DNOP	67.5	50.6-138		%Rec	1	8/9/2018 4:33:28 AM	39630

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW8
Project: Sterling
Collection Date: 8/2/2018 1:47:00 AM
Lab ID: 1808257-026 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	8/9/2018 3:57:56 PM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/8/2018 1:06:17 AM	39617
Surr: BFB	110	70-130		%Rec	1	8/8/2018 1:06:17 AM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/9/2018 10:40:32 AM	39631
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/9/2018 10:40:32 AM	39631
Surr: DNOP	82.4	50.6-138		%Rec	1	8/9/2018 10:40:32 AM	39631

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW9
Project: Sterling
Collection Date: 8/2/2018 2:24:00 AM
Lab ID: 1808257-027 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	380	30		mg/Kg	20	8/9/2018 4:10:20 PM	39689

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW10
Project: Sterling
Collection Date: 8/2/2018 1:40:00 AM
Lab ID: 1808257-028 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	220	30		mg/Kg	20	8/9/2018 4:22:45 PM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/8/2018 1:29:27 AM	39617
Surr: BFB	110	70-130		%Rec	1	8/8/2018 1:29:27 AM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	63	9.2		mg/Kg	1	8/9/2018 11:54:10 AM	39631
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/9/2018 11:54:10 AM	39631
Surr: DNOP	73.2	50.6-138		%Rec	1	8/9/2018 11:54:10 AM	39631

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

Qualifiers:

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

Analytical Report
Lab Order **1808257**
Date Reported: **8/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW11
Project: Sterling
Collection Date: 8/2/2018 3:00:00 AM
Lab ID: 1808257-029 **Matrix:** SOIL **Received Date:** 8/4/2018 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	640	30		mg/Kg	20	8/9/2018 4:35:09 PM	39689
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/8/2018 1:52:33 AM	39617
Surr: BFB	112	70-130		%Rec	1	8/8/2018 1:52:33 AM	39617
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/9/2018 12:18:54 PM	39631
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/9/2018 12:18:54 PM	39631
Surr: DNOP	58.6	50.6-138		%Rec	1	8/9/2018 12:18:54 PM	39631

Refer to the QC Summary report and 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#: **1808257**

15-Aug-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-39649**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**39649**	RunNo:	**53285**					
Prep Date:	**8/7/2018**	Analysis Date:	**8/7/2018**	SeqNo:	**1754280**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-39649**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**39649**	RunNo:	**53285**					
Prep Date:	**8/7/2018**	Analysis Date:	**8/7/2018**	SeqNo:	**1754281**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.4	90	110			

Sample ID	**MB-39676**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**39676**	RunNo:	**53315**					
Prep Date:	**8/8/2018**	Analysis Date:	**8/8/2018**	SeqNo:	**1755324**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-39676**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**39676**	RunNo:	**53315**					
Prep Date:	**8/8/2018**	Analysis Date:	**8/8/2018**	SeqNo:	**1755325**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

Sample ID	**MB-39689**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**39689**	RunNo:	**53322**					
Prep Date:	**8/9/2018**	Analysis Date:	**8/9/2018**	SeqNo:	**1756389**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-39689**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**39689**	RunNo:	**53322**					
Prep Date:	**8/9/2018**	Analysis Date:	**8/9/2018**	SeqNo:	**1756390**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **1808257**

15-Aug-18

Client: Souder, Miller & Associates
Project: Sterling

Sample ID	**MB-39630**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID:	**39630**	RunNo:	**53282**					
Prep Date:	**8/7/2018**	Analysis Date:	**8/8/2018**	SeqNo:	**1753763**	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	8.0		10.00		80.2	50.6	138			

Sample ID	**LCS-39630**	SampType:	**LCS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID:	**39630**	RunNo:	**53282**					
Prep Date:	**8/7/2018**	Analysis Date:	**8/8/2018**	SeqNo:	**1753885**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.5	70	130			
Surr: DNOP	3.9		5.000		78.8	50.6	138			

Sample ID	**MB-39631**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID:	**39631**	RunNo:	**53282**					
Prep Date:	**8/7/2018**	Analysis Date:	**8/9/2018**	SeqNo:	**1755507**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		81.9	50.6	138			

Sample ID	**LCS-39631**	SampType:	**LCS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID:	**39631**	RunNo:	**53282**					
Prep Date:	**8/7/2018**	Analysis Date:	**8/9/2018**	SeqNo:	**1755508**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.0	70	130			
Surr: DNOP	4.0		5.000		79.0	50.6	138			

Sample ID	**1808257-026AMS**	SampType:	**MS**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**SW8**	Batch ID:	**39631**	RunNo:	**53282**					
Prep Date:	**8/7/2018**	Analysis Date:	**8/9/2018**	SeqNo:	**1755510**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.4	47.08	2.889	92.7	53.5	126			
Surr: DNOP	3.9		4.708		82.6	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#: **1808257**

15-Aug-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**1808257-026AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**SW8**	Batch ID:	**39631**		RunNo:	**53282**				
Prep Date:	**8/7/2018**	Analysis Date:	**8/9/2018**		SeqNo:	**1755511**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.4	46.86	2.889	91.2	53.5	126	1.95	21.7	
Surr: DNOP	3.9		4.686		84.2	50.6	138	0	0	

Sample ID	**MB-39736**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**39736**		RunNo:	**53383**				
Prep Date:	**8/13/2018**	Analysis Date:	**8/13/2018**		SeqNo:	**1758231**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.5		10.00		65.4	50.6	138			

Sample ID	**LCS-39736**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**39736**		RunNo:	**53383**				
Prep Date:	**8/13/2018**	Analysis Date:	**8/13/2018**		SeqNo:	**1758232**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.3		5.000		66.5	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#: **1808257**

15-Aug-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**1808257-009ams**	SampType:	**MS**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**					
Client ID:	**L5-1**	Batch ID:	**39617**		RunNo:	**53276**					
Prep Date:	**8/6/2018**	Analysis Date:	**8/7/2018**		SeqNo:	**1753410**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	1100	24	23.76	1186	-556	64.7	142			S	
Surr: BFB	2400		2376		101	70	130				

Sample ID	**lcs-39617**	SampType:	**LCS**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**39617**		RunNo:	**53276**					
Prep Date:	**8/6/2018**	Analysis Date:	**8/7/2018**		SeqNo:	**1753428**	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	70	130				
Surr: BFB	530		500.0		106	70	130				

Sample ID	**mb-39617**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**39617**		RunNo:	**53276**					
Prep Date:	**8/6/2018**	Analysis Date:	**8/7/2018**		SeqNo:	**1753429**	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	570		500.0		114	70	130				

Sample ID	**1808257-009amsd**	SampType:	**MSD**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**					
Client ID:	**L5-1**	Batch ID:	**39617**		RunNo:	**53276**					
Prep Date:	**8/6/2018**	Analysis Date:	**8/7/2018**		SeqNo:	**1753643**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	1000	23	23.19	1186	-646	64.7	142	1.68	20	S	
Surr: BFB	2300		2319		101	70	130	0	0		

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: SMA-CARLSBAD Work Order Number: 1808257 RcptNo: 1

Received By: **Erin Melendrez** 8/4/2018 10:15:00 AM

Completed By: **Ashley Gallegos** 8/6/2018 9:21:38 AM

Reviewed By: JAB 08/06/18 labeled by: 08/06/18

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: 08/06/18

Special Handling (if applicable)

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

Person Notified: Austin Weyant Date: 08/06/18
By Whom: Ashley Gallegos Via: ☒ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: Missing analysis for -008
Client Instructions: analyze for Cl 08/06/18

16. Additional remarks: see email

17. **Cooler Information**

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

Chain-of-Custody Record

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

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

Project Name: Sterling

Project #:

Project Manager: Austin Wesant

Sampler: AMP CLAA

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1-0.3(cf)=2.8

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808257	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
8/2/18	8:11	Soil	L1-2	4oz	/	-001								X								
	8:15		L1-3			-002								X								
	8:18		L2-1			-003								X								
	8:25		L2-3			-004								X								
	8:30		L2-4			-005								X								
	8:45		L3-2			-006								X								
	9:00		L4-1			-007								X								
	9:05		L4-2			-008																
	9:20		L5-1			-009			X													
	9:25		L5-2			-010			X													
	9:30		L5-3			-011			X													
	9:35		L5-4			-012			X													

Date	Time	Relinquished by:	Received by:	Date	Time
8/3/18	1400			8/3/18	1400
8/3/18	1900		Courier 8/4/18	8/4/18	1015

Remarks:
pg 1 of 3

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.

Chain-of-Custody Record

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

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

Project Name: Sterling

Project #:

Project Manager: Austin Weymouth

Sampler: LAA / ltrip

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1-0.3(cf)=2.8

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808257	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
8/2/18	9:47	Soil	L7-1	4oz		-013			X					X				
	9:49		L7-2			-014								X				
	9:50		L7-3			-015								X				
	9:58		L7-4			-016								X				
	10:10		SW1			-017			X					X				
	10:33		L9-2			-018			X					X				
	10:36		L9-3			-019			X					X				
	10:45		SW2			-020								X				
	10:50		SW3			-021								X				
	11:25		SW4			-022			X					X				
	1:15		SW5			-023								X				
	1:18		SW6			-024			X					X				

Date	Time	Relinquished by:	Received by:	Date	Time
8/3/18	1900			8/3/18	1400
8/3/18	1900		Courier EVM 8/4/18	8/4/18	1015

Remarks: Marathon

pg 2 of 3

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.

Chain-of-Custody Record

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

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation ☐ NELAP ☐ Other

☐ EDD (Type)

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

Project Name: Sterling

Project #:

Project Manager: Austin Weyant

Sampler: HWP/LAA

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1-0.3(CF)=2.8

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808257	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
8/2/18	1:45	Soil	SW7	4oz		-025			X					X								
	1:47		SW8			-026			X					X								
	2:24		SW9			-027								X								
	1:40		SW10			-028			X					X								
	3:00		SW11			-029			X					X								

Date	Time	Relinquished by	Received by	Date	Time
8/3/18	1400	[signature]	[signature]	8/3/18	1400
8/3/18	1900	[signature]	[signature] courier	8/4/18	1015

Remarks: Marathon
Pg. 3 of 3

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

October 09, 2018

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

RE: Sterling OrderNo.: 1810095

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 13 sample(s) on 10/2/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L-10-2
Project: Sterling
Collection Date: 9/28/2018 10:20:00 AM
Lab ID: 1810095-001 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	86	30		mg/Kg	20	10/4/2018 2:05:23 PM	40802

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L11-2
Project: Sterling
Collection Date: 9/28/2018 10:40:00 AM
Lab ID: 1810095-002 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	140	30		mg/Kg	20	10/4/2018 2:17:47 PM	40802

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW10
Project: Sterling
Collection Date: 9/28/2018 12:28:00 PM
Lab ID: 1810095-003 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	170	30		mg/Kg	20	10/4/2018 3:19:50 PM	40802
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**lrm**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/5/2018 11:31:42 PM	40813
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/5/2018 11:31:42 PM	40813
Surr: DNOP	94.3	50.6-138		%Rec	1	10/5/2018 11:31:42 PM	40813
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/4/2018 2:02:41 PM	40785
Surr: BFB	97.5	15-316		%Rec	1	10/4/2018 2:02:41 PM	40785
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	10/4/2018 2:02:41 PM	40785
Toluene	ND	0.050		mg/Kg	1	10/4/2018 2:02:41 PM	40785
Ethylbenzene	ND	0.050		mg/Kg	1	10/4/2018 2:02:41 PM	40785
Xylenes, Total	ND	0.099		mg/Kg	1	10/4/2018 2:02:41 PM	40785
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	10/4/2018 2:02:41 PM	40785

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Sterling
Collection Date: 9/28/2018 11:26:00 AM
Lab ID: 1810095-004 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/4/2018 3:32:15 PM	40802

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-1
Project: Sterling
Collection Date: 9/28/2018 8:48:00 AM
Lab ID: 1810095-005 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/4/2018 3:44:40 PM	40802

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-2
Project: Sterling
Collection Date: 9/28/2018 8:34:00 AM
Lab ID: 1810095-006 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/4/2018 3:57:04 PM	40802

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-0.5
Project: Sterling
Collection Date: 9/28/2018 11:08:00 AM
Lab ID: 1810095-007 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	10/4/2018 4:09:29 PM	40802

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-0.5
Project: Sterling
Collection Date: 9/28/2018 9:12:00 AM
Lab ID: 1810095-008 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	2600	75		mg/Kg	50	10/8/2018 2:23:28 PM	40802

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5-2
Project: Sterling
Collection Date: 9/28/2018 2:45:00 AM
Lab ID: 1810095-009 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	180	30		mg/Kg	20	10/5/2018 10:34:27 AM	40831
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	10/5/2018 11:53:42 PM	40813
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/5/2018 11:53:42 PM	40813
Surr: DNOP	98.7	50.6-138		%Rec	1	10/5/2018 11:53:42 PM	40813
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/4/2018 2:26:02 PM	40785
Surr: BFB	98.0	15-316		%Rec	1	10/4/2018 2:26:02 PM	40785
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/4/2018 2:26:02 PM	40785
Toluene	ND	0.049		mg/Kg	1	10/4/2018 2:26:02 PM	40785
Ethylbenzene	ND	0.049		mg/Kg	1	10/4/2018 2:26:02 PM	40785
Xylenes, Total	ND	0.098		mg/Kg	1	10/4/2018 2:26:02 PM	40785
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	10/4/2018 2:26:02 PM	40785

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L6-0.5
Project: Sterling
Collection Date: 9/28/2018 12:15:00 PM
Lab ID: 1810095-010 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	50	30		mg/Kg	20	10/4/2018 4:34:18 PM	40802

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-0.5
Project: Sterling
Collection Date: 9/28/2018 12:01:00 PM
Lab ID: 1810095-011 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	30		mg/Kg	20	10/5/2018 11:11:41 AM	40831
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	520	9.9		mg/Kg	1	10/6/2018 12:15:44 AM	40813
Motor Oil Range Organics (MRO)	610	49		mg/Kg	1	10/6/2018 12:15:44 AM	40813
Surr: DNOP	126	50.6-138		%Rec	1	10/6/2018 12:15:44 AM	40813
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/4/2018 2:49:24 PM	40785
Surr: BFB	96.7	15-316		%Rec	1	10/4/2018 2:49:24 PM	40785
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/4/2018 2:49:24 PM	40785
Toluene	ND	0.049		mg/Kg	1	10/4/2018 2:49:24 PM	40785
Ethylbenzene	ND	0.049		mg/Kg	1	10/4/2018 2:49:24 PM	40785
Xylenes, Total	ND	0.097		mg/Kg	1	10/4/2018 2:49:24 PM	40785
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	10/4/2018 2:49:24 PM	40785

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

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L8-0.5
Project: Sterling
Collection Date: 9/28/2018 12:48:00 PM
Lab ID: 1810095-012 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	200	30		mg/Kg	20	10/5/2018 11:24:05 AM	40831

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

Qualifiers:

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

Analytical Report
Lab Order **1810095**
Date Reported: **10/9/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW-3
Project: Sterling
Collection Date: 9/28/2018 9:46:00 AM
Lab ID: 1810095-013 **Matrix:** SOIL **Received Date:** 10/2/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	140	30		mg/Kg	20	10/5/2018 11:36:29 AM	40831
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/6/2018 12:37:49 AM	40813
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/6/2018 12:37:49 AM	40813
Surr: DNOP	52.2	50.6-138		%Rec	1	10/6/2018 12:37:49 AM	40813
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/4/2018 3:12:48 PM	40785
Surr: BFB	98.3	15-316		%Rec	1	10/4/2018 3:12:48 PM	40785
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/4/2018 3:12:48 PM	40785
Toluene	ND	0.047		mg/Kg	1	10/4/2018 3:12:48 PM	40785
Ethylbenzene	ND	0.047		mg/Kg	1	10/4/2018 3:12:48 PM	40785
Xylenes, Total	ND	0.095		mg/Kg	1	10/4/2018 3:12:48 PM	40785
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	10/4/2018 3:12:48 PM	40785

Refer to the QC Summary report and 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#: **1810095**

09-Oct-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-40802**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**40802**	RunNo:	**54642**					
Prep Date:	**10/4/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1813615**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-40802**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**40802**	RunNo:	**54642**					
Prep Date:	**10/4/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1813616**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID	**MB-40831**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**40831**	RunNo:	**54680**					
Prep Date:	**10/5/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1815578**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-40831**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**40831**	RunNo:	**54680**					
Prep Date:	**10/5/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1815579**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.3	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#: **1810095**

09-Oct-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**LCS-40834**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**40834**		RunNo:	**54672**				
Prep Date:	**10/5/2018**	Analysis Date:	**10/5/2018**		SeqNo:	**1814135**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.4		5.000		109	50.6	138			

Sample ID	**MB-40834**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**40834**		RunNo:	**54672**				
Prep Date:	**10/5/2018**	Analysis Date:	**10/5/2018**		SeqNo:	**1814136**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		122	50.6	138			

Sample ID	**LCS-40813**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**40813**		RunNo:	**54672**				
Prep Date:	**10/4/2018**	Analysis Date:	**10/5/2018**		SeqNo:	**1815335**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	70	130			
Surr: DNOP	5.8		5.000		117	50.6	138			

Sample ID	**MB-40813**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**40813**		RunNo:	**54672**				
Prep Date:	**10/4/2018**	Analysis Date:	**10/5/2018**		SeqNo:	**1815336**	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		119	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#: **1810095**

09-Oct-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-40785**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**40785**	RunNo:	**54638**					
Prep Date:	**10/3/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1812890**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.5	15	316			

Sample ID	**LCS-40785**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**40785**	RunNo:	**54638**					
Prep Date:	**10/3/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1812891**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.2	75.9	131			
Surr: BFB	1100		1000		110	15	316			

Sample ID	**MB-40791**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**40791**	RunNo:	**54638**					
Prep Date:	**10/3/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1812912**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.0	15	316			

Sample ID	**LCS-40791**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**40791**	RunNo:	**54638**					
Prep Date:	**10/3/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1812913**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		112	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810095**

09-Oct-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-40785**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**40785**	RunNo:	**54638**					
Prep Date:	**10/3/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1812931**	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	0.91		1.000		91.3	80	120			

Sample ID	**LCS-40785**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**40785**	RunNo:	**54638**					
Prep Date:	**10/3/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1812932**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.0	77.3	128			
Toluene	0.95	0.050	1.000	0	94.5	79.2	125			
Ethylbenzene	0.93	0.050	1.000	0	93.5	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	93.8	81.6	129			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.0	80	120			

Sample ID	**MB-40791**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**40791**	RunNo:	**54638**					
Prep Date:	**10/3/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1812949**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		92.2	80	120			

Sample ID	**LCS-40791**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**40791**	RunNo:	**54638**					
Prep Date:	**10/3/2018**	Analysis Date:	**10/4/2018**	SeqNo:	**1812950**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	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: **1810095** RcptNo: **1**

Received By: **Victoria Zellar** **10/2/2018 9:15:00 AM** Victoria Zellar

Completed By: **Ashley Gallegos** **10/2/2018 12:28:43 PM**

Reviewed By: JD 10/2/18

Labeled by: JAB 10/02/18

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: 0 (<2 or >12 unless noted)

Adjusted? NO

Checked by: DAD 10/2/18

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	1.2	Good	Yes			

Chain-of-Custody Record

Client: SMH - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 5 day

Project Name: Sterling

Project #:

Project Manager: Austin Weyant

Sampler: LAA

On Ice: ☒ Yes ☐ No

Sample Temperature: 22-1.0(CF) = 1.2

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 Request ID	Container Type and #	Preservative Type	HEAL No. 1810095	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
9/28/18	1020	Soil	L-10	4oz		-001								X				
	1040		L-11	4oz		-002								X				
	1228		SW-10			-003	X		X					X				
	1126		SW-1			-004								X				

Date: Time: Relinquished by:

Received by: Date Time 10/1/18 1500

Date: 10/1/18 Time: 1900 Relinquished by:

Received by: VVZ 10/2/18 Victoria V. Gallan Date Time 10/2/18 9:15

Remarks: Courier. VVZ 10/2/18 9:15
Marathon Oil
1 of 2

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

Chain-of-Custody Record

Client: SMA-Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 5 day

Project Name: Sterling

Project #:

Project Manager: Austin Weyant

Sampler: LAA

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.2-(1).0 = 1.2

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 Request ID	Container Type and #	Preservative Type	HEAL No. 1810095	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
10/28/18	848	Soil	L1-1	4 07		-005								X				
	834		L2-2			-006								X				
	1108		L3-0.5			-007								X				
	912		L4-0.5			-008								X				
	245		L5-2			-009	X		X					X				
	1215		L6-0.5			-010								X				
	1201		L7-0.5			-011	X		X					X				
	1248		L8-0.5			-012								X				
			[redacted]															
	946		SW-3			-013	X		X					X				

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
				10/1/18	1500	Marathon Oil
Date:	Time:	Relinquished by:	Received by:	Date	Time	
10/1/18	1900		Victoria Nellon	10/2/18	09:15	2 of 2

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

October 11, 2018

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

RE: Sterling OrderNo.: 1810268

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/4/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1810268**
Date Reported: **10/11/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L9-2
Project: Sterling
Collection Date: 10/1/2018 12:45:00 PM
Lab ID: 1810268-001 **Matrix:** SOIL **Received Date:** 10/4/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	140	30		mg/Kg	20	10/6/2018 5:55:04 PM	40852
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/10/2018 3:27:45 PM	40900
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/10/2018 3:27:45 PM	40900
Surr: DNOP	102	50.6-138		%Rec	1	10/10/2018 3:27:45 PM	40900
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/9/2018 10:28:59 AM	40866
Surr: BFB	88.8	15-316		%Rec	1	10/9/2018 10:28:59 AM	40866
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/9/2018 10:28:59 AM	40866
Toluene	ND	0.048		mg/Kg	1	10/9/2018 10:28:59 AM	40866
Ethylbenzene	ND	0.048		mg/Kg	1	10/9/2018 10:28:59 AM	40866
Xylenes, Total	ND	0.095		mg/Kg	1	10/9/2018 10:28:59 AM	40866
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	10/9/2018 10:28:59 AM	40866

Refer to the QC Summary report and 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#: **1810268**

11-Oct-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**MB-40852**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**40852**	RunNo:	**54700**					
Prep Date:	**10/5/2018**	Analysis Date:	**10/6/2018**	SeqNo:	**1815489**	Units:	**mg/Kg**			

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

Sample ID	**LCS-40852**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**40852**	RunNo:	**54700**					
Prep Date:	**10/5/2018**	Analysis Date:	**10/6/2018**	SeqNo:	**1815490**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1810268**

11-Oct-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**LCS-40900**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**40900**		RunNo:	**54778**				
Prep Date:	**10/9/2018**	Analysis Date:	**10/10/2018**		SeqNo:	**1819055**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.3	70	130			
Surr: DNOP	4.4		5.000		87.9	50.6	138			

Sample ID	**MB-40900**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**40900**		RunNo:	**54778**				
Prep Date:	**10/9/2018**	Analysis Date:	**10/10/2018**		SeqNo:	**1819056**	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		98.2	50.6	138			

Sample ID	**1810268-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**L9-2**	Batch ID:	**40900**		RunNo:	**54778**				
Prep Date:	**10/9/2018**	Analysis Date:	**10/10/2018**		SeqNo:	**1819695**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	9.9	49.26	0	114	53.5	126			
Surr: DNOP	5.7		4.926		115	50.6	138			

Sample ID	**1810268-001AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**L9-2**	Batch ID:	**40900**		RunNo:	**54778**				
Prep Date:	**10/9/2018**	Analysis Date:	**10/10/2018**		SeqNo:	**1819696**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	9.9	49.41	0	119	53.5	126	5.03	21.7	
Surr: DNOP	6.0		4.941		122	50.6	138	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810268**

11-Oct-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**1810268-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**L9-2**	Batch ID:	**40866**		RunNo:	**54741**				
Prep Date:	**10/8/2018**	Analysis Date:	**10/9/2018**		SeqNo:	**1818152**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.8	24.11	0	107	77.8	128			
Surr: BFB	1000		964.3		108	15	316			

Sample ID	**1810268-001AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**L9-2**	Batch ID:	**40866**		RunNo:	**54741**				
Prep Date:	**10/8/2018**	Analysis Date:	**10/9/2018**		SeqNo:	**1818153**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.8	24.04	0	118	77.8	128	9.65	20	
Surr: BFB	1000		961.5		107	15	316	0	0	

Sample ID	**LCS-40866**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**40866**		RunNo:	**54741**				
Prep Date:	**10/8/2018**	Analysis Date:	**10/9/2018**		SeqNo:	**1818187**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.2	75.9	131			
Surr: BFB	1000		1000		103	15	316			

Sample ID	**MB-40866**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**40866**		RunNo:	**54741**				
Prep Date:	**10/8/2018**	Analysis Date:	**10/9/2018**		SeqNo:	**1818189**	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	920		1000		92.0	15	316			

Sample ID	**LCS-40909**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**40909**		RunNo:	**54774**				
Prep Date:	**10/9/2018**	Analysis Date:	**10/10/2018**		SeqNo:	**1819349**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		105	15	316			

Sample ID	**MB-40909**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**40909**		RunNo:	**54774**				
Prep Date:	**10/9/2018**	Analysis Date:	**10/10/2018**		SeqNo:	**1819350**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	900		1000		89.8	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1810268**

11-Oct-18

Client: Souder, Miller & Associates

Project: Sterling

Sample ID	**LCS-40866**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**40866**	RunNo:	**54741**					
Prep Date:	**10/8/2018**	Analysis Date:	**10/9/2018**	SeqNo:	**1818668**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.3	77.3	128			
Toluene	0.94	0.050	1.000	0	94.0	79.2	125			
Ethylbenzene	0.94	0.050	1.000	0	94.2	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	95.7	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	**MB-40866**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**40866**	RunNo:	**54741**					
Prep Date:	**10/8/2018**	Analysis Date:	**10/9/2018**	SeqNo:	**1818670**	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-40909**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**40909**	RunNo:	**54774**					
Prep Date:	**10/9/2018**	Analysis Date:	**10/10/2018**	SeqNo:	**1819469**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID	**MB-40909**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**40909**	RunNo:	**54774**					
Prep Date:	**10/9/2018**	Analysis Date:	**10/10/2018**	SeqNo:	**1819470**	Units:	**%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		96.6	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: 1810268 RcptNo: 1

Received By: Jazzmine Burkhead 10/4/2018 8:55:00 AM

Completed By: Ashley Gallegos 10/4/2018 10:14:58 AM

Reviewed By: JO 10/4/18 @ 1145 labeled by: JAB 10/04/18

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 ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? JAB 10/04/18
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	1.6	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

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

Project Name: Sterling

Project #:

Project Manager: Austin Weyand

Sampler: Heath Patterson

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.6 - 1.0 (CF) = 1.6

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
10/1/18	12:45	Soil	CS-2	4oz		18102608-001	X		X					X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
				10/3/18	0900
10/3/18	1900		Jennifer Burkhead	10/04/18	08:55

Remarks: Courier: 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.

APPENDIX A

CARMONA RESOURCES

CARMONA RESOURCES

August 29, 2023

Mike Bratcher
District Supervisor
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Re: Amendment to Closure Report
Sterling 20 State 1H
Marathon Oil Corporation
NAB182233389
2RP-4725
Site Location: Unit O, S17, T23S, R27E
(Lat 32.2985°, Long -104.2086°)
Eddy County, New Mexico

Mr. Bratcher:

On behalf of Marathon Oil Corporation (Marathon), Carmona Resource, LLC has prepared this letter to document additional site activities for the Sterling 20 State 1H. The site is located at the GPS 32.2985°, -104.2086° within Unit O, S17, T23S, R27E in Eddy County, New Mexico.

1.0 Site Information and Background

NAB182233389/2RP-4725

On June 26, 2023 the New Mexico OCD denied the closure report for the following reason: This release has occurred in a high karst area and will need to be remediated to the strictest closure criteria of <50' depth to groundwater from Table 1 of the spill rule.

2.0 Site Characterization and Groundwater

The site is located within a high karst area. Based on a review of the New Mexico Office of State Engineers and USGS databases, no known water features are within a 0.50-mile radius of the location. The nearest identified well is approximately 0.63 miles Southeast of the site in S21, T23S, R27E and was drilled in 1983. The well has a reported depth to groundwater of 163.27 feet below the ground surface (ft bgs). A copy of the associated Summary Report is attached in Appendix D of the amended report.

3.0 NMAC Regulatory Criteria

Per the NMOCD regulatory criteria established in 19.15.29.12 NMAC, the following were utilized in assessing the site.

- Benzene: 10 milligrams per kilogram (mg/kg).
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg.
- TPH: 100 mg/kg (GRO + DRO + MRO).
- Chloride: 600 mg/kg.

4.0 Site Assessment Activities

On July 25, and September 13, 2023, Carmona Resources, LLC performed site assessment activities to evaluate soil impacts stemming from the release. To assess the vertical extent, three (4) sample points (S-1 through S-4) were advanced to depths ranging from surface to 3' bgs inside the release area at L4, L5, L7, and L8. See Figure 3 for the sample locations. For chemical analysis, the soil samples were collected and placed directly into laboratory-provided sample containers, stored on ice, and transported under the proper chain-of-custody protocol to Eurofins

310 West Wall Street, Suite 500
Midland, Texas 79701
432.813.1992

CARMONA RESOURCES

Laboratories in Midland, Texas. The sample points S-1, S-2, and S-3 were analyzed for total petroleum hydrocarbons (TPH) by EPA method 8015, modified benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, and chloride by EPA method 300.0. The sample point S-4 was analyzed for total petroleum hydrocarbons (TPH) by EPA method 8015. The laboratory reports, including analytical methods, results, and chain-of-custody documents, are attached in Appendix E of the amended report.

All samples were below the regulatory requirements for TPH, BTEX, and chloride. Refer to Table 1. All sample points have undergone attenuation from precipitation and weather events that occurred from the closure sampling on September 28, 2018 to present.

5.0 Conclusions

Based on the assessment results and the analytical data, no further actions are required at the site. The final C-141 is attached, and Marathon formally requests the closure of the spill. If you have any questions regarding this report or need additional information, please contact us at 432-813-1992.

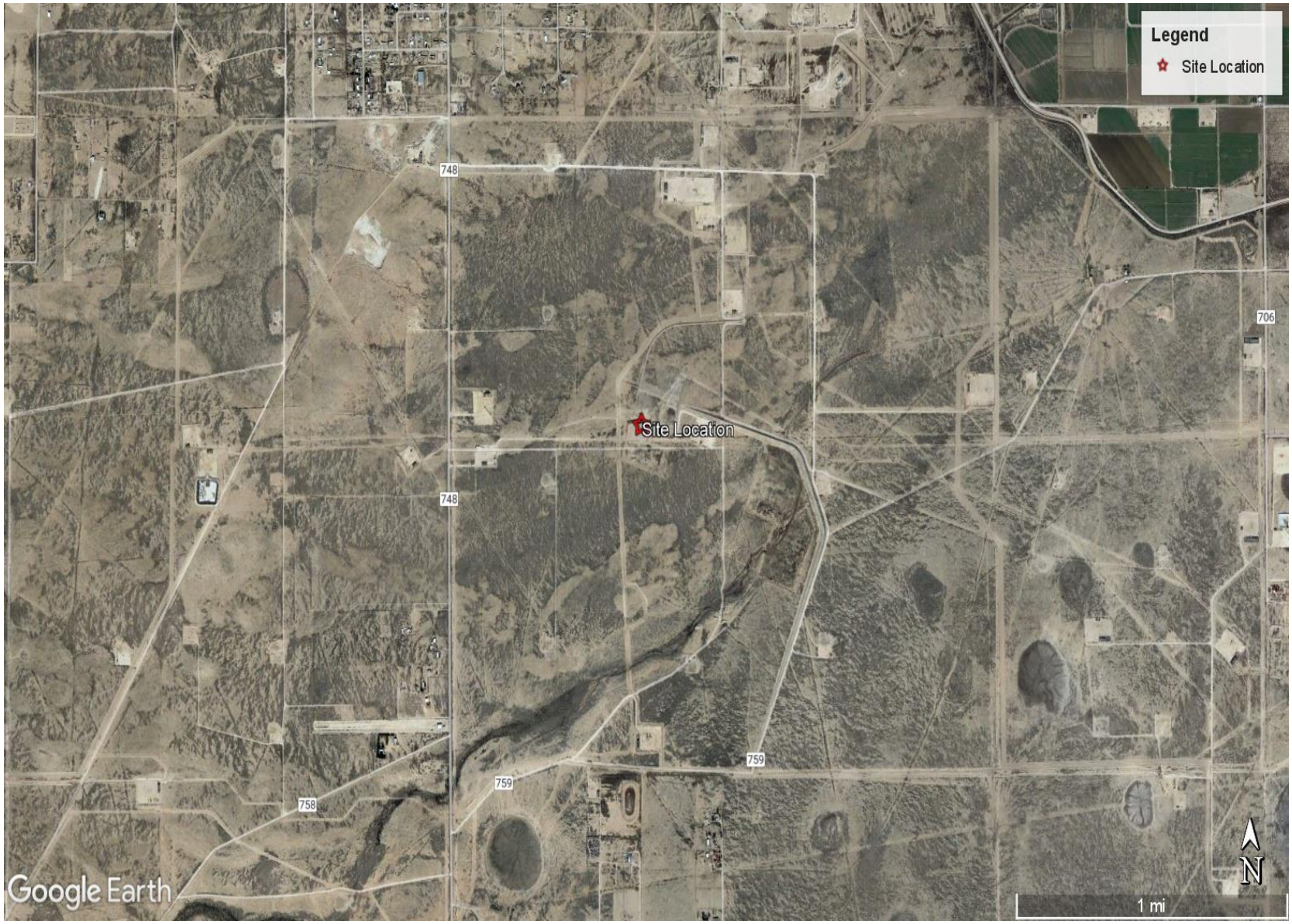
Sincerely,
Carmona Resources, LLC

Mike Carmona
Environmental Manager

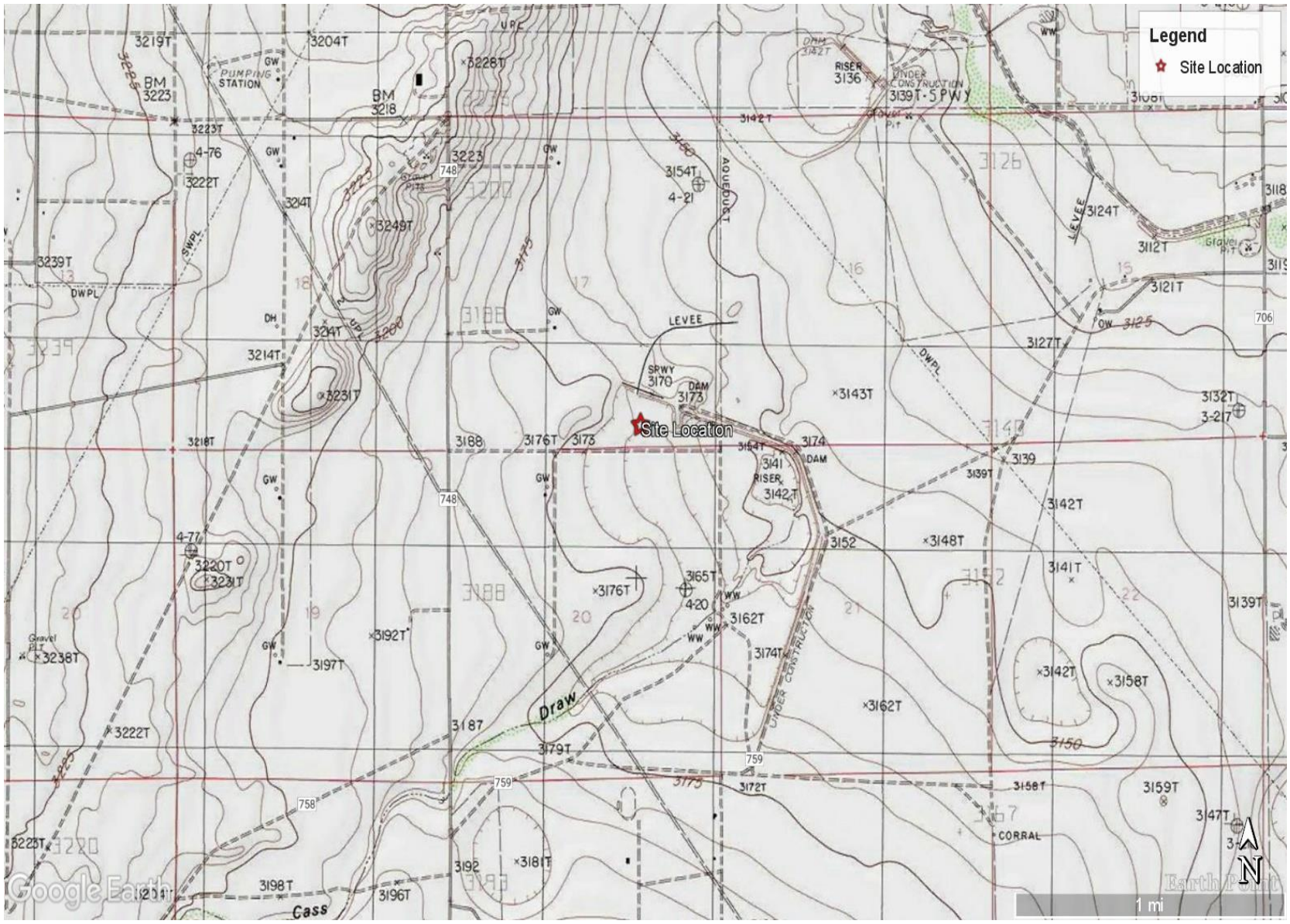
Clinton Merritt
Sr. Project Manager

FIGURES

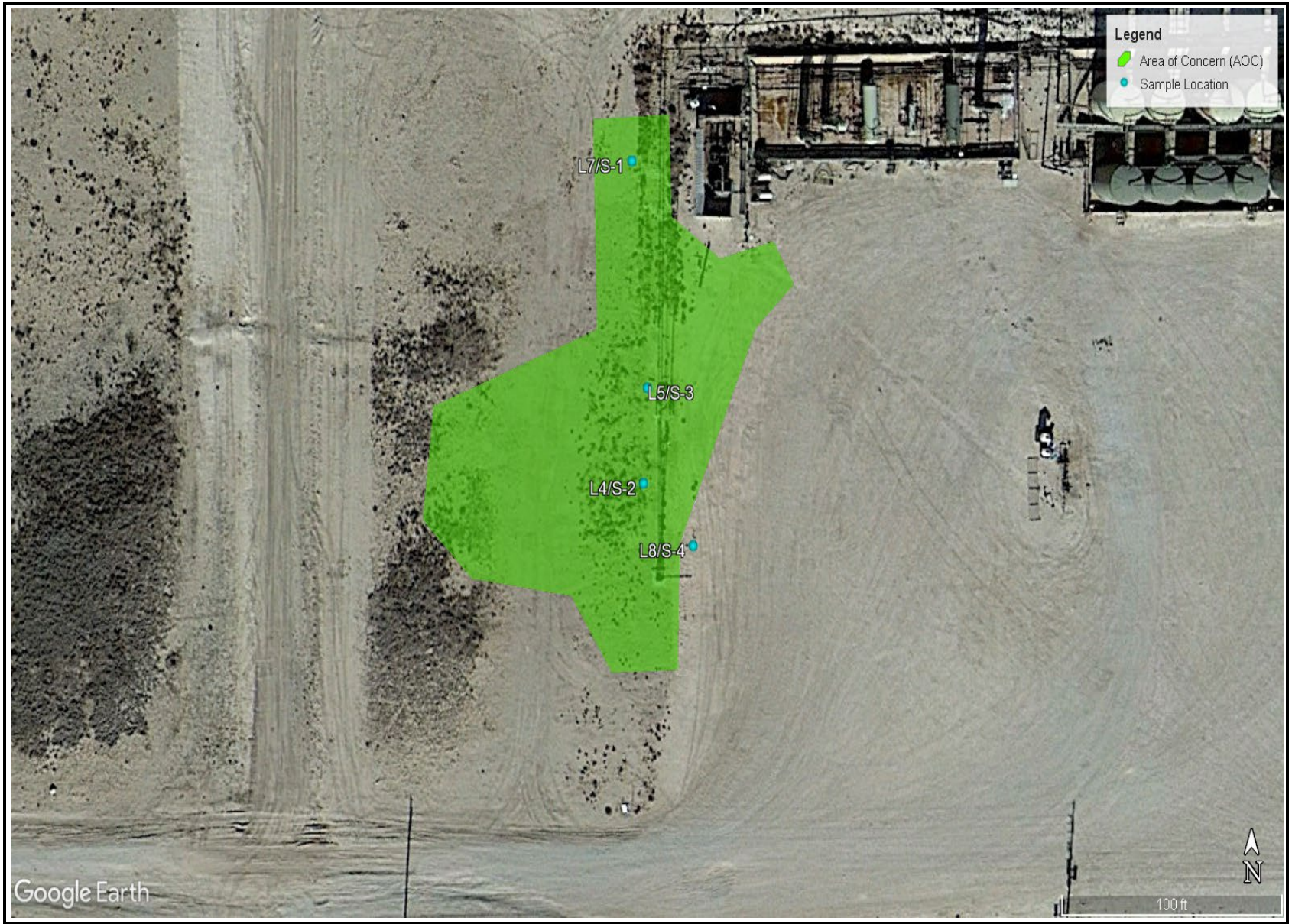
CARMONA RESOURCES



OVERVIEW MAP MARATHON OIL CORPORATION STERLING 20 STATE 1H EDDY COUNTY, NEW MEXICO 32.298500°, -104.208600°	CARMONA RESOURCES	FIGURE 1



TOPOGRAPHIC MAP MARATHON OIL CORPORATION STERLING 20 STATE 1H EDDY COUNTY, NEW MEXICO 32.298500°, -104.208600°	CARMONA RESOURCES	FIGURE 2



SAMPLE LOCATION MAP MARATHON OIL CORPORATION STERLING 20 STATE 1H EDDY COUNTY, NEW MEXICO 32.2985, -104.2086	CARMONA RESOURCES	FIGURE 3

APPENDIX B

CARMONA RESOURCES

Table 1
Marathon Oil
Sterling 20 State 1H
Eddy County, New Mexico

Sample ID	Date	Depth (ft)	TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			GRO	DRO	MRO	Total						
S-1	7/25/2023	0-1	<50.4	<50.4	<50.4	<50.4	<0.00198	<0.00198	<0.00198	<0.00397	<0.00397	43.8
	"	2.0	<50.5	<50.5	<50.5	<50.5	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	40.8
	"	3.0	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	42.9
S-2	7/25/2023	0-1	<49.6	<49.6	<49.6	<49.6	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	83.9
	"	2.0	<50.3	<50.3	<50.3	<50.3	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	96.3
	"	3.0	<50.4	<50.4	<50.4	<50.4	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	48.8
S-3	7/25/2023	0-1	<50.4	<50.4	<50.4	<50.4	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	83.9
	"	2.0	<50.5	<50.5	<50.5	<50.5	<0.00198	<0.00198	<0.00198	<0.00396	<0.00396	96.3
	"	3.0	<49.6	<49.6	<49.6	<49.6	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	48.8
S-4	9/13/2023	0-1	<49.8	<49.8	<49.8	<49.8	-	-	-	-	-	-
Regulatory Criteria [A]						100 mg/kg	10 mg/kg				50 mg/kg	600 mg/kg

(-) Not Analyzed
[A] – Table 1 - 19.15.29 NMAC
mg/kg - milligram per kilogram
TPH - Total Petroleum Hydrocarbons
ft - feet
(S) Sample Point

APPENDIX C

CARMONA RESOURCES

PHOTOGRAPHIC LOG

Marathon Oil Corporation

Photograph No. 1

Facility: Sterling 20 State 1H

County: Eddy County, New Mexico

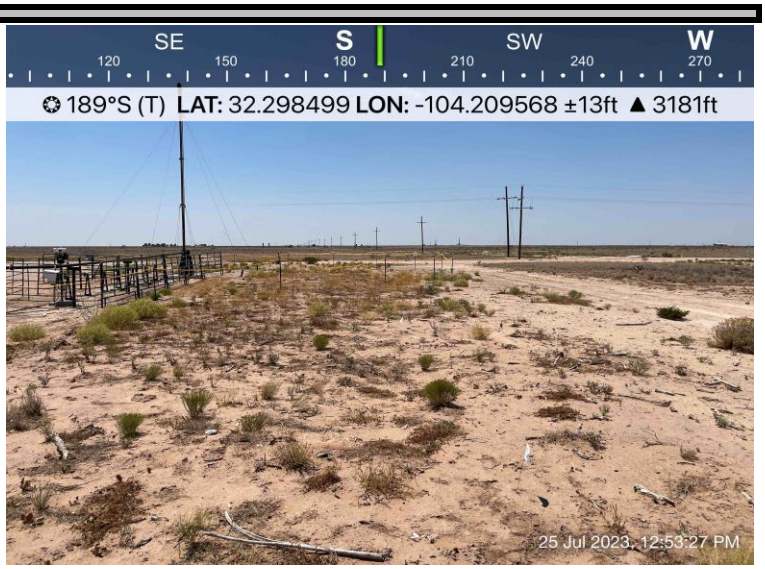
Description:
View South, area of L7/S-1.

Photograph No. 2

Facility: Sterling 20 State 1H

County: Eddy County, New Mexico

Description:
View South, area of L4/S-2



Photograph No. 3

Facility: Sterling 20 State 1H

County: Eddy County, New Mexico

Description:
View Northeast, area of L5/S-3

APPENDIX D

CARMONA RESOURCES

Nearest Water Well

Marathon Oil Permian LLC

Legend

- 0.50 Mile Radius
- 0.63 Miles
- 0.92 Miles
- 1.02 Miles
- 1.29 Miles
- NMSEO Water Well
- STERLING 20 STATE #001H
- USGS Water Well

STERLING 20 STATE #001H

100' - Drilled 1964

133.22' - Drilled 2018

163.27' - Drilled 1983

170' - Drilled 1998

N

1 mi

High Karst

Marathon Oil Permian LLC

Legend

- High
- Medium
- STERLING 20 STATE #001H

STERLING 20 STATE #001H

N

1 mi

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*	1645	180	100	80
C 01781		C	ED		2	4	19	23S	27E	573161	3572659*	1751			
C 01781 POD2		C	ED		2	4	19	23S	27E	573161	3572659*	1751	210		
C 01781 POD3		C	ED		2	4	19	23S	27E	573161	3572659*	1751	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*	2198	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	2453	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 04429 POD1		C	ED	4	4	1	08	23S	27E	574102	3576270	2552	400	350	50
C 00195		CUB	ED	4	1	4	09	23S	27E	576069	3575827*	2583	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 04581 POD1		C	ED	3	1	1	09	23S	27E	575167	3576589	2906	165	109	56
C 00187		C	ED	1	1	4	15	23S	27E	577380	3574509	2950	210	125	85
C 00623		C	ED		2	1	15	23S	27E	577189	3575142*	3001	200		
C 03736 POD1		C	ED	2	2	4	13	23S	26E	571677	3574793	3034			
C 02300		CUB	ED			3	07	23S	27E	572160	3575676*	3049	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

***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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
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
C 00420	C	CUB	ED		4	2	09	23S	27E	576370	3576337*	3172	2151		
C 00508 S		CUB	ED	2	1	3	10	23S	27E	576877	3576039*	3277	234	28	206
C 00068 CLW193190	O	CUB	ED	3	3	1	10	23S	27E	576673	3576241*	3284	175		
C 02835		CUB	ED	3	4	1	30	23S	27E	572258	3571338*	3315	228		
C 01847		C	ED		1	3	07	23S	27E	571956	3575878*	3335	300		
C 01847 POD2		C	ED		1	3	07	23S	27E	571956	3575878*	3335	243		
C 00323		C	ED		4	4	05	23S	27E	574750	3577122*	3375	200		
C 02711		C	ED		4	4	05	23S	27E	574750	3577122*	3375	170	75	95
C 03020		C	ED		4	4	05	23S	27E	574750	3577122*	3375	176	135	41
C 00068		CUB	ED	1	3	1	10	23S	27E	576673	3576441*	3438	175		
C 03799 POD1		C	ED	1	3	3	04	23S	27E	574981	3577170	3446	200	51	149
C 04453 POD1		C	ED	3	2	1	07	23S	27E	572475	3576566	3482	250	70	180
C 01825		C	ED		3	2	13	23S	26E	571151	3574670*	3499	243	221	22
C 00109 CLW203096	O	CUB	ED	1	3	3	04	23S	27E	575051	3577226*	3511	260		
C 02710		C	ED			4	05	23S	27E	574550	3577318*	3564	200	72	128
C 03653 POD1		C	ED	2	4	4	05	23S	27E	574757	3577331	3585	220	180	40
C 01083		C	ED		4	2	15	23S	27E	578003	3574751	3615	325	45	280
C 00508		CUB	ED	3	1	4	10	23S	27E	577487	3575855*	3629	190		
C 03010		C	ED	2	2	4	12	23S	26E	571649	3575978*	3637	140	130	10
C 01857		C	ED				13	23S	26E	570949	3574465*	3648	255	197	58
C 02232		C	ED				13	23S	26E	570949	3574465*	3648	240	200	40
C 02448		C	ED		2	4	12	23S	26E	571550	3575879*	3658	140	127	13
C 04331 POD1		C	ED	2	2	4	12	23S	26E	571632	3575997	3663	170	133	37
C 00259 S		CUB	ED	1	1	3	30	23S	27E	571874	3571131*	3731	204		
C 02834		CUB	ED	1	1	3	30	23S	27E	571874	3571131*	3731	310	176	134
C 04591 POD1		C	ED	3	2	1	07	23S	27E	572168	3576690	3767	300		
C 00296		C	ED		1	4	05	23S	27E	574345	3577519*	3769	225		

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

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

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

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

POD Number		POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01672		C	ED		4	3	13	23S	26E	570750	3573861*	3779	280	80	200
C 03961 POD1		C	ED	1	2	4	12	23S	26E	571522	3576070	3795	280		
C 01905		C	ED		2	3	13	23S	26E	570749	3574267*	3813	300		
C 03071		C	ED		2	3	13	23S	26E	570749	3574267*	3813	250	204	46
C 00518 POD2		CUB	ED	2	4	4	22	23S	27E	578105	3572431*	3813	220	98	122
C 01678		C	ED	3	3	4	12	23S	26E	571048	3575379*	3840		350	
C 02484 EXPL		CUB	ED		4	1	13	23S	26E	570747	3574672*	3890	280	175	105
C 00518		CUB	ED	1	1	3	23	23S	27E	578310	3572840*	3890	178		
C 03348		C	ED	1	3	3	13	23S	26E	570606	3573938	3926	240	200	40
C 03766 POD1		C	ED	3	3	1	14	23S	27E	578373	3574609	3939	260	25	235
C 01642		C	ED	2	2	1	13	23S	26E	570845	3575177*	3948	303		
C 03060		C	ED	4	4	4	10	23S	27E	578098	3575460	3956	139	87	52
C 03488 POD1		C	ED	4	3	1	23	23S	27E	578430	3573023	3969	217	122	95
C 02151		C	ED		4	3	06	23S	27E	572341	3577095*	3993	196	130	66
C 00231 AS		CUB	ED	4	1	1	23	23S	27E	578512	3573447*	3995	230	100	130
C 00498		CUB	ED	4	1	1	23	23S	27E	578512	3573447*	3995	210	120	90
C 00498 CLW194833	O	CUB	ED	4	1	1	23	23S	27E	578512	3573447*	3995	165	80	85

Average Depth to Water: **129 feet**
Minimum Depth: **25 feet**
Maximum Depth: **350 feet**

Record Count: 72

UTMNAD83 Radius Search (in meters):

Easting (X): 574528 **Northing (Y):** 3573754 **Radius:** 4000

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? S

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Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321726104120801

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321726104120801 23S.27E.20.42220

Eddy County, New Mexico
Latitude 32°17'26", Longitude 104°12'08" NAD27
Land-surface elevation 3,162 feet above NAVD88
The depth of the well is 192 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1981-05-14		D	62610		2997.28	NGVD29	1	Z		
1981-05-14		D	62611		2998.92	NAVD88	1	Z		
1981-05-14		D	72019	163.08			1	Z		
1983-02-02		D	62610		2997.09	NGVD29	1	Z		
1983-02-02		D	62611		2998.73	NAVD88	1	Z		
1983-02-02		D	72019	163.27			1	Z		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? S

Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Explanation of terms
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Title: Groundwater for New Mexico: Water Levels
URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2023-07-18 14:06:18 EDT
0.29 0.25 nadww01

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	C 01195			2	19	23S	27E	572958	3573260*

Driller License:	108	**Driller Company:**	SMITH, SAM S.		
Driller Name:	SMITH, SAM S.				
Drill Start Date:	07/01/1964	**Drill Finish Date:**	07/15/1964	**Plug Date:**	
Log File Date:	08/14/1964	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	6.00	**Depth Well:**	180 feet	**Depth Water:**	100 feet

Water Bearing Stratifications:	Top	Bottom	Description
	168	173	Limestone/Dolomite/Chalk

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

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) Q64	Q16	Q4	(quarters are smallest to largest) Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	C 02377			2	29	23S	27E	574575	3571666*

Driller License:	1348	**Driller Company:**	TAYLOR WATER WELL SERVICE		
Driller Name:					
Drill Start Date:	05/24/1998	**Drill Finish Date:**	05/30/1998	**Plug Date:**	
Log File Date:	08/24/1998	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	232 feet	**Depth Water:**	170 feet

Water Bearing Stratifications:	Top	Bottom	Description
	173	174	Limestone/Dolomite/Chalk
	175	176	Other/Unknown
	179	180	Other/Unknown

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? S

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Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321727104131801

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321727104131801 23S.27E.19.421232

Eddy County, New Mexico
Latitude 32°17'27", Longitude 104°13'18" NAD27
Land-surface elevation 3,190 feet above NAVD88
The depth of the well is 180 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1966-01-05		D	62610		3033.25	NGVD29	1	Z		
1966-01-05		D	62611		3034.89	NAVD88	1	Z		
1966-01-05		D	72019	155.11			1	Z		
1967-01-19		D	62610		3033.08	NGVD29	1	Z		
1967-01-19		D	62611		3034.72	NAVD88	1	Z		
1967-01-19		D	72019	155.28			1	Z		
1968-01-26		D	62610		3033.20	NGVD29	1	Z		
1968-01-26		D	62611		3034.84	NAVD88	1	Z		
1968-01-26		D	72019	155.16			1	Z		
1969-01-28		D	62610		3033.70	NGVD29	1	Z		
1969-01-28		D	62611		3035.34	NAVD88	1	Z		
1969-01-28		D	72019	154.66			1	Z		
1970-01-20		D	62610		3032.54	NGVD29	1	Z		
1970-01-20		D	62611		3034.18	NAVD88	1	Z		

Date	Time	? Water-level date-time accuracy	? Parameter code		Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? S	
1970-01-20		D	72019	155.82			1	Z	
1974-01-22		D	62610		3031.74	NGVD29	1	Z	
1974-01-22		D	62611		3033.38	NAVD88	1	Z	
1974-01-22		D	72019	156.62			1	Z	
1975-01-29		D	62610		3032.27	NGVD29	1	Z	
1975-01-29		D	62611		3033.91	NAVD88	1	Z	
1975-01-29		D	72019	156.09			1	Z	
1976-01-13		D	62610		3033.22	NGVD29	1	Z	
1976-01-13		D	62611		3034.86	NAVD88	1	Z	
1976-01-13		D	72019	155.14			1	Z	
1977-02-01		D	62610		3032.96	NGVD29	1	Z	
1977-02-01		D	62611		3034.60	NAVD88	1	Z	
1977-02-01		D	72019	155.40			1	Z	
1978-01-23		D	62610		3032.96	NGVD29	1	Z	
1978-01-23		D	62611		3034.60	NAVD88	1	Z	
1978-01-23		D	72019	155.40			1	Z	
1983-01-25		D	62610		3032.71	NGVD29	1	Z	
1983-01-25		D	62611		3034.35	NAVD88	1	Z	
1983-01-25		D	72019	155.65			1	Z	
1988-03-16		D	62610		3034.46	NGVD29	1	Z	
1988-03-16		D	62611		3036.10	NAVD88	1	Z	
1988-03-16		D	72019	153.90			1	Z	
1993-05-04		D	62610		3031.61	NGVD29	1	S	
1993-05-04		D	62611		3033.25	NAVD88	1	S	
1993-05-04		D	72019	156.75			1	S	
1995-07-18		D	62610		3032.28	NGVD29	1	S	
1995-07-18		D	62611		3033.92	NAVD88	1	S	
1995-07-18		D	72019	156.08			1	S	
1996-01-23		D	62610		3032.81	NGVD29	1	S	
1996-01-23		D	62611		3034.45	NAVD88	1	S	
1996-01-23		D	72019	155.55			1	S	
1998-01-14		D	62610		3032.68	NGVD29	1	S	
1998-01-14		D	62611		3034.32	NAVD88	1	S	
1998-01-14		D	72019	155.68			1	S	
2003-01-24		D	62610		3027.63	NGVD29	1	S	USGS
2003-01-24		D	62611		3029.27	NAVD88	1	S	USGS
2003-01-24		D	72019	160.73			1	S	USGS
2018-02-01	00:14 UTC	m	62610		3055.14	NGVD29	1	V	USGS
2018-02-01	00:14 UTC	m	62611		3056.78	NAVD88	1	V	USGS
2018-02-01	00:14 UTC	m	72019	133.22			1	V	USGS

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? S

Method of measurement	V	Calibrated electric-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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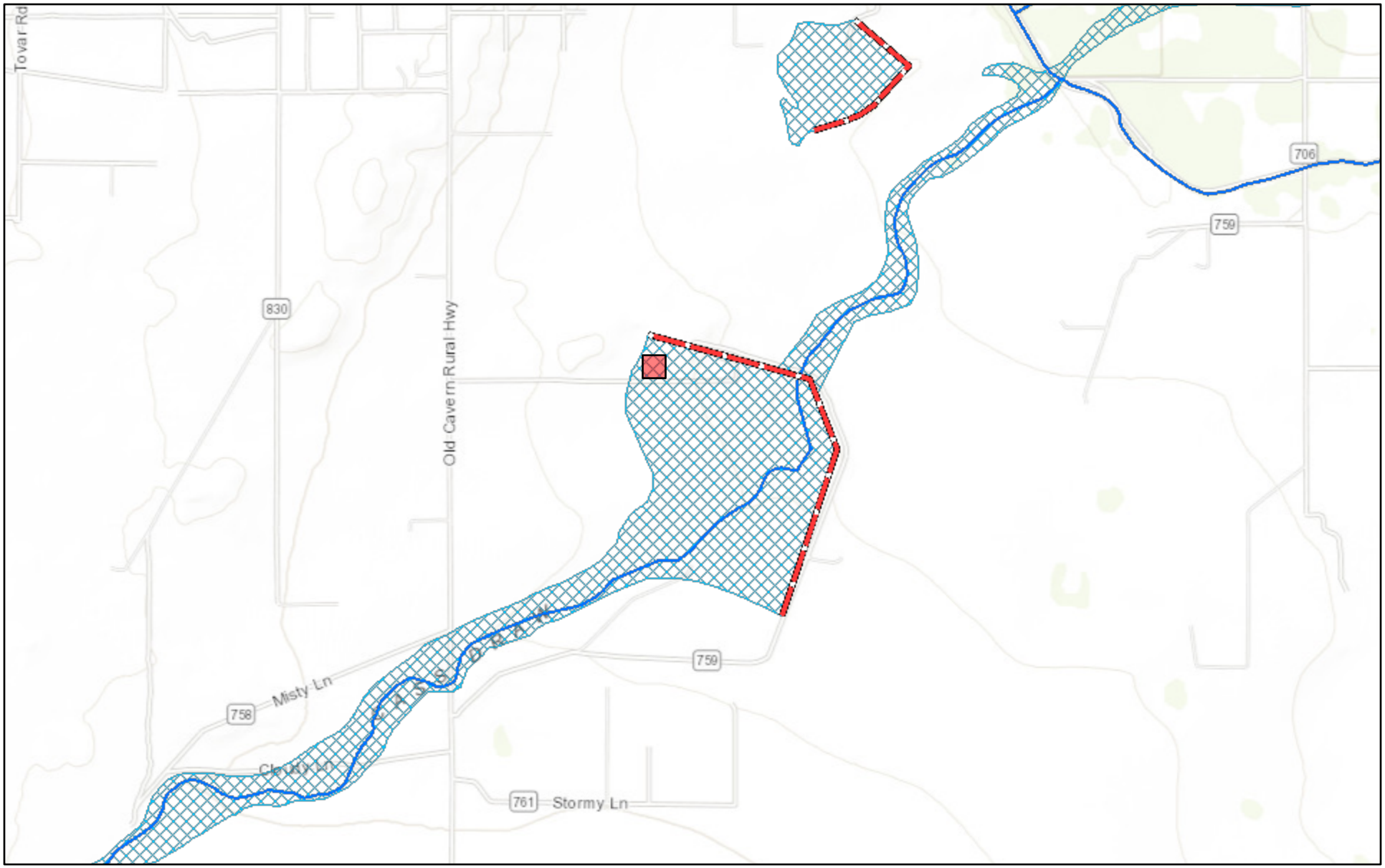
New Mexico NFHL Data



July 18, 2023

1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

FEMA, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

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APPENDIX E

CARMONA RESOURCES

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Clint Merritt
Carmona Resources
310 W Wall St
Ste 500
Midland, Texas 79701

Generated 8/9/2023 9:56:49 AM

JOB DESCRIPTION

Sterling 20 State 1H
SDG NUMBER Lea County, New Mexico

JOB NUMBER

880-31299-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

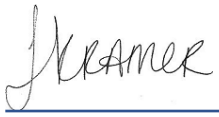
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
8/9/2023 9:56:49 AM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Laboratory Job ID: 880-31299-1
SDG: Lea County, New Mexico

Table of Contents

Definitions/Glossary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Job ID: 880-31299-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-31299-1

Receipt
The samples were received on 7/26/2023 4:45 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.5°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: S-1 (0-1') (880-31299-1), S-1 (2') (880-31299-2), S-1 (3') (880-31299-3), S-1 (4') (880-31299-4) and S-1 (5') (880-31299-5).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: S-1 (0-1') (880-31299-1), S-1 (2') (880-31299-2), S-1 (3') (880-31299-3), (880-31298-A-1-F), (880-31298-A-1-D MS) and (880-31298-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58964 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-58964/2) and (CCV 880-58964/20).

Method 8021B: The method blank for preparation batch 880-58815 and 880-58990 and analytical batch 880-58964 contained Ethylbenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58964 recovered above the upper control limit for Benzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-58964/64).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: S-1 (0-1') (880-31299-1), S-1 (2') (880-31299-2), S-1 (3') (880-31299-3), (CCV 880-59596/31), (CCV 880-59596/47), (LCS 880-59402/2-A), (LCSD 880-59402/3-A), (870-19120-A-2-E), (870-19120-A-2-F MS) and (870-19120-A-2-G MSD). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-59402 and analytical batch 880-59596 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-59402 and analytical batch 880-59596 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Client Sample ID: S-1 (0-1')

Lab Sample ID: 880-31299-1
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:33	08/02/23 09:20	1
Toluene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:33	08/02/23 09:20	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:33	08/02/23 09:20	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		08/01/23 10:33	08/02/23 09:20	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		08/01/23 10:33	08/02/23 09:20	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		08/01/23 10:33	08/02/23 09:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*175*	*S1+*	*70 - 130*	*08/01/23 10:33*	*08/02/23 09:20*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*08/01/23 10:33*	*08/02/23 09:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			08/02/23 15:47	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			08/09/23 10:33	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		08/07/23 14:17	08/08/23 23:45	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		08/07/23 14:17	08/08/23 23:45	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/07/23 14:17	08/08/23 23:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*148*	*S1+*	*70 - 130*	*08/07/23 14:17*	*08/08/23 23:45*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*08/07/23 14:17*	*08/08/23 23:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**43.8**		5.04		mg/Kg			07/29/23 02:59	1

Client Sample ID: S-1 (2')

Lab Sample ID: 880-31299-2
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:33	08/02/23 09:45	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:33	08/02/23 09:45	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:33	08/02/23 09:45	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/01/23 10:33	08/02/23 09:45	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/01/23 10:33	08/02/23 09:45	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/01/23 10:33	08/02/23 09:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*234*	*S1+*	*70 - 130*	*08/01/23 10:33*	*08/02/23 09:45*	*1*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*	*08/01/23 10:33*	*08/02/23 09:45*	*1*

Client Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Client Sample ID: S-1 (2')

Lab Sample ID: 880-31299-2
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/02/23 15:47	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/09/23 10:33	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		08/07/23 14:17	08/09/23 00:06	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/07/23 14:17	08/09/23 00:06	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/07/23 14:17	08/09/23 00:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*187*	*S1+*	*70 - 130*	*08/07/23 14:17*	*08/09/23 00:06*	*1*
o-Terphenyl	*172*	*S1+*	*70 - 130*	*08/07/23 14:17*	*08/09/23 00:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**40.8**		5.01		mg/Kg			07/29/23 03:05	1

Client Sample ID: S-1 (3')

Lab Sample ID: 880-31299-3
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:33	08/02/23 10:11	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:33	08/02/23 10:11	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:33	08/02/23 10:11	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		08/01/23 10:33	08/02/23 10:11	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/01/23 10:33	08/02/23 10:11	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		08/01/23 10:33	08/02/23 10:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*157*	*S1+*	*70 - 130*	*08/01/23 10:33*	*08/02/23 10:11*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*08/01/23 10:33*	*08/02/23 10:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			08/02/23 15:47	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/09/23 10:33	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/07/23 14:17	08/09/23 00:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/07/23 14:17	08/09/23 00:28	1

Client Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Client Sample ID: S-1 (3')
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Lab Sample ID: 880-31299-3
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/07/23 14:17	08/09/23 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*161*	*S1+*	*70 - 130*	*08/07/23 14:17*	*08/09/23 00:28*	*1*
o-Terphenyl	*151*	*S1+*	*70 - 130*	*08/07/23 14:17*	*08/09/23 00:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42.9**		4.95		mg/Kg			07/29/23 03:10	1

Surrogate Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-31298-A-1-D MS	Matrix Spike	137 S1+	97
880-31298-A-1-E MSD	Matrix Spike Duplicate	149 S1+	97
880-31299-1	S-1 (0-1')	175 S1+	112
880-31299-2	S-1 (2')	234 S1+	120
880-31299-3	S-1 (3')	157 S1+	76
LCS 880-58990/1-A	Lab Control Sample	128	108
LCSD 880-58990/2-A	Lab Control Sample Dup	114	74
MB 880-58815/5-A	Method Blank	73	93
MB 880-58990/5-A	Method Blank	80	83

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
870-19120-A-2-F MS	Matrix Spike	152 S1+	113
870-19120-A-2-G MSD	Matrix Spike Duplicate	151 S1+	122
880-31299-1	S-1 (0-1')	148 S1+	137 S1+
880-31299-2	S-1 (2')	187 S1+	172 S1+
880-31299-3	S-1 (3')	161 S1+	151 S1+
LCS 880-59402/2-A	Lab Control Sample	169 S1+	148 S1+
LCSD 880-59402/3-A	Lab Control Sample Dup	172 S1+	158 S1+
MB 880-59402/1-A	Method Blank	113	105

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58815/5-A
Matrix: Solid
Analysis Batch: 58964

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58815

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/31/23 09:23	08/01/23 11:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/31/23 09:23	08/01/23 11:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/31/23 09:23	08/01/23 11:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/31/23 09:23	08/01/23 11:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/31/23 09:23	08/01/23 11:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/31/23 09:23	08/01/23 11:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*07/31/23 09:23*	*08/01/23 11:55*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*07/31/23 09:23*	*08/01/23 11:55*	*1*

Lab Sample ID: MB 880-58990/5-A
Matrix: Solid
Analysis Batch: 58964

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58990

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:33	08/02/23 01:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:33	08/02/23 01:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:33	08/02/23 01:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/01/23 10:33	08/02/23 01:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:33	08/02/23 01:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/01/23 10:33	08/02/23 01:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*08/01/23 10:33*	*08/02/23 01:11*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*08/01/23 10:33*	*08/02/23 01:11*	*1*

Lab Sample ID: LCS 880-58990/1-A
Matrix: Solid
Analysis Batch: 58964

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58990

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1132		mg/Kg		113	70 - 130
Toluene	0.100	0.1137		mg/Kg		114	70 - 130
Ethylbenzene	0.100	0.1119		mg/Kg		112	70 - 130
m-Xylene & p-Xylene	0.200	0.2278		mg/Kg		114	70 - 130
o-Xylene	0.100	0.1085		mg/Kg		109	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-58990/2-A
Matrix: Solid
Analysis Batch: 58964

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58990

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09487		mg/Kg		95	70 - 130	18	35

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-58990/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58964 — **Prep Batch: 58990**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1006		mg/Kg		101	70 - 130	12	35
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2067		mg/Kg		103	70 - 130	10	35
o-Xylene			0.100	0.09669		mg/Kg		97	70 - 130	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*

Lab Sample ID: 880-31298-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58964 — **Prep Batch: 58990**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0996	0.1021		mg/Kg		103	70 - 130
Toluene	<0.00200	U	0.0996	0.08881		mg/Kg		88	70 - 130
Ethylbenzene	<0.00200	U	0.0996	0.07294		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.199	0.1536		mg/Kg		77	70 - 130
o-Xylene	<0.00200	U	0.0996	0.07078		mg/Kg		71	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-31298-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58964 — **Prep Batch: 58990**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0994	0.1033		mg/Kg		104	70 - 130	1	35
Toluene	<0.00200	U	0.0994	0.09014		mg/Kg		89	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0994	0.07476		mg/Kg		75	70 - 130	2	35
m-Xylene & p-Xylene	<0.00399	U	0.199	0.1561		mg/Kg		78	70 - 130	2	35
o-Xylene	<0.00200	U	0.0994	0.07104		mg/Kg		71	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*149*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-59402/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 59596 — **Prep Batch: 59402**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/05/23 18:11	08/08/23 19:25	1

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-59402/1-A
Matrix: Solid
Analysis Batch: 59596

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59402

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/05/23 18:11	08/08/23 19:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/23 18:11	08/08/23 19:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*08/05/23 18:11*	*08/08/23 19:25*	*1*
o-Terphenyl	*105*		*70 - 130*	*08/05/23 18:11*	*08/08/23 19:25*	*1*

Lab Sample ID: LCS 880-59402/2-A
Matrix: Solid
Analysis Batch: 59596

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59402

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1068		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1003		mg/Kg		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*169*	*S1+*	*70 - 130*
o-Terphenyl	*148*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-59402/3-A
Matrix: Solid
Analysis Batch: 59596

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59402

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1052		mg/Kg		105	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	960.9		mg/Kg		96	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*172*	*S1+*	*70 - 130*
o-Terphenyl	*158*	*S1+*	*70 - 130*

Lab Sample ID: 870-19120-A-2-F MS
Matrix: Solid
Analysis Batch: 59596

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 59402

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	999	1013		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	<50.2	U F1	999	1459	F1	mg/Kg		144	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*152*	*S1+*	*70 - 130*
o-Terphenyl	*113*		*70 - 130*

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 870-19120-A-2-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 59596 — **Prep Batch: 59402**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	999	1118		mg/Kg		108	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<50.2	U F1	999	1472	F1	mg/Kg		146	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*151*	*S1+*	*70 - 130*
o-Terphenyl	*122*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58660/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/29/23 00:46	1

Lab Sample ID: LCS 880-58660/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	253.7		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-58660/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	269.2		mg/Kg		108	90 - 110	6	20

Lab Sample ID: 880-31298-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	169		253	417.1		mg/Kg		98	90 - 110

Lab Sample ID: 880-31298-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	169		253	426.8		mg/Kg		102	90 - 110	2	20

QC Association Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

GC VOA

Prep Batch: 58815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-58815/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 58964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31299-1	S-1 (0-1')	Total/NA	Solid	8021B	58990
880-31299-2	S-1 (2')	Total/NA	Solid	8021B	58990
880-31299-3	S-1 (3')	Total/NA	Solid	8021B	58990
MB 880-58815/5-A	Method Blank	Total/NA	Solid	8021B	58815
MB 880-58990/5-A	Method Blank	Total/NA	Solid	8021B	58990
LCS 880-58990/1-A	Lab Control Sample	Total/NA	Solid	8021B	58990
LCSD 880-58990/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58990
880-31298-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	58990
880-31298-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58990

Prep Batch: 58990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31299-1	S-1 (0-1')	Total/NA	Solid	5035	
880-31299-2	S-1 (2')	Total/NA	Solid	5035	
880-31299-3	S-1 (3')	Total/NA	Solid	5035	
MB 880-58990/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58990/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58990/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-31298-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-31298-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 59136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31299-1	S-1 (0-1')	Total/NA	Solid	Total BTEX	
880-31299-2	S-1 (2')	Total/NA	Solid	Total BTEX	
880-31299-3	S-1 (3')	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 59402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31299-1	S-1 (0-1')	Total/NA	Solid	8015NM Prep	
880-31299-2	S-1 (2')	Total/NA	Solid	8015NM Prep	
880-31299-3	S-1 (3')	Total/NA	Solid	8015NM Prep	
MB 880-59402/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59402/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59402/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
870-19120-A-2-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
870-19120-A-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 59596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31299-1	S-1 (0-1')	Total/NA	Solid	8015B NM	59402
880-31299-2	S-1 (2')	Total/NA	Solid	8015B NM	59402
880-31299-3	S-1 (3')	Total/NA	Solid	8015B NM	59402
MB 880-59402/1-A	Method Blank	Total/NA	Solid	8015B NM	59402
LCS 880-59402/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59402

QC Association Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

GC Semi VOA (Continued)

Analysis Batch: 59596 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-59402/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59402
870-19120-A-2-F MS	Matrix Spike	Total/NA	Solid	8015B NM	59402
870-19120-A-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	59402

Analysis Batch: 59742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31299-1	S-1 (0-1')	Total/NA	Solid	8015 NM	
880-31299-2	S-1 (2')	Total/NA	Solid	8015 NM	
880-31299-3	S-1 (3')	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31299-1	S-1 (0-1')	Soluble	Solid	DI Leach	
880-31299-2	S-1 (2')	Soluble	Solid	DI Leach	
880-31299-3	S-1 (3')	Soluble	Solid	DI Leach	
MB 880-58660/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58660/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58660/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-31298-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-31298-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 58743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31299-1	S-1 (0-1')	Soluble	Solid	300.0	58660
880-31299-2	S-1 (2')	Soluble	Solid	300.0	58660
880-31299-3	S-1 (3')	Soluble	Solid	300.0	58660
MB 880-58660/1-A	Method Blank	Soluble	Solid	300.0	58660
LCS 880-58660/2-A	Lab Control Sample	Soluble	Solid	300.0	58660
LCSD 880-58660/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58660
880-31298-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	58660
880-31298-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	58660

Lab Chronicle

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Client Sample ID: S-1 (0-1')

Lab Sample ID: 880-31299-1
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	58990	08/01/23 10:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58964	08/02/23 09:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59136	08/02/23 15:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			59742	08/09/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	59402	08/07/23 14:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59596	08/08/23 23:45	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	58660	07/27/23 14:22	KS	EET MID
Soluble	Analysis	300.0		1			58743	07/29/23 02:59	CH	EET MID

Client Sample ID: S-1 (2')

Lab Sample ID: 880-31299-2
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	58990	08/01/23 10:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58964	08/02/23 09:45	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59136	08/02/23 15:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			59742	08/09/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	59402	08/07/23 14:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59596	08/09/23 00:06	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	58660	07/27/23 14:22	KS	EET MID
Soluble	Analysis	300.0		1			58743	07/29/23 03:05	CH	EET MID

Client Sample ID: S-1 (3')

Lab Sample ID: 880-31299-3
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58990	08/01/23 10:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58964	08/02/23 10:11	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59136	08/02/23 15:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			59742	08/09/23 10:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	59402	08/07/23 14:17	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59596	08/09/23 00:28	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58660	07/27/23 14:22	KS	EET MID
Soluble	Analysis	300.0		1			58743	07/29/23 03:10	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31299-1
SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-31299-1	S-1 (0-1')	Solid	07/25/23 00:00	07/26/23 16:45
880-31299-2	S-1 (2')	Solid	07/25/23 00:00	07/26/23 16:45
880-31299-3	S-1 (3')	Solid	07/25/23 00:00	07/26/23 16:45

880-31299 Chain of Custody

Project Manager	Clinton Merritt	Bill to (if different)	Melodie Sanjari
Company Name	Carmona Resources	Company Name	Marathon Oil Corporation
Address	310 W Wall St Ste 500	Address	990 Town and Country Blvd
City, State ZIP	Midland, TX 79701	City, State ZIP	Houston TX 77024
Phone		Email	msanjari@marathonoil com

Work Order Comments

Program. UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐

Deliverables EDD ☐ ADaPT ☐ Other

Project Name	Sterling 20 State 1H	Turn Around	
Project Number	2091	☑ Routine	☐ Rush
Project Location	Lea County, New Mexico	Due Date	5 day
Sampler's Name	CCM		
PO #			

SAMPLE RECEIPT				
Temp Blank	Yes (No)	Wet Ice	(Yes) No	
Received Intact:	(Yes) No	Thermometer ID	IR8	
Cooler Custody Seals	Yes No (N/A)	Correction Factor	-.30	
Sample Custody Seals	Yes No (N/A)	Temperature Reading	4.8	
Total Containers.		Corrected Temperature	4.5	

Sample Identification	Date	Time	Soil	Water	Grab/ Comp	# of Cont	BTEX 8021B	TPH 8015M (GRO + DRO + MRO)	Chloride 300 0	Hold
S-1 (0-1')	7 25 23		X		G	1	X	X	X	
S-1 (2')	7 25 23		X		G	1	X	X	X	
S-1 (3')	7 25 23		X		G	1	X	X	X	
S-1 (4')	7 25 23		X		G	1				X
S-1 (5')	7 25 23		X		G	1				X

Preservative Codes

None NO | DI Water H_2O

Cool Cool | MeOH Me

HCL HC | HNO_3 HN

H_2S0_4 H_2 | NaOH Na

H PO_4 HP

$NaHSO_4$ NABIS

Na_2S_2O NaSO

Zn Acetate+NaOH Zn

NaOH+Ascorbic Acid SAPC

Sample Comments

Comments Email results to Mike Carmona mcarmona@carmonaresources com, Conner Moehring cmoehring@carmonaresources com, Clint Merritt MerrittC@carmonaresources com

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
	7-26-23 1645		

8/9/2023

Login Sample Receipt Checklist

Client: Carmona Resources

Job Number: 880-31299-1
SDG Number: Lea County, New Mexico

Login Number: 31299
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Clint Merritt
Carmona Resources
310 W Wall St
Ste 500
Midland, Texas 79701

Generated 8/9/2023 9:55:53 AM

JOB DESCRIPTION

Sterling 20 State 1H
SDG NUMBER Lea County, New Mexico

JOB NUMBER

880-31296-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

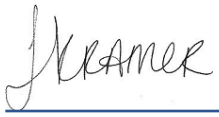
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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8/9/2023 9:55:53 AM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Laboratory Job ID: 880-31296-1
SDG: Lea County, New Mexico

Table of Contents

Definitions/Glossary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Job ID: 880-31296-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-31296-1

Receipt
The samples were received on 7/26/2023 4:45 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.5°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: S-2 (0-1') (880-31296-1), S-2 (2') (880-31296-2) and S-2 (3') (880-31296-3).

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-59598/31), (CCV 880-59598/47) and (CCV 880-59598/58). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: S-2 (0-1') (880-31296-1), S-2 (2') (880-31296-2), S-2 (3') (880-31296-3), (880-31325-A-21-E), (880-31325-A-21-F MS) and (880-31325-A-21-G MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-59535 and analytical batch 880-59598 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Client Sample ID: S-2 (0-1')

Lab Sample ID: 880-31296-1
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/01/23 09:18	08/03/23 04:20	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/01/23 09:18	08/03/23 04:20	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/01/23 09:18	08/03/23 04:20	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		08/01/23 09:18	08/03/23 04:20	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/01/23 09:18	08/03/23 04:20	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		08/01/23 09:18	08/03/23 04:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*08/01/23 09:18*	*08/03/23 04:20*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*08/01/23 09:18*	*08/03/23 04:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			08/03/23 09:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/09/23 10:25	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/07/23 14:29	08/09/23 03:41	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/07/23 14:29	08/09/23 03:41	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/07/23 14:29	08/09/23 03:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*142*	*S1+*	*70 - 130*	*08/07/23 14:29*	*08/09/23 03:41*	*1*
o-Terphenyl	*166*	*S1+*	*70 - 130*	*08/07/23 14:29*	*08/09/23 03:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**83.9**		4.99		mg/Kg			07/29/23 01:34	1

Client Sample ID: S-2 (2')

Lab Sample ID: 880-31296-2
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/01/23 09:18	08/03/23 04:40	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/01/23 09:18	08/03/23 04:40	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/01/23 09:18	08/03/23 04:40	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/01/23 09:18	08/03/23 04:40	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/01/23 09:18	08/03/23 04:40	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/01/23 09:18	08/03/23 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*08/01/23 09:18*	*08/03/23 04:40*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*08/01/23 09:18*	*08/03/23 04:40*	*1*

Client Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Client Sample ID: S-2 (2')

Lab Sample ID: 880-31296-2
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/03/23 09:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			08/09/23 10:25	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		08/07/23 14:29	08/09/23 04:03	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		08/07/23 14:29	08/09/23 04:03	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		08/07/23 14:29	08/09/23 04:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*08/07/23 14:29*	*08/09/23 04:03*	*1*
o-Terphenyl	*173*	*S1+*	*70 - 130*	*08/07/23 14:29*	*08/09/23 04:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**96.3**		4.96		mg/Kg			07/29/23 01:50	1

Client Sample ID: S-2 (3')

Lab Sample ID: 880-31296-3
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/01/23 09:18	08/03/23 05:01	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/01/23 09:18	08/03/23 05:01	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/01/23 09:18	08/03/23 05:01	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		08/01/23 09:18	08/03/23 05:01	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/01/23 09:18	08/03/23 05:01	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		08/01/23 09:18	08/03/23 05:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*08/01/23 09:18*	*08/03/23 05:01*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/01/23 09:18*	*08/03/23 05:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			08/03/23 09:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			08/09/23 10:25	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		08/07/23 14:29	08/09/23 04:24	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		08/07/23 14:29	08/09/23 04:24	1

Client Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Client Sample ID: S-2 (3')
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Lab Sample ID: 880-31296-3
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/07/23 14:29	08/09/23 04:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*149*	*S1+*	*70 - 130*	*08/07/23 14:29*	*08/09/23 04:24*	*1*
o-Terphenyl	*185*	*S1+*	*70 - 130*	*08/07/23 14:29*	*08/09/23 04:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**48.8**		4.96		mg/Kg			07/29/23 01:55	1

Surrogate Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-31279-A-1-A MS	Matrix Spike	103	100
880-31279-A-1-B MSD	Matrix Spike Duplicate	108	104
880-31296-1	S-2 (0-1')	113	104
880-31296-2	S-2 (2')	112	107
880-31296-3	S-2 (3')	103	102
LCS 880-58971/1-A	Lab Control Sample	104	100
LCSD 880-58971/2-A	Lab Control Sample Dup	95	103
MB 880-58971/5-A	Method Blank	84	89
MB 880-58998/5-A	Method Blank	85	89

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-31296-1	S-2 (0-1')	142 S1+	166 S1+
880-31296-2	S-2 (2')	145 S1+	173 S1+
880-31296-3	S-2 (3')	149 S1+	185 S1+
880-31325-A-21-F MS	Matrix Spike	138 S1+	152 S1+
880-31325-A-21-G MSD	Matrix Spike Duplicate	160 S1+	166 S1+
LCS 880-59535/2-A	Lab Control Sample	102	128
LCSD 880-59535/3-A	Lab Control Sample Dup	102	128
MB 880-59535/1-A	Method Blank	101	123

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58971/5-A
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/01/23 09:18	08/02/23 22:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*08/01/23 09:18*	*08/02/23 22:08*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*08/01/23 09:18*	*08/02/23 22:08*	*1*

Lab Sample ID: LCS 880-58971/1-A
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58971

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07714		mg/Kg		77	70 - 130		
Toluene			0.100	0.1014		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.08911		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1753		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.08985		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-58971/2-A
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58971

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08576		mg/Kg		86	70 - 130	11	35
Toluene			0.100	0.1000		mg/Kg		100	70 - 130	1	35
Ethylbenzene			0.100	0.08572		mg/Kg		86	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1641		mg/Kg		82	70 - 130	7	35
o-Xylene			0.100	0.08388		mg/Kg		84	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-31279-A-1-A MS
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58971

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0996	0.07513		mg/Kg		75	70 - 130		
Toluene	<0.00202	U	0.0996	0.08995		mg/Kg		90	70 - 130		

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-31279-A-1-A MS
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58971

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0996	0.08100		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1561		mg/Kg		78	70 - 130
o-Xylene	<0.00202	U	0.0996	0.07987		mg/Kg		80	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-31279-A-1-B MSD
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58971

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0994	0.07017		mg/Kg		71	70 - 130	7	35
Toluene	<0.00202	U	0.0994	0.08738		mg/Kg		88	70 - 130	3	35
Ethylbenzene	<0.00202	U	0.0994	0.07772		mg/Kg		78	70 - 130	4	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1481		mg/Kg		75	70 - 130	5	35
o-Xylene	<0.00202	U	0.0994	0.07711		mg/Kg		78	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: MB 880-58998/5-A
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58998

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/01/23 10:59	08/02/23 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*08/01/23 10:59*	*08/02/23 11:28*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*08/01/23 10:59*	*08/02/23 11:28*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-59535/1-A
Matrix: Solid
Analysis Batch: 59598

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59535

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/07/23 14:29	08/08/23 19:25	1

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-59535/1-A | **Client Sample ID: Method Blank**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 59598 | **Prep Batch: 59535**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/07/23 14:29	08/08/23 19:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/07/23 14:29	08/08/23 19:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*08/07/23 14:29*	*08/08/23 19:25*	*1*
o-Terphenyl	*123*		*70 - 130*	*08/07/23 14:29*	*08/08/23 19:25*	*1*

Lab Sample ID: LCS 880-59535/2-A | **Client Sample ID: Lab Control Sample**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 59598 | **Prep Batch: 59535**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	970.1		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	964.8		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*128*		*70 - 130*

Lab Sample ID: LCSD 880-59535/3-A | **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 59598 | **Prep Batch: 59535**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1003		mg/Kg		100	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	969.6		mg/Kg		97	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*128*		*70 - 130*

Lab Sample ID: 880-31325-A-21-F MS | **Client Sample ID: Matrix Spike**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 59598 | **Prep Batch: 59535**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1010	984.3		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)	136		1010	1054		mg/Kg		91	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*138*	*S1+*	*70 - 130*
o-Terphenyl	*152*	*S1+*	*70 - 130*

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-31325-A-21-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 59598 — **Prep Batch: 59535**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1010	1127		mg/Kg		108	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	136		1010	1203		mg/Kg		106	70 - 130	13	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*160*	*S1+*	*70 - 130*
o-Terphenyl	*166*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58660/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/29/23 00:46	1

Lab Sample ID: LCS 880-58660/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	253.7		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-58660/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	269.2		mg/Kg		108	90 - 110	6	20

Lab Sample ID: 880-31292-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	65.6		251	292.8		mg/Kg		91	90 - 110

Lab Sample ID: 880-31292-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58743

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	65.6		251	304.8		mg/Kg		95	90 - 110	4	20

QC Association Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

GC VOA

Prep Batch: 58971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31296-1	S-2 (0-1')	Total/NA	Solid	5035	
880-31296-2	S-2 (2')	Total/NA	Solid	5035	
880-31296-3	S-2 (3')	Total/NA	Solid	5035	
MB 880-58971/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58971/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58971/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-31279-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-31279-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 58998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-58998/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 59072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31296-1	S-2 (0-1')	Total/NA	Solid	8021B	58971
880-31296-2	S-2 (2')	Total/NA	Solid	8021B	58971
880-31296-3	S-2 (3')	Total/NA	Solid	8021B	58971
MB 880-58971/5-A	Method Blank	Total/NA	Solid	8021B	58971
MB 880-58998/5-A	Method Blank	Total/NA	Solid	8021B	58998
LCS 880-58971/1-A	Lab Control Sample	Total/NA	Solid	8021B	58971
LCSD 880-58971/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58971
880-31279-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	58971
880-31279-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58971

Analysis Batch: 59212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31296-1	S-2 (0-1')	Total/NA	Solid	Total BTEX	
880-31296-2	S-2 (2')	Total/NA	Solid	Total BTEX	
880-31296-3	S-2 (3')	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 59535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31296-1	S-2 (0-1')	Total/NA	Solid	8015NM Prep	
880-31296-2	S-2 (2')	Total/NA	Solid	8015NM Prep	
880-31296-3	S-2 (3')	Total/NA	Solid	8015NM Prep	
MB 880-59535/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59535/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59535/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-31325-A-21-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-31325-A-21-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 59598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31296-1	S-2 (0-1')	Total/NA	Solid	8015B NM	59535
880-31296-2	S-2 (2')	Total/NA	Solid	8015B NM	59535
880-31296-3	S-2 (3')	Total/NA	Solid	8015B NM	59535
MB 880-59535/1-A	Method Blank	Total/NA	Solid	8015B NM	59535
LCS 880-59535/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59535

QC Association Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

GC Semi VOA (Continued)

Analysis Batch: 59598 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-59535/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59535
880-31325-A-21-F MS	Matrix Spike	Total/NA	Solid	8015B NM	59535
880-31325-A-21-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	59535

Analysis Batch: 59738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31296-1	S-2 (0-1')	Total/NA	Solid	8015 NM	
880-31296-2	S-2 (2')	Total/NA	Solid	8015 NM	
880-31296-3	S-2 (3')	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31296-1	S-2 (0-1')	Soluble	Solid	DI Leach	
880-31296-2	S-2 (2')	Soluble	Solid	DI Leach	
880-31296-3	S-2 (3')	Soluble	Solid	DI Leach	
MB 880-58660/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58660/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58660/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-31292-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-31292-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 58743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31296-1	S-2 (0-1')	Soluble	Solid	300.0	58660
880-31296-2	S-2 (2')	Soluble	Solid	300.0	58660
880-31296-3	S-2 (3')	Soluble	Solid	300.0	58660
MB 880-58660/1-A	Method Blank	Soluble	Solid	300.0	58660
LCS 880-58660/2-A	Lab Control Sample	Soluble	Solid	300.0	58660
LCSD 880-58660/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58660
880-31292-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	58660
880-31292-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	58660

Lab Chronicle

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Client Sample ID: S-2 (0-1')

Lab Sample ID: 880-31296-1
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58971	08/01/23 09:18	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59072	08/03/23 04:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59212	08/03/23 09:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			59738	08/09/23 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	59535	08/07/23 14:29	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59598	08/09/23 03:41	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58660	07/27/23 14:22	KS	EET MID
Soluble	Analysis	300.0		1			58743	07/29/23 01:34	CH	EET MID

Client Sample ID: S-2 (2')

Lab Sample ID: 880-31296-2
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	58971	08/01/23 09:18	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59072	08/03/23 04:40	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59212	08/03/23 09:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			59738	08/09/23 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	59535	08/07/23 14:29	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59598	08/09/23 04:03	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	58660	07/27/23 14:22	KS	EET MID
Soluble	Analysis	300.0		1			58743	07/29/23 01:50	CH	EET MID

Client Sample ID: S-2 (3')

Lab Sample ID: 880-31296-3
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	58971	08/01/23 09:18	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59072	08/03/23 05:01	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59212	08/03/23 09:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			59738	08/09/23 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	59535	08/07/23 14:29	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59598	08/09/23 04:24	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	58660	07/27/23 14:22	KS	EET MID
Soluble	Analysis	300.0		1			58743	07/29/23 01:55	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31296-1
SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-31296-1	S-2 (0-1')	Solid	07/25/23 00:00	07/26/23 16:45
880-31296-2	S-2 (2')	Solid	07/25/23 00:00	07/26/23 16:45
880-31296-3	S-2 (3')	Solid	07/25/23 00:00	07/26/23 16:45

Wo 

880-31296 Chain of Custody

Project Manager	Clinton Merritt	Bill to (if different)	Melodie Sanjari
Company Name	Carmona Resources	Company Name	Marathon Oil Corporation
Address	310 W Wall St Ste 500	Address	990 Town and Country Blvd
City, State ZIP	Midland, TX 79701	City, State ZIP	Houston, TX 77024
Phone		Email	msanjari@marathonoil.com

Work Order Comments

Program UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project

Reporting Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐

Deliverables EDD ☐ ADaPT ☐ Other

Project Name	Sterling 20 State 1H	Turn Around	
Project Number	2091	☑ Routine	☐ Rush
Project Location	Lea County, New Mexico	Due Date	5 day
Sampler's Name	CCM		
PO #:			

SAMPLE RECEIPT				
Temp Blank	Yes No	Wet Ice	Yes No	
Received Intact:	Yes No	Thermometer ID	JRB	
Cooler Custody Seals	Yes No N/A	Correction Factor	-1.50	
Sample Custody Seals	Yes No N/A	Temperature Reading	4.8	
Total Containers		Corrected Temperature	4.3	

ANALYSIS REQUEST

Preservative Codes

None NO DI Water H_2O

Cool Cool MeOH Me

HCL HC HNO_3 HN

H_2S0_4 H_2 NaOH Na

H PO_4 HP

$NaHSO_4$ NABIS

Na-S-O $NaSO_3$

Zn Acetate+NaOH Zn

NaOH+Ascorbic Acid SAPC

Sample Identification	Date	Time	Soil	Water	Grab/ Comp	# of Cont	Parameters: BTEX 8021B	TPH 8015M (GRO + DRO + MRO)	Chloride 300 0	Hold	Sample Comments
S-2 (0-1')	7 25 23		X		G	1	X	X	X		
S-2 (2')	7 25 23		X		G	1	X	X	X		
S-2 (3')	7 25 23		X		G	1	X	X	X		

Comments Email results to Mike Carmona mcarmona@carmonaresources com, Conner Moehring cmoehring@carmonaresources com, Clint Merritt MerrittC@carmonaresources com

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
	7-26-23 1045		

Login Sample Receipt Checklist

Client: Carmona Resources

Job Number: 880-31296-1
SDG Number: Lea County, New Mexico

Login Number: 31296
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Clint Merritt
Carmona Resources
310 W Wall St
Ste 500
Midland, Texas 79701

Generated 8/7/2023 12:44:19 PM

JOB DESCRIPTION

Sterling 20 State 1H
SDG NUMBER Lea County, New Mexico

JOB NUMBER

880-31291-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

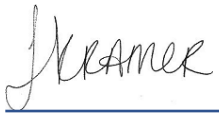
Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Laboratory Job ID: 880-31291-1
SDG: Lea County, New Mexico

Table of Contents

Definitions/Glossary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Job ID: 880-31291-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-31291-1

Receipt
The samples were received on 7/26/2023 4:45 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.5°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: S-3 (0-1') (880-31291-1), S-3 (2') (880-31291-2) and S-3 (3') (880-31291-3).

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-59369 and analytical batch 880-59409 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Client Sample ID: S-3 (0-1')

Lab Sample ID: 880-31291-1
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/03/23 00:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/03/23 00:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/03/23 00:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/01/23 09:18	08/03/23 00:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/03/23 00:54	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/01/23 09:18	08/03/23 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*08/01/23 09:18*	*08/03/23 00:54*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*08/01/23 09:18*	*08/03/23 00:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			08/03/23 09:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			08/07/23 10:15	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U *-	50.4		mg/Kg		08/04/23 17:30	08/06/23 19:21	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		08/04/23 17:30	08/06/23 19:21	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/04/23 17:30	08/06/23 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*08/04/23 17:30*	*08/06/23 19:21*	*1*
o-Terphenyl	*115*		*70 - 130*	*08/04/23 17:30*	*08/06/23 19:21*	*1*

Client Sample ID: S-3 (2')

Lab Sample ID: 880-31291-2
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		08/01/23 09:18	08/03/23 01:14	1
Toluene	<0.00198	U	0.00198		mg/Kg		08/01/23 09:18	08/03/23 01:14	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		08/01/23 09:18	08/03/23 01:14	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		08/01/23 09:18	08/03/23 01:14	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		08/01/23 09:18	08/03/23 01:14	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		08/01/23 09:18	08/03/23 01:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*08/01/23 09:18*	*08/03/23 01:14*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*08/01/23 09:18*	*08/03/23 01:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			08/03/23 09:53	1

Client Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Client Sample ID: S-3 (2')

Lab Sample ID: 880-31291-2
Date Collected: 07/25/23 00:00
Matrix: Solid
Date Received: 07/26/23 16:45

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/07/23 10:15	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U *-	50.5		mg/Kg		08/04/23 17:30	08/06/23 19:45	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/04/23 17:30	08/06/23 19:45	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/04/23 17:30	08/06/23 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*08/04/23 17:30*	*08/06/23 19:45*	*1*
o-Terphenyl	*108*		*70 - 130*	*08/04/23 17:30*	*08/06/23 19:45*	*1*

Client Sample ID: S-3 (3')

Lab Sample ID: 880-31291-3
Date Collected: 07/25/23 00:00
Matrix: Solid
Date Received: 07/26/23 16:45

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/01/23 09:18	08/03/23 01:35	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/01/23 09:18	08/03/23 01:35	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/01/23 09:18	08/03/23 01:35	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/01/23 09:18	08/03/23 01:35	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/01/23 09:18	08/03/23 01:35	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/01/23 09:18	08/03/23 01:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*08/01/23 09:18*	*08/03/23 01:35*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/01/23 09:18*	*08/03/23 01:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/03/23 09:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/07/23 10:15	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U *-	49.6		mg/Kg		08/04/23 17:30	08/06/23 20:11	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/04/23 17:30	08/06/23 20:11	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/04/23 17:30	08/06/23 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*08/04/23 17:30*	*08/06/23 20:11*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/04/23 17:30*	*08/06/23 20:11*	*1*

Surrogate Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-31279-A-1-A MS	Matrix Spike	103	100
880-31279-A-1-B MSD	Matrix Spike Duplicate	108	104
880-31291-1	S-3 (0-1')	106	105
880-31291-2	S-3 (2')	111	106
880-31291-3	S-3 (3')	114	102
LCS 880-58971/1-A	Lab Control Sample	104	100
LCSD 880-58971/2-A	Lab Control Sample Dup	95	103
MB 880-58971/5-A	Method Blank	84	89
MB 880-58998/5-A	Method Blank	85	89

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-31291-1	S-3 (0-1')	108	115
880-31291-2	S-3 (2')	104	108
880-31291-3	S-3 (3')	96	98
880-31664-A-2-F MS	Matrix Spike	123	104
880-31664-A-2-G MSD	Matrix Spike Duplicate	128	112
LCS 880-59369/2-A	Lab Control Sample	93	94
LCSD 880-59369/3-A	Lab Control Sample Dup	85	82
MB 880-59369/1-A	Method Blank	88	94

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58971/5-A
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 09:18	08/02/23 22:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/01/23 09:18	08/02/23 22:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*08/01/23 09:18*	*08/02/23 22:08*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*08/01/23 09:18*	*08/02/23 22:08*	*1*

Lab Sample ID: LCS 880-58971/1-A
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.07714		mg/Kg		77	70 - 130
Toluene	0.100	0.1014		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.08911		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1753		mg/Kg		88	70 - 130
o-Xylene	0.100	0.08985		mg/Kg		90	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-58971/2-A
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58971

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08576		mg/Kg		86	70 - 130	11	35
Toluene	0.100	0.1000		mg/Kg		100	70 - 130	1	35
Ethylbenzene	0.100	0.08572		mg/Kg		86	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1641		mg/Kg		82	70 - 130	7	35
o-Xylene	0.100	0.08388		mg/Kg		84	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-31279-A-1-A MS
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58971

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.0996	0.07513		mg/Kg		75	70 - 130
Toluene	<0.00202	U	0.0996	0.08995		mg/Kg		90	70 - 130

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-31279-A-1-A MS
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58971

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0996	0.08100		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1561		mg/Kg		78	70 - 130
o-Xylene	<0.00202	U	0.0996	0.07987		mg/Kg		80	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-31279-A-1-B MSD
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58971

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0994	0.07017		mg/Kg		71	70 - 130	7	35
Toluene	<0.00202	U	0.0994	0.08738		mg/Kg		88	70 - 130	3	35
Ethylbenzene	<0.00202	U	0.0994	0.07772		mg/Kg		78	70 - 130	4	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1481		mg/Kg		75	70 - 130	5	35
o-Xylene	<0.00202	U	0.0994	0.07711		mg/Kg		78	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: MB 880-58998/5-A
Matrix: Solid
Analysis Batch: 59072

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58998

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/01/23 10:59	08/02/23 11:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/01/23 10:59	08/02/23 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*08/01/23 10:59*	*08/02/23 11:28*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*08/01/23 10:59*	*08/02/23 11:28*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-59369/1-A
Matrix: Solid
Analysis Batch: 59409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59369

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/04/23 17:29	08/06/23 08:16	1

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-59369/1-A
Matrix: Solid
Analysis Batch: 59409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59369

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/04/23 17:29	08/06/23 08:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/04/23 17:29	08/06/23 08:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/04/23 17:29*	*08/06/23 08:16*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/04/23 17:29*	*08/06/23 08:16*	*1*

Lab Sample ID: LCS 880-59369/2-A
Matrix: Solid
Analysis Batch: 59409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59369

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	661.8	*-	mg/Kg		66	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	873.3		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Lab Sample ID: LCSD 880-59369/3-A
Matrix: Solid
Analysis Batch: 59409

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59369

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	660.9	*-	mg/Kg		66	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	845.2		mg/Kg		85	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Lab Sample ID: 880-31664-A-2-F MS
Matrix: Solid
Analysis Batch: 59409

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 59369

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U *-	993	876.9		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)	61.5		993	1175		mg/Kg		112	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-31664-A-2-G MSD
Matrix: Solid
Analysis Batch: 59409

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 59369

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U *-	992	918.4		mg/Kg		91	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	61.5		992	1254		mg/Kg		120	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*128*		*70 - 130*
o-Terphenyl	*112*		*70 - 130*

QC Association Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

GC VOA

Prep Batch: 58971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31291-1	S-3 (0-1')	Total/NA	Solid	5035	
880-31291-2	S-3 (2')	Total/NA	Solid	5035	
880-31291-3	S-3 (3')	Total/NA	Solid	5035	
MB 880-58971/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58971/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58971/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-31279-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-31279-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 58998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-58998/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 59072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31291-1	S-3 (0-1')	Total/NA	Solid	8021B	58971
880-31291-2	S-3 (2')	Total/NA	Solid	8021B	58971
880-31291-3	S-3 (3')	Total/NA	Solid	8021B	58971
MB 880-58971/5-A	Method Blank	Total/NA	Solid	8021B	58971
MB 880-58998/5-A	Method Blank	Total/NA	Solid	8021B	58998
LCS 880-58971/1-A	Lab Control Sample	Total/NA	Solid	8021B	58971
LCSD 880-58971/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58971
880-31279-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	58971
880-31279-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58971

Analysis Batch: 59207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31291-1	S-3 (0-1')	Total/NA	Solid	Total BTEX	
880-31291-2	S-3 (2')	Total/NA	Solid	Total BTEX	
880-31291-3	S-3 (3')	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 59369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31291-1	S-3 (0-1')	Total/NA	Solid	8015NM Prep	
880-31291-2	S-3 (2')	Total/NA	Solid	8015NM Prep	
880-31291-3	S-3 (3')	Total/NA	Solid	8015NM Prep	
MB 880-59369/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59369/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59369/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-31664-A-2-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-31664-A-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 59409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31291-1	S-3 (0-1')	Total/NA	Solid	8015B NM	59369
880-31291-2	S-3 (2')	Total/NA	Solid	8015B NM	59369
880-31291-3	S-3 (3')	Total/NA	Solid	8015B NM	59369
MB 880-59369/1-A	Method Blank	Total/NA	Solid	8015B NM	59369
LCS 880-59369/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59369

QC Association Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

GC Semi VOA (Continued)

Analysis Batch: 59409 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-59369/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59369
880-31664-A-2-F MS	Matrix Spike	Total/NA	Solid	8015B NM	59369
880-31664-A-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	59369

Analysis Batch: 59488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-31291-1	S-3 (0-1')	Total/NA	Solid	8015 NM	
880-31291-2	S-3 (2')	Total/NA	Solid	8015 NM	
880-31291-3	S-3 (3')	Total/NA	Solid	8015 NM	

Lab Chronicle

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Client Sample ID: S-3 (0-1')

Lab Sample ID: 880-31291-1
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	58971	08/01/23 09:18	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59072	08/03/23 00:54	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59207	08/03/23 09:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			59488	08/07/23 10:15	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	59369	08/04/23 17:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59409	08/06/23 19:21	SM	EET MID

Client Sample ID: S-3 (2')

Lab Sample ID: 880-31291-2
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58971	08/01/23 09:18	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59072	08/03/23 01:14	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59207	08/03/23 09:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			59488	08/07/23 10:15	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	59369	08/04/23 17:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59409	08/06/23 19:45	SM	EET MID

Client Sample ID: S-3 (3')

Lab Sample ID: 880-31291-3
Matrix: Solid
Date Collected: 07/25/23 00:00
Date Received: 07/26/23 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	58971	08/01/23 09:18	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59072	08/03/23 01:35	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59207	08/03/23 09:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			59488	08/07/23 10:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	59369	08/04/23 17:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59409	08/06/23 20:11	SM	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Carmona Resources
Project/Site: Sterling 20 State 1H

Job ID: 880-31291-1
SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-31291-1	S-3 (0-1')	Solid	07/25/23 00:00	07/26/23 16:45
880-31291-2	S-3 (2')	Solid	07/25/23 00:00	07/26/23 16:45
880-31291-3	S-3 (3')	Solid	07/25/23 00:00	07/26/23 16:45

880-31291 Chain of Custody

Page 1 of 1

Project Manager	Clinton Merritt	Bill to (if different)	Melodie Sanjari
Company Name	Carmona Resources	Company Name	Marathon Oil Corporation
Address	310 W Wall St Ste 500	Address	990 Town and Country Blvd
City, State ZIP	Midland, TX 79701	City, State ZIP	Houston TX 77024
Phone		Email	msanjari@marathonoil.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project

Reporting Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐

Deliverables EDD ☐ ADaPT ☐ Other

Project Name	Sterling 20 State 1H	Turn Around	
Project Number	2091	☑ Routine	☐ Rush
Project Location	Lea County, New Mexico	Due Date	5 day
Sampler's Name	CCM		
PO #			

SAMPLE RECEIPT				
Temp Blank	Yes (No)	Wet Ice	(Yes) No	
Received Intact:	(Yes) No	Thermometer ID	IR8	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor	-.30	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading	4.8	
Total Containers:		Corrected Temperature	4.5	

Preservative Codes

None NO; DI Water H_2O; Cool Cool; MeOH Me; HCL HC; HNO_3 HN; H_2SO_4 H_2; NaOH Na; H_3PO_4 HP; $NaHSO_4$ NABIS; $Na_2S_2O_3$ $NaSO_3$; Zn Acetate+NaOH Zn; NaOH+Ascorbic Acid SAPC

Sample Identification	Date	Time	Soil	Water	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021B	TPH 8015M (GRO + DRO + MRO)	Chloride 300 0	Hold	Sample Comments
S-3 (0-1')	7 25 23		X		G	1		X	X			
S-3 (2')	7 25 23		X		G	1		X	X			
S-3 (3')	7 25 23		X		G	1		X	X			

Parameters

ANALYSIS REQUEST

Comments: Email results to Mike Carmona mcarmona@carmonaresources com, Conner Moehring cmoehring@carmonaresources com, Clint Merritt MerrittC@carmonaresources com

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
	7-26-23 1645		

8/7/2023

Login Sample Receipt Checklist

Client: Carmona Resources

Job Number: 880-31291-1
SDG Number: Lea County, New Mexico

Login Number: 31291
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Clint Merritt
Carmona Resources
310 W Wall St
Ste 500
Midland, Texas 79701

Generated 9/19/2023 8:20:49 AM Revision 1

JOB DESCRIPTION

Sterling 20 St 1H
SDG NUMBER Eddy County New Mexico

JOB NUMBER

890-5263-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

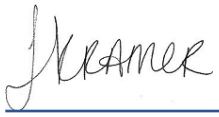
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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9/19/2023 8:20:49 AM
Revision 1

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Laboratory Job ID: 890-5263-1
SDG: Eddy County New Mexico

Table of Contents

Definitions/Glossary

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Job ID: 890-5263-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5263-1

REVISION

The report being provided is a revision of the original report sent on 9/18/2023. The report (revision 1) is being revised due to Per client email, requesting sample ID correction.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 9/13/2023 11:11 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: S-4 (0-1') (890-5263-1).

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-33291-A-17-C). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Client Sample ID: S-4 (0-1')

Date Collected: 09/13/23 00:00
Date Received: 09/13/23 11:11

Lab Sample ID: 890-5263-1

Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/15/23 12:04	09/15/23 23:25	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/15/23 12:04	09/15/23 23:25	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/15/23 12:04	09/15/23 23:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*09/15/23 12:04*	*09/15/23 23:25*	*1*
o-Terphenyl	*123*		*70 - 130*	*09/15/23 12:04*	*09/15/23 23:25*	*1*

Surrogate Summary

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
880-33291-A-17-D MS	Matrix Spike	112	110										
880-33291-A-17-E MSD	Matrix Spike Duplicate	122	116										
890-5263-1	S-4 (0-1')	118	123										
LCS 880-62583/2-A	Lab Control Sample	96	106										
LCSD 880-62583/3-A	Lab Control Sample Dup	87	97										
MB 880-62583/1-A	Method Blank	121	128										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-62583/1-A
Matrix: Solid
Analysis Batch: 62511

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62583

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/15/23 12:04	09/15/23 17:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/15/23 12:04	09/15/23 17:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/15/23 12:04	09/15/23 17:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*09/15/23 12:04*	*09/15/23 17:38*	*1*
o-Terphenyl	*128*		*70 - 130*	*09/15/23 12:04*	*09/15/23 17:38*	*1*

Lab Sample ID: LCS 880-62583/2-A
Matrix: Solid
Analysis Batch: 62511

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62583

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1109		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1003		mg/Kg		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: LCSD 880-62583/3-A
Matrix: Solid
Analysis Batch: 62511

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62583

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	990.9		mg/Kg		99	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	847.5		mg/Kg		85	70 - 130	17	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: 880-33291-A-17-D MS
Matrix: Solid
Analysis Batch: 62511

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62583

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	993	1131		mg/Kg		110	70 - 130
Diesel Range Organics (Over C10-C28)	98.9		993	853.5		mg/Kg		76	70 - 130

QC Sample Results

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-33291-A-17-D MS
Matrix: Solid
Analysis Batch: 62511

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62583

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: 880-33291-A-17-E MSD
Matrix: Solid
Analysis Batch: 62511

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62583

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	993	1252		mg/Kg		122	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	98.9		993	919.4		mg/Kg		83	70 - 130	7	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	116		70 - 130

QC Association Summary

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

GC Semi VOA

Analysis Batch: 62511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5263-1	S-4 (0-1')	Total/NA	Solid	8015B NM	62583
MB 880-62583/1-A	Method Blank	Total/NA	Solid	8015B NM	62583
LCS 880-62583/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62583
LCSD 880-62583/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62583
880-33291-A-17-D MS	Matrix Spike	Total/NA	Solid	8015B NM	62583
880-33291-A-17-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62583

Prep Batch: 62583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5263-1	S-4 (0-1')	Total/NA	Solid	8015NM Prep	
MB 880-62583/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62583/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62583/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-33291-A-17-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-33291-A-17-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Chronicle

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Client Sample ID: S-4 (0-1')
Date Collected: 09/13/23 00:00
Date Received: 09/13/23 11:11

Lab Sample ID: 890-5263-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	62583	09/15/23 12:04	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62511	09/15/23 23:25	SM	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Diesel Range Organics (Over C10-C28)
8015B NM	8015NM Prep	Solid	Gasoline Range Organics (GRO)-C6-C10
8015B NM	8015NM Prep	Solid	Oil Range Organics (Over C28-C36)

Method Summary

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Method	Method Description	Protocol	Laboratory
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Carmona Resources
Project/Site: Sterling 20 St 1H

Job ID: 890-5263-1
SDG: Eddy County New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-5263-1	S-4 (0-1')	Solid	09/13/23 00:00	09/13/23 11:11

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Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Clinton Merritt	Bill to: (if different)	Melodie Sanjari
Company Name:	Carmona Resources	Company Name:	Marathon Oil Corp
Address:	310 W Wall St	Address:	990 Town & Country Blvd
City, State ZIP:	Midland Tx 79701	City, State ZIP:	Houston Tx 77024
Phone:	[illegible]	Email:	MSanjari@marathonoil.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Sterling 20 St 1H	Turn Around	
Project Number:	2091	☒ Routine ☐ Rush	
Project Location:	Eddy Co, NM	Due Date:	
Sampler's Name:	CCM	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TM007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.6	
Total Containers:		Corrected Temperature:	2.4	

ANALYSIS REQUEST

Pres. Code

Parameters: TPH 8015M

890-5263 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont		Sample Comments
S-4 (0-1')	S	9/13			G	1	X	Email to: merrittc@carmonaresources.com

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		9-13 11:11	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Carmona Resources

Job Number: 890-5263-1
SDG Number: Eddy County New Mexico

Login Number: 5263
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Carmona Resources

Job Number: 890-5263-1
SDG Number: Eddy County New Mexico

Login Number: 5263
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 09/15/23 11:13 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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

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

CONDITIONS

Action 272745

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 272745
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	10/6/2023