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

November 1, 2019

#5E27950-BG26

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

SUBJECT: Closure Report for the Mohawk State #001 Release (NGRL1313754595), Chaves County, New Mexico

Dear Mr. Mike Bratcher:

On behalf of Marathon Oil Permian LLC (Marathon), Souder, Miller & Associates (SMA) has prepared this Closure Report that describes the activities of a release of liquids related to oil and gas production activities at the Mohawk State #001 site. The site is in Unit P, Section 20, Township 8S, Range 33E, Chaves 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	Mohawk State #001	Company	Marathon Oil Permian, LLC
API Number	30-005-29108	Location	33.6002, -103.58209
Incident Number	NGRL1313754595		
Estimated Date of Release	April 30, 2013	Date Reported to NMOCD	April 30, 2013
Landowner	State	Reported To	NMOCD
Source of Release	Heater treater sight glass		
Released Volume	15 bbls	Released Material	Oil & Produced Water
Recovered Volume	15 bbls	Net Release	0
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	August 5, September 24-25, October 8, 2019		

1.0 Background

On April 30, 2013, a release was discovered at the Mohawk State #001 site due a ruptured sight glass on the heater treater. Initial response activities were conducted by the operator at the time, Nadel & Gussman Permian on April 30, 2013. The release occurred within a lined area, and the operator reported that no soil was impacted by the release. Initial response activities included containment activities and fluid recovery. Figure 1 illustrates the vicinity and site location, Figures 2 and 3 illustrate the release location. The spill information has been completed on a new C-141 form which is included in Appendix A.

2.0 Site Information and Closure Criteria

The Mohawk State #001 is located approximately 55 miles east of Roswell, New Mexico on State land at an elevation of approximately 4,389 feet above mean sea level (amsl).

Based upon USGS water well data (Appendix B), depth to groundwater in the area is estimated to be 132 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 4/30/2019). The nearest significant watercourse is an unnamed playa located approximately 1,530 feet to the west. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for groundwater depth of greater than 100 feet bgs. Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

3.0 Release Characterization and Remediation Activities

On August 5, 2019, SMA personnel collected soil samples from one location (L1), at depths of one and 1.5 feet bgs. The sample location was adjacent to the release source. Soil samples were field screened for chloride using an electrical conductivity (EC) meter and for hydrocarbon impacts using a calibrated MiniRAE 2000 photoionization detector (PID).

Samples were analyzed 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. 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 hydrocarbon impacts remained in the soil above 1.5 feet bgs and excavation was recommended.

From September 24-25, 2019, SMA personnel returned to the site to oversee excavation within the dirt containment. The impact area was excavated to a depth of 1.5 ft. bgs utilizing hand tools. The area of excavation measured approximately 29 feet by 23 feet.

Upon completion, two samples (CL1, CL2) were collected from the base, and two samples (CSW1, CSW2) were collected from the sidewalls of the excavation and processed for the laboratory methods as described above. After excavation, a 20-mil liner was placed in the footprint of the excavation.

Laboratory results indicate that NMOCD closure criteria for groundwater depth of greater than 100 feet bgs has been meet in both bottom samples (CL1, CL2). Both sidewall samples indicate remaining hydrocarbon impacts slightly above the NMOCD Closure Criteria.

On October 8, 2019, SMA personnel returned to the site to collect closure samples outside of the earthen berm to determine the extent of contamination. SMA collected four composite samples (North Wall, East Wall, West Wall, and South Wall) from surface to 2 ft. bgs. and processed them for motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D only. 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).

Laboratory results indicate that NMOCD closure criteria for groundwater depth of greater than 100 feet bgs service has been met. Figure 3 shows the extent of the excavation and sample locations.

SMA recommends no further action and requests the closure of NGRL 1313754595.

Approximately 24 cubic yards of contaminated soils from the excavated base and earthen berm were removed. The excavation was backfilled with clean material to return the surface to previous contours. The earthen berm was rebuilt with clean material and a 20-mil liner was placed at the base of the excavation and over the berm. The contaminated soil was transported and disposed of at R360 Environmental Solutions near Hobbs, New Mexico, an NMOCD permitted disposal facility.

4.0 Scope and Limitations

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing this deferment 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 Ashley Maxwell or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Ashley Maxwell
Project Scientist

Reviewed by:

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

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

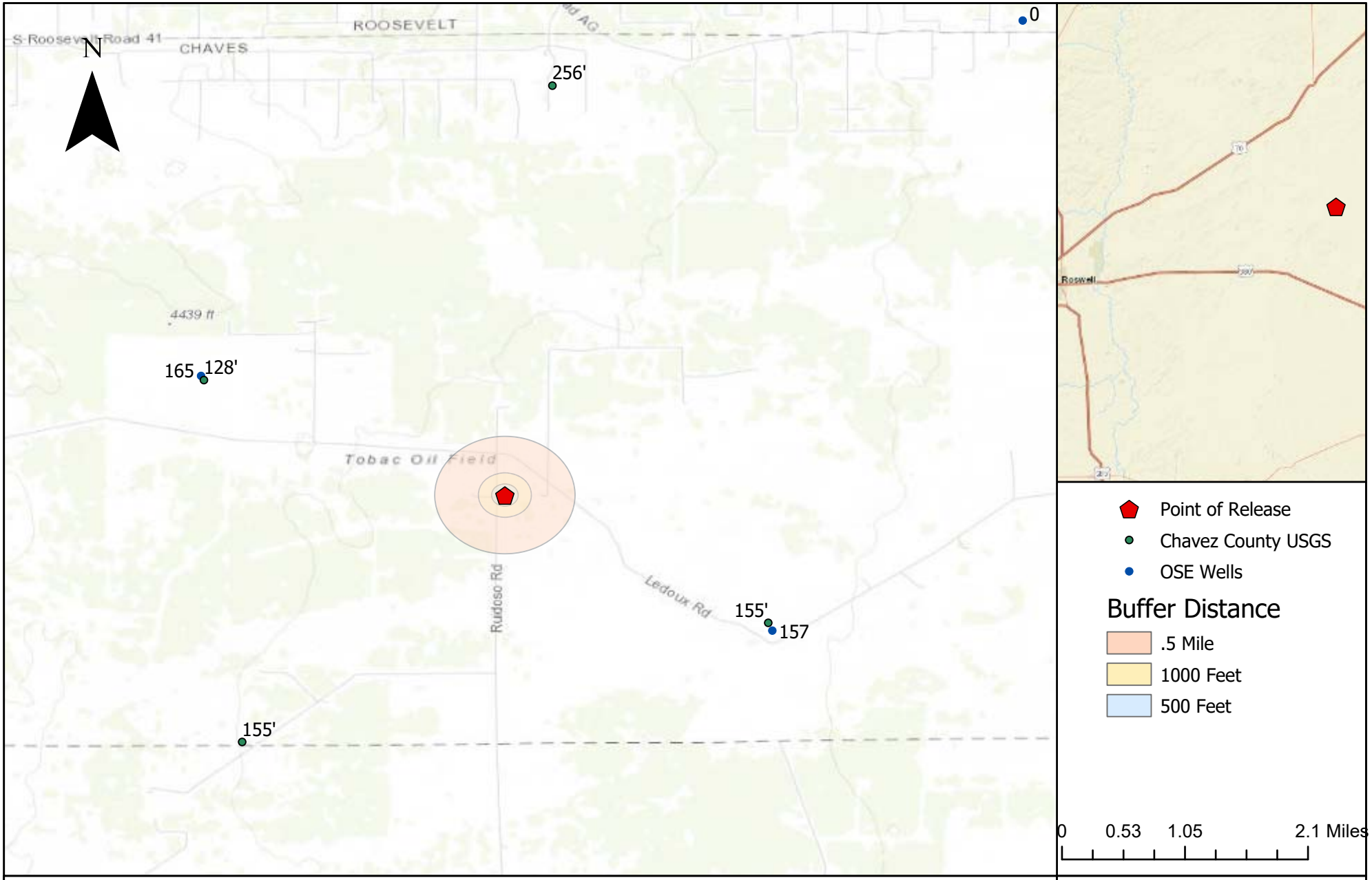
Tables:

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

Appendices:

Appendix A: Spill Incident information
Appendix B: NMOSE Wells Report
Appendix C: Field Notes & Photo Log
Appendix D: Laboratory Analytical Reports

FIGURES



Regional Vicinity & Wellhead Protection Map
Mohawk State #1- Marathon
Sec 20 T8S R33E, New Mexico

Figure 1

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

Date Saved: 4/10/2019

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

Drawn Heather Patterson
Date 4/10/2019
Checked
Approved

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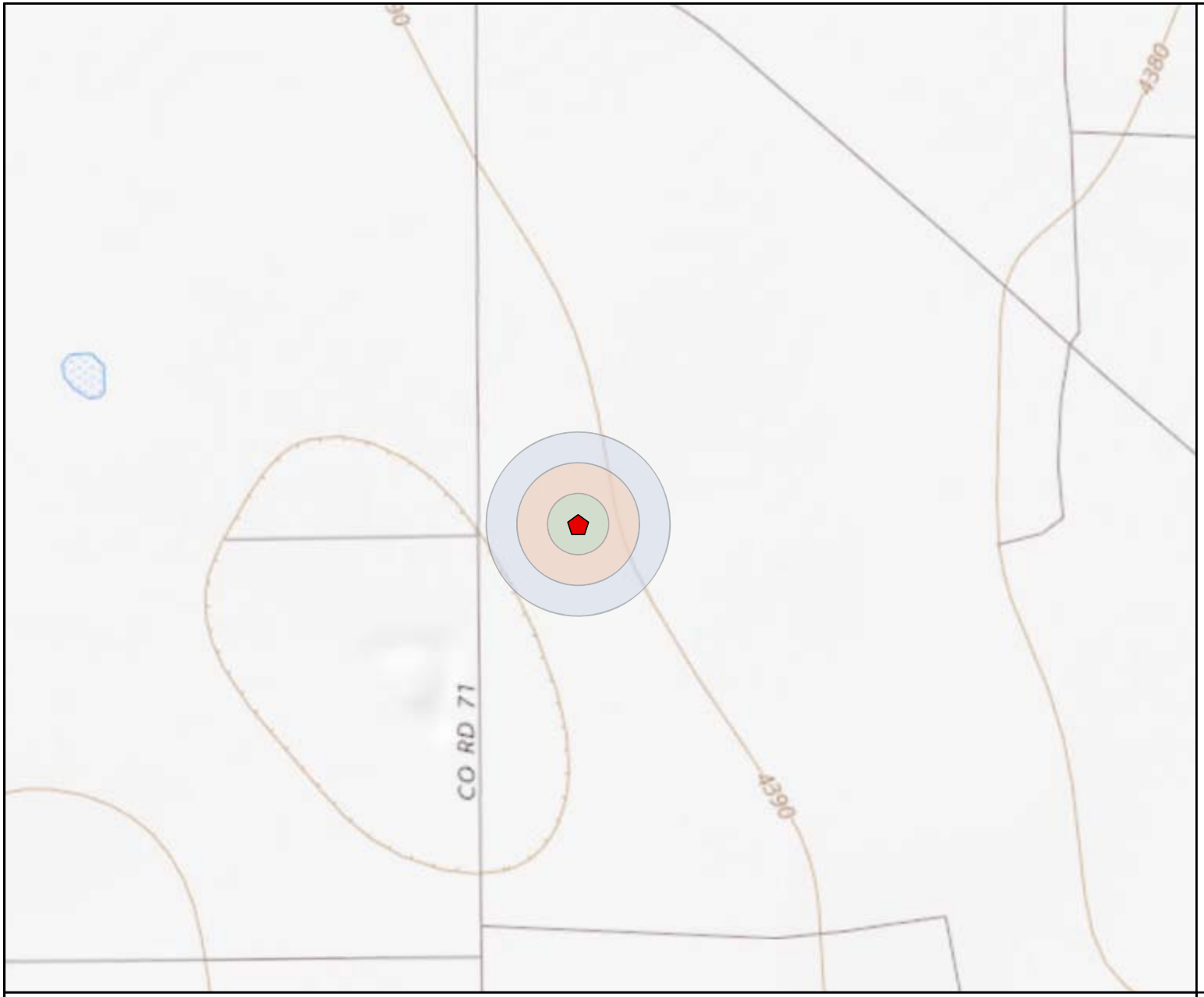

Legend

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

Buffer Distance

- 100 Feet
- 200 Feet
- 300 Feet

N

0 145 290 580 US Feet

Surface Water Protection Map
Mohawk State #1- Marathon
Sec 20 T8S R33E, New Mexico

Figure 2

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

Date Saved: 4/10/2019

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

Drawn Heather Patterson
Date 4/10/2019
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LEGEND

- Point of Release
- BH Sample Locations
- SW Sample Locations
- 1.5' Excavation

N

0 7 14 28

Feet

Site and Sample Location Map
Mohawk State (Heater Treater) - Marathon Oil LLC
UL: P S: 20 T: 8S R: 33E Chaves County, New Mexico

Figure 3

Date Saved: 10/31/2019

Revisions

By:_____ Date:_____ Descr:_____

By:_____ Date:_____ Descr:_____

Drawn *Ashley Maxwell*
Date 11/1/2019
Checked
Approved

SMA

201 South Halagueno Street
Carlsbad, New Mexico 88220
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\\192.168.22.10\Projects\5-Marathon MSA 2019 (5E27950)\GIS\ARCGIS\MARATHON_MIT.aprx

TABLES

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	132	USGS Water Well Data
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	>1/2 mile	Figure 1
Hortizontal Distance to Nearest Significant Watercourse (ft)	1,530	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'		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					

Table 3:
Summary of Sample Results

Marathon Oil Permian LLC
Mohawk State #1
Incident number: NGRL1313754595 2013

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria				**50**	**10**	**1000**			**2,500**	**20,000**
L1	8/5/2019	1	Excavated	24.85	0.15	260	9200	6900	**16360**	1900
		1.5	in-situ	<0.221	<0.025	<4.9	<9.5	<47	<57	380
CL1	9/25/2019	1.5	in-situ	<0.224	<0.025	<5.0	<9.9	<49	<63.9	500
CL2	9/25/2019	1.5	in-situ	<0.216	<0.024	<4.8	22	<50	22	470
CSW1	9/25/2019	0-1.5	Excavated	<0.221	<0.025	<4.9	1700	1600	3300	620
CSW2	9/25/2019	0-1.5	Excavated	<0.220	<0.024	<4.9	1300	1100	2400	350
North Wall	10/8/2019	0-2'	in-situ	-	-	<4.8	19	63	82	-
East Wall	10/8/2019	0-2'	in-situ	-	-	<4.9	67	230	297	-
West Wall	10/8/2019	0-2'	in-situ	-	-	<4.8	<9.9	<49	<63.7	-
South Wall	10/8/2019	0-2'	in-situ	-	-	<4.9	<9.2	<46	<60.1	-

"--" = Not Analyzed

APPENDIX A

SPILL INCIDENT INFORMATION AND C-141

30-005-29108 MOHAWK STATE #001 [318257]

General Well Information

Operator:	[372098] MARATHON OIL PERMIAN LLC		
Status:	Active	**Direction:**	Vertical
Well Type:	Oil	**Multi-Lateral:**	No
Work Type:	New	**Mineral Owner:**	State
		Surface Owner:	
Surface Location:	P-20-08S-33E 660 FSL 660 FEL		
Lat/Long:	33.60022,-103.58209 NAD83		
GL Elevation:	4389		
KB Elevation:		**Sing/Mult Compl:**	Single
DF Elevation:		**Potash Waiver:**	False

Proposed Formation and/or Notes

WILDCAT ATOKA MORROW (GAS) 11/11/09 SPUD

Depths

Proposed:	11000	**True Vertical Depth:**	10975
Measured Vertical Depth:	10975	**Plugback Measured:**	0

Formation Tops

Formation	Top	Producing	Method Obtained
Rustler	1807		State Geologist
Yates	2360		State Geologist
Seven Rivers	2553		State Geologist
Glorieta	4974	Yes	State Geologist
Yeso	5070		State Geologist
Tubb	6448		State Geologist
Abo	7301		State Geologist
Wolfcamp	8450		State Geologist
Strawn	9966		State Geologist

Event Date	Category	Type
06/09/2010	Enforcements	Identification (Well Sign)
06/09/2010	Notifications	Informal Letter (Inspector)

Complaints, Incidents and Spills

Please note that incidents that impact ground water are recorded along with “facilities” which may not be wells, so although the initial report may be recorded here as a spill, information related to the abatement plans, remediation plans and ground water impact information are not yet part of this application.

NGRL1313754595 2013 MINOR A OS @ 30-005-29108

Action:
Notified: Industry Rep

Event Dates

Date of Discovery: 04/30/2013 **OCD Notified of Major Release:** 04/30/2013
Characterization Report Received: **Closure Report Approved:**

Notes

Date	Detail
05/17/2013	Initial / Final C-141 - 1RP-05-13-2925 - Gas company shut-in pipeline which caused the sight glass to rupture on heater to rupture. The ebntire spill wa contained wihtin the tank battery firewall. 20 mil plastic liner had been installed in the fire wall prior to the spill, so oil did not reach the ground. Vacuum truck was able to pick up the entire spill due to the plastic liner. Mike Bratcher of the NMOCD wa notified by Kurt Hood of Nadel & Gussman Permian on 4/3/13. Remediation is complete.

Spills

Cause	Source	Product Spilled	Square Feet	Volume Spilled	Volume Recovered
Normal Operations	Fitting	Crude Oil	0	15	15 BBL

NAB1904952756 MOHAWK STATE #001 @ 30-005-29108

Action: Referred to Environmental Inspector
Notified: Industry Rep

Event Dates

Date of Discovery: 02/06/2019 **OCD Notified of Major Release:**
Characterization Report Received: **Closure Report Approved:**

Notes

Date	Detail

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	NGRL1313754595
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Marathon Oil Permian LLC	OGRID 372098
Contact Name Isaac Castro	Contact Telephone 575-988-0561
Contact email icastro@marathonoil.com	Incident # *(assigned by OCD)* NGRL1313754595
Contact mailing address 4111 Tidwell Rd, Carlsbad NM, 88220	

Location of Release Source

Latitude 33.60022 Longitude -103.58209
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Mohawk State #001	Site Type Oil Facility
Date Release Discovered April 30, 2013	API# *(if applicable)* 30-005-29108

Unit Letter	Section	Township	Range	County
P	20	8S	33E	Chaves

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) 7.5	Volume Recovered (bbls) 7.5
☑ Produced Water	Volume Released (bbls) 7.5	Volume Recovered (bbls) 7.5
	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

Gas company shut-in pipeline which caused the sight glass to rupture on the heat treater. The entire spill was contained within the tank battery firewall. 20 mil plastic liner had been installed in the fire wall prior to the spill, so oil did not reach the ground. Vacuumm truck was able to pick up the entire spill due to the plastic liner.
Mike Bratcher of the NMOCD was notified by Kurt Hood of Nadel & Gussman Permian on 4/3/13.
Remediation is complete.

State of New Mexico
Oil Conservation Division

Incident ID	NGRL1313754595
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☑ No	If YES, for what reason(s) does the responsible party consider this a major release?

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

Mike Bratcher of the NMOCD was notified by Kurt Hood of Nadel & Gussman Permian on 4/3/13.

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: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NGRL1313754595
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	132 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☑ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☑ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☑ Field data
- ☑ Data table of soil contaminant concentration data
- ☑ Depth to water determination
- ☑ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☑ Photographs including date and GIS information
- ☑ Topographic/Aerial maps
- ☑ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	NGRL1313754595
District RP	
Facility ID	
Application ID	

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

Printed Name: Isaac Castro Title: Environmental Professional

Signature: Isaac Castro Date: 11/1/19

email: icastro@marathonoil.com Telephone: 575-988-0561

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	NGRL1313754595
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: Isaac Castro Title: Environmental Professional

Signature: Isaac Castro Date: 11/1/19

email: icastro@marathonoil.com Telephone: 575-988-0561

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: Bradford Billings Date: 11/6/2019

Printed Name: Bradford Billings Title: E.Spec.A

APPENDIX B
NMOSE WELLS REPORT

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

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 631556.38 **Northing (Y):** 3718731.55 **Radius:** 1610

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- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 333651103370901

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

USGS 333651103370901 08s.32e.13.43421

Chaves County, New Mexico
Latitude 33°36'51", Longitude 103°37'09" NAD27
Land-surface elevation 4,418 feet above NGVD29
The depth of the hole is 180.00 feet below land surface.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source o measure
1995-01-25		D	127.55			2		S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

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- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 333503103325801

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

USGS 333503103325801 08S.33E.34.212211

Chaves County, New Mexico
Latitude 33°35'03", Longitude 103°32'58" NAD27
Land-surface elevation 4,355 feet above NGVD29
The depth of the well is 180 feet below land surface.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source o measure
1995-02-21		D	155			0		S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	0	Water level accuracy to nearest foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 333410103365201

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

USGS 333410103365201 08S.33E.31.333323

Chaves County, New Mexico
Latitude 33°34'10", Longitude 103°36'52" NAD27
Land-surface elevation 4,397 feet above NGVD29
The depth of the well is 186 feet below land surface.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source o measure
1995-01-25		D	155.80			2		S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

APPENDIX C
FIELD NOTES &
PHOTO LOG

ASMA Field Screening

Location Name: Mohawk State #1

Date: 8/8/19

HAP

Sample Name:	Collection Time:	EC (mS)	Temp (°C)	PID Reading /PF	Soil Color	Primary Soil Type	Moisture Level	Other Remarks/Notes:
L1 @ 1'	0835	1.30	29.9	210	Light Tan Gray Yellow / Dark Brown Olive Red (circled: Dark, Brown)	Gravel Rock Sand Silt Clay (circled: Gravel, Rock, Sand)	Dry Moist Wet	Noticeable Hydrocarbon odor. Visible Salts @ Surf.
L1 @ 1.5'	0845	0.38	30°	47	Light Tan Gray Yellow / Dark Brown Olive Red (circled: Brown)	Gravel Rock Sand Silt Clay (circled: Sand)	Dry Moist Wet (circled: Moist)	Light odor.
L1 @ 2'	0900	0.45	30.1	31	Light Tan Gray Yellow / Dark Brown Olive Red (circled: Brown)	Gravel Rock Sand Silt Clay (circled: Sand)	Dry Moist Wet (circled: Moist)	" "
					Light Tan Gray Yellow / Dark Brown Olive Red	Gravel Rock Sand Silt Clay	Dry Moist Wet	
					Light Tan Gray Yellow / Dark Brown Olive Red	Gravel Rock Sand Silt Clay	Dry Moist Wet	
					Light Tan Gray Yellow / Dark Brown Olive Red	Gravel Rock Sand Silt Clay	Dry Moist Wet	
					Light Tan Gray Yellow / Dark Brown Olive Red	Gravel Rock Sand Silt Clay	Dry Moist Wet	
					Light Tan Gray Yellow / Dark Brown Olive Red	Gravel Rock Sand Silt Clay	Dry Moist Wet	
					Light Tan Gray Yellow / Dark Brown Olive Red	Gravel Rock Sand Silt Clay	Dry Moist Wet	

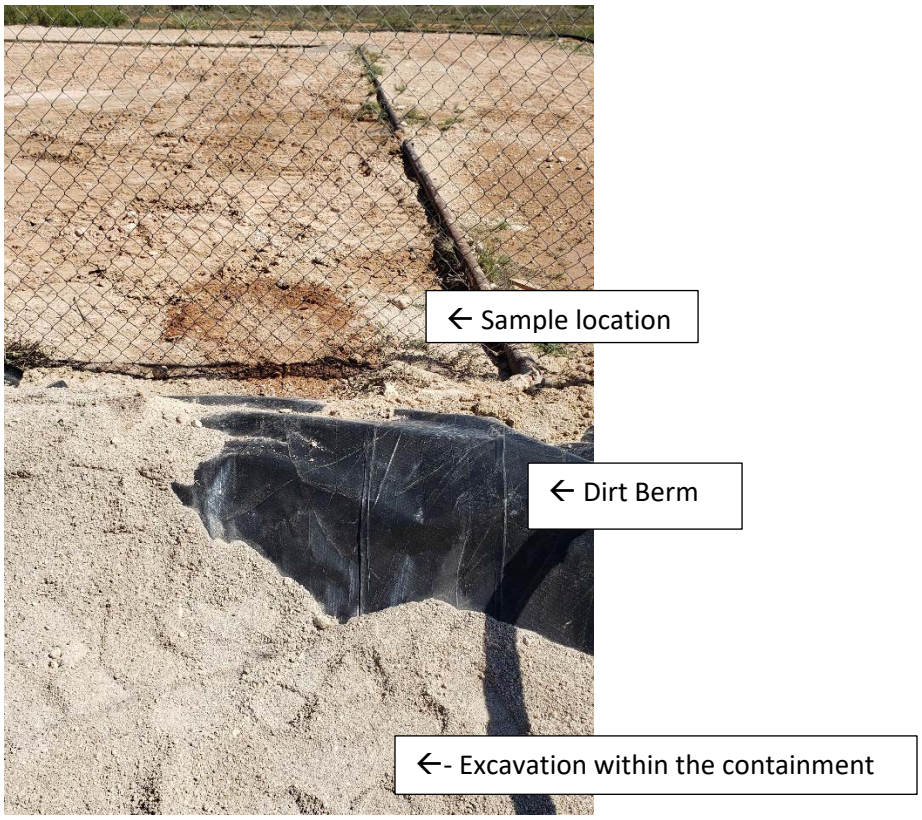
SW1, CL1 facing south

SW1, CL1 facing north

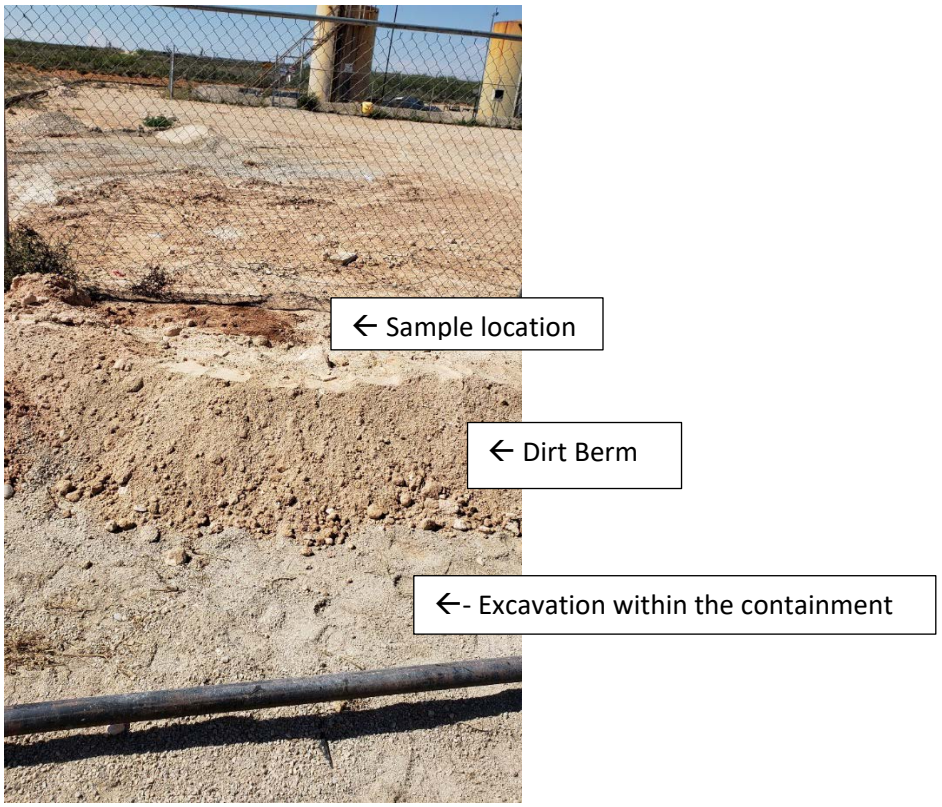
SW2, CL2 facing east

SW2, CL2 facing north.

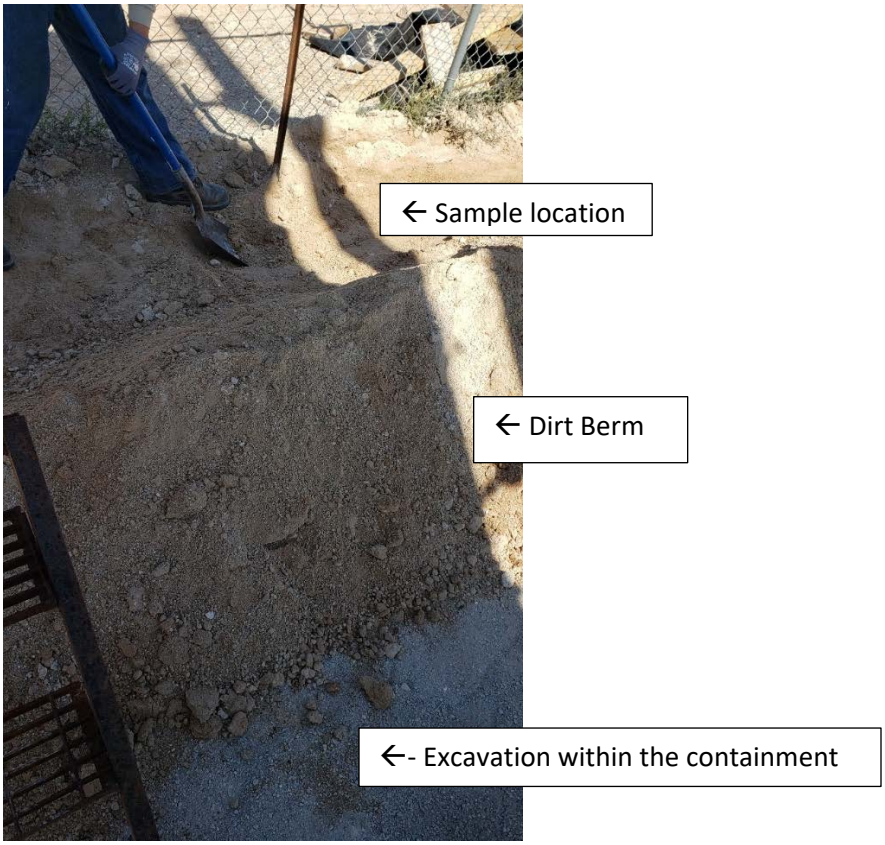
East Wall



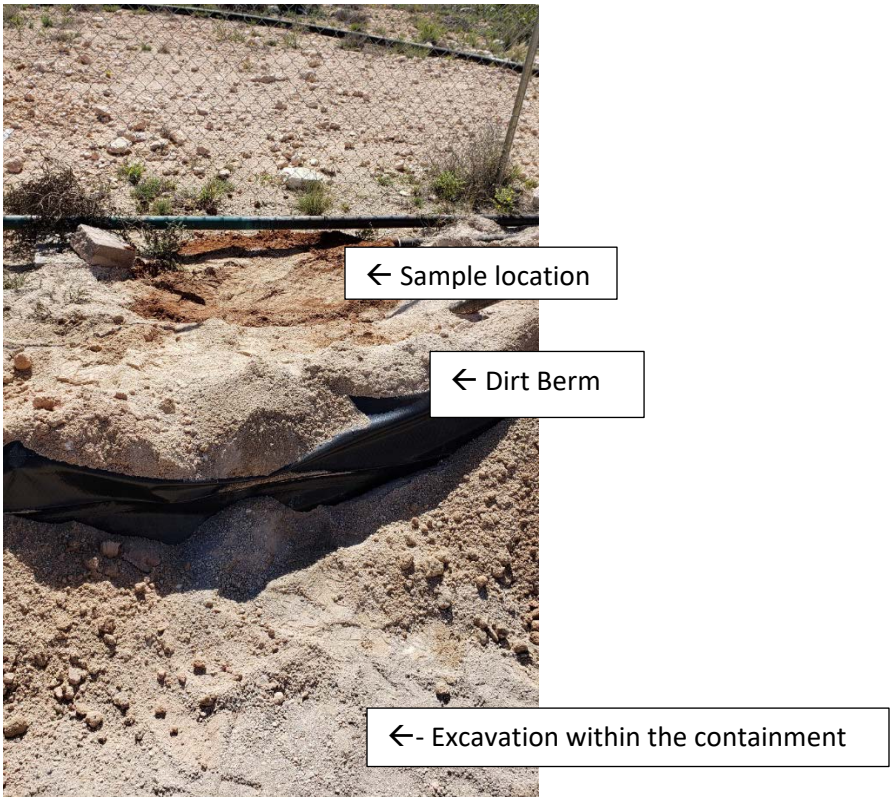
West Wall



North Wall



South Wall



APPENDIX D

LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 12, 2019

Heather Patterson

Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-8801
FAX:

RE: Mohawk State 1 OrderNo.: 1908324

Dear Heather Patterson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/7/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1908324**
Date Reported: **8/12/2019**

CLIENT: Souder, Miller & Associates
Client Sample ID: L1 @ 1ft
Project: Mohawk State 1
Collection Date: 8/5/2019 8:35:00 AM
Lab ID: 1908324-001 **Matrix:** SOIL
Received Date: 8/7/2019 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	1900	60		mg/Kg	20	8/9/2019 11:47:03 AM	46698
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	9200	950		mg/Kg	100	8/9/2019 4:55:56 PM	46674
Motor Oil Range Organics (MRO)	6900	4700		mg/Kg	100	8/9/2019 4:55:56 PM	46674
Surr: DNOP	0	70-130	S	%Rec	100	8/9/2019 4:55:56 PM	46674
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	260	24		mg/Kg	5	8/9/2019 1:48:13 PM	46639
Surr: BFB	403	77.4-118	S	%Rec	5	8/9/2019 1:48:13 PM	46639
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.15	0.12		mg/Kg	5	8/9/2019 1:48:13 PM	46639
Toluene	1.7	0.24		mg/Kg	5	8/9/2019 1:48:13 PM	46639
Ethylbenzene	12	0.24		mg/Kg	5	8/9/2019 1:48:13 PM	46639
Xylenes, Total	11	0.47		mg/Kg	5	8/9/2019 1:48:13 PM	46639
Surr: 4-Bromofluorobenzene	133	80-120	S	%Rec	5	8/9/2019 1:48:13 PM	46639

Refer to the QC Summary report and 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 Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1 @ 1.5ft
Project: Mohawk State 1
Collection Date: 8/5/2019 8:45:00 AM
Lab ID: 1908324-002 **Matrix:** SOIL
Received Date: 8/7/2019 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	380	60		mg/Kg	20	8/9/2019 11:59:28 AM	46698
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/9/2019 5:18:04 PM	46674
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/9/2019 5:18:04 PM	46674
Surr: DNOP	94.5	70-130		%Rec	1	8/9/2019 5:18:04 PM	46674
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/9/2019 1:24:37 AM	46639
Surr: BFB	101	77.4-118		%Rec	1	8/9/2019 1:24:37 AM	46639
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	8/9/2019 1:24:37 AM	46639
Toluene	ND	0.049		mg/Kg	1	8/9/2019 1:24:37 AM	46639
Ethylbenzene	ND	0.049		mg/Kg	1	8/9/2019 1:24:37 AM	46639
Xylenes, Total	ND	0.098		mg/Kg	1	8/9/2019 1:24:37 AM	46639
Surr: 4-Bromofluorobenzene	99.5	80-120		%Rec	1	8/9/2019 1:24:37 AM	46639

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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908324**

12-Aug-19

Client: Souder, Miller & Associates

Project: Mohawk State 1

Sample ID: **MB-46698**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **46698**	RunNo: **62026**
Prep Date: **8/9/2019**	Analysis Date: **8/9/2019**	SeqNo: **2105582** Units: **mg/Kg**

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

Sample ID: **LCS-46698**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **46698**	RunNo: **62026**
Prep Date: **8/9/2019**	Analysis Date: **8/9/2019**	SeqNo: **2105583** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	90	110			

Qualifiers:

*	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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908324**
12-Aug-19

Client: Souder, Miller & Associates
Project: Mohawk State 1

Sample ID: **LCS-46643** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46643** RunNo: **61951**
Prep Date: **8/7/2019** Analysis Date: **8/8/2019** SeqNo: **2104158** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID: **LCS-46649** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46649** RunNo: **61951**
Prep Date: **8/7/2019** Analysis Date: **8/9/2019** SeqNo: **2104161** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		5.000		96.8	70	130			

Sample ID: **MB-46643** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46643** RunNo: **61951**
Prep Date: **8/7/2019** Analysis Date: **8/8/2019** SeqNo: **2104164** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		123	70	130			

Sample ID: **MB-46649** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46649** RunNo: **61951**
Prep Date: **8/7/2019** Analysis Date: **8/9/2019** SeqNo: **2104167** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		107	70	130			

Sample ID: **LCS-46674** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46674** RunNo: **61951**
Prep Date: **8/8/2019** Analysis Date: **8/9/2019** SeqNo: **2104530** 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	92.9	63.9	124			
Surr: DNOP	4.1		5.000		81.2	70	130			

Sample ID: **MB-46674** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46674** RunNo: **61951**
Prep Date: **8/8/2019** Analysis Date: **8/9/2019** SeqNo: **2104531** 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	9.1		10.00		91.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908324**

12-Aug-19

Client: Souder, Miller & Associates

Project: Mohawk State 1

Sample ID: **MB-46639**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **46639**	RunNo: **61991**
Prep Date: **8/7/2019**	Analysis Date: **8/8/2019**	SeqNo: **2103397** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		106	77.4	118			

Sample ID: **LCS-46639**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **46639**	RunNo: **61991**
Prep Date: **8/7/2019**	Analysis Date: **8/8/2019**	SeqNo: **2103398** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	80	120			
Surr: BFB	1200		1000		118	77.4	118			

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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908324**

12-Aug-19

Client: Souder, Miller & Associates

Project: Mohawk State 1

Sample ID: **MB-46639**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **46639**	RunNo: **61991**
Prep Date: **8/7/2019**	Analysis Date: **8/8/2019**	SeqNo: **2103431** Units: **mg/Kg**

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

Sample ID: **LCS-46639**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **46639**	RunNo: **61991**
Prep Date: **8/7/2019**	Analysis Date: **8/8/2019**	SeqNo: **2103432** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.9	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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 Limit

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: **1908324** RcptNo: 1

Received By: DanielH. **8/7/2019 9:10:00 AM**

Completed By: **Erin Melendrez** **8/7/2019 11:20:42 AM**

Reviewed By: ENM 8/7/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: YG 8/7/19

Special Handling (if applicable)

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

Person Notified: Heather Patterson Date: 8/8/19

By Whom: Leah Baca Via: ☐ eMail ☒ Phone ☐ Fax ☐ In Person

Regarding: Bottle labeled as L-5, COC L-1

Client Instructions: Report as is on COC

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes			

Chain-of-Custody Record

Client: SMA Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush 5 day

Project Name: Mohawk State #1

Project #:

Project Manager: Heather Patterson

Sampler: HAP

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 5.4-0.0=5.4°c

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1908324	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/5/19	0835	SOIL	L1 @ 1ft.	402		-001	X	X					X			
8/5/19	0845	SOIL	L1 @ 1.5 ft	" "		-002	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date Time
8/5/19	1330	Henrietta Price			8/6/19 1300
8/6/19	1900			courier	8/7/19 9:10

Remarks:
Marathon.
Please email copy to:
henrietta.price@soudermiller.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

October 03, 2019

Ashley Maxwell

Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-8801
FAX

RE: Mohawk HT OrderNo.: 1909G80

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/28/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CL1 @ 1.5'
Project: Mohawk HT
Collection Date: 9/25/2019 12:15:00 PM
Lab ID: 1909G80-001 **Matrix:** SOIL
Received Date: 9/28/2019 10:27:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	500	60		mg/Kg	20	10/1/2019 7:29:58 PM	47866
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/1/2019 4:59:02 PM	47817
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/1/2019 4:59:02 PM	47817
Surr: DNOP	112	70-130		%Rec	1	10/1/2019 4:59:02 PM	47817
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/2/2019 12:33:34 AM	47808
Surr: BFB	99.0	77.4-118		%Rec	1	10/2/2019 12:33:34 AM	47808
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	10/2/2019 12:33:34 AM	47808
Toluene	ND	0.050		mg/Kg	1	10/2/2019 12:33:34 AM	47808
Ethylbenzene	ND	0.050		mg/Kg	1	10/2/2019 12:33:34 AM	47808
Xylenes, Total	ND	0.099		mg/Kg	1	10/2/2019 12:33:34 AM	47808
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	10/2/2019 12:33:34 AM	47808

Refer to the QC Summary report and 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 Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CL2 @ 1.5'
Project: Mohawk HT
Collection Date: 9/25/2019 12:20:00 PM
Lab ID: 1909G80-002 **Matrix:** SOIL **Received Date:** 9/28/2019 10:27:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	470	60		mg/Kg	20	10/1/2019 8:07:12 PM	47866
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	22	9.9		mg/Kg	1	10/1/2019 5:23:20 PM	47817
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/1/2019 5:23:20 PM	47817
Surr: DNOP	110	70-130		%Rec	1	10/1/2019 5:23:20 PM	47817
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/2/2019 12:57:29 AM	47808
Surr: BFB	104	77.4-118		%Rec	1	10/2/2019 12:57:29 AM	47808
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/2/2019 12:57:29 AM	47808
Toluene	ND	0.048		mg/Kg	1	10/2/2019 12:57:29 AM	47808
Ethylbenzene	ND	0.048		mg/Kg	1	10/2/2019 12:57:29 AM	47808
Xylenes, Total	ND	0.096		mg/Kg	1	10/2/2019 12:57:29 AM	47808
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	10/2/2019 12:57:29 AM	47808

Refer to the QC Summary report and 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 Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW1
Project: Mohawk HT
Collection Date: 9/26/2019 4:33:00 PM
Lab ID: 1909G80-003 **Matrix:** SOIL **Received Date:** 9/28/2019 10:27:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	620	60		mg/Kg	20	10/1/2019 8:19:37 PM	47866
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	1700	92		mg/Kg	10	10/2/2019 11:37:35 PM	47817
Motor Oil Range Organics (MRO)	1600	460		mg/Kg	10	10/2/2019 11:37:35 PM	47817
Surr: DNOP	0	70-130	S	%Rec	10	10/2/2019 11:37:35 PM	47817
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/2/2019 1:21:10 AM	47829
Surr: BFB	112	77.4-118		%Rec	1	10/2/2019 1:21:10 AM	47829
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	10/2/2019 1:21:10 AM	47829
Toluene	ND	0.049		mg/Kg	1	10/2/2019 1:21:10 AM	47829
Ethylbenzene	ND	0.049		mg/Kg	1	10/2/2019 1:21:10 AM	47829
Xylenes, Total	ND	0.098		mg/Kg	1	10/2/2019 1:21:10 AM	47829
Surr: 4-Bromofluorobenzene	96.8	80-120		%Rec	1	10/2/2019 1:21:10 AM	47829

Refer to the QC Summary report and 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 Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW2
Project: Mohawk HT
Collection Date: 9/26/2019 3:36:00 PM
Lab ID: 1909G80-004 **Matrix:** SOIL **Received Date:** 9/28/2019 10:27:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	350	60		mg/Kg	20	10/1/2019 8:32:02 PM	47866
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	1300	93		mg/Kg	10	10/2/2019 11:59:39 PM	47817
Motor Oil Range Organics (MRO)	1100	470		mg/Kg	10	10/2/2019 11:59:39 PM	47817
Surr: DNOP	0	70-130	S	%Rec	10	10/2/2019 11:59:39 PM	47817
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/2/2019 2:33:00 AM	47829
Surr: BFB	149	77.4-118	S	%Rec	1	10/2/2019 2:33:00 AM	47829
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/2/2019 2:33:00 AM	47829
Toluene	ND	0.049		mg/Kg	1	10/2/2019 2:33:00 AM	47829
Ethylbenzene	ND	0.049		mg/Kg	1	10/2/2019 2:33:00 AM	47829
Xylenes, Total	ND	0.098		mg/Kg	1	10/2/2019 2:33:00 AM	47829
Surr: 4-Bromofluorobenzene	97.8	80-120		%Rec	1	10/2/2019 2:33:00 AM	47829

Refer to the QC Summary report and 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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1909G80**
03-Oct-19

Client: Souder, Miller & Associates
Project: Mohawk HT

Sample ID: **MB-47866**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **47866**	RunNo: **63337**
Prep Date: **10/1/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162858** Units: **mg/Kg**

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

Sample ID: **LCS-47866**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **47866**	RunNo: **63337**
Prep Date: **10/1/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162859** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1909G80**

03-Oct-19

Client: Souder, Miller & Associates

Project: Mohawk HT

Sample ID: **LCS-47817**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **47817**	RunNo: **63328**
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2161904** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	50.00	0	118	63.9	124			
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID: **MB-47817**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **47817**	RunNo: **63328**
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2161907** 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		121	70	130			

Sample ID: **LCS-47875**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **47875**	RunNo: **63364**
Prep Date: **10/2/2019**	Analysis Date: **10/2/2019**	SeqNo: **2163537** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		92.5	70	130			

Sample ID: **MB-47875**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **47875**	RunNo: **63364**
Prep Date: **10/2/2019**	Analysis Date: **10/2/2019**	SeqNo: **2163538** Units: **%Rec**

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

Qualifiers:

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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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1909G80**
03-Oct-19

Client: Souder, Miller & Associates
Project: Mohawk HT

Sample ID: **MB-47829**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **47829**	RunNo: **63336**							
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162423**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.9	77.4	118			

Sample ID: **LCS-47829**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **47829**	RunNo: **63336**							
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162424**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	80	120			
Surr: BFB	1100		1000		112	77.4	118			

Sample ID: **1909G80-003AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **CSW1**	Batch ID: **47829**	RunNo: **63335**							
Prep Date: **9/30/2019**	Analysis Date: **10/2/2019**	SeqNo: **2162489**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.9	24.53	0	119	69.1	142			
Surr: BFB	1300		981.4		131	77.4	118			S

Sample ID: **1909G80-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **CSW1**	Batch ID: **47829**	RunNo: **63335**							
Prep Date: **9/30/2019**	Analysis Date: **10/2/2019**	SeqNo: **2162490**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.7	23.61	0	110	69.1	142	11.3	20	
Surr: BFB	1100		944.3		120	77.4	118	0	0	S

Sample ID: **MB-47808**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **47808**	RunNo: **63335**							
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162492**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		97.3	77.4	118			

Sample ID: **LCS-47808**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **47808**	RunNo: **63335**							
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162493**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1909G80**
03-Oct-19

Client: Souder, Miller & Associates
Project: Mohawk HT

Sample ID: **LCS-47808**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **47808**	RunNo: **63335**
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162493** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	114	80	120			
Surr: BFB	1100		1000		110	77.4	118			

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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1909G80**

03-Oct-19

Client: Souder, Miller & Associates

Project: Mohawk HT

Sample ID: **MB-47829**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **47829**	RunNo: **63336**
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162448** 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	0.92		1.000		91.7	80	120			

Sample ID: **LCS-47829**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **47829**	RunNo: **63336**
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162449** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.3	80	120			
Toluene	0.97	0.050	1.000	0	97.0	80	120			
Ethylbenzene	0.98	0.050	1.000	0	97.9	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.9	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.1	80	120			

Sample ID: **1909G80-004AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CSW2**	Batch ID: **47829**	RunNo: **63335**
Prep Date: **9/30/2019**	Analysis Date: **10/2/2019**	SeqNo: **2162529** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	0.9990	0	98.9	76	123			
Toluene	1.0	0.050	0.9990	0.007640	99.6	80.3	127			
Ethylbenzene	1.0	0.050	0.9990	0.01195	101	80.2	131			
Xylenes, Total	3.1	0.10	2.997	0.04750	100	78	133			
Surr: 4-Bromofluorobenzene	1.0		0.9990		104	80	120			

Sample ID: **1909G80-004AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CSW2**	Batch ID: **47829**	RunNo: **63335**
Prep Date: **9/30/2019**	Analysis Date: **10/2/2019**	SeqNo: **2162530** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	0.9940	0	99.6	76	123	0.207	20	
Toluene	1.0	0.050	0.9940	0.007640	99.7	80.3	127	0.458	20	
Ethylbenzene	1.0	0.050	0.9940	0.01195	100	80.2	131	0.823	20	
Xylenes, Total	3.1	0.099	2.982	0.04750	101	78	133	0.218	20	
Surr: 4-Bromofluorobenzene	1.0		0.9940		106	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1909G80**

03-Oct-19

Client: Souder, Miller & Associates

Project: Mohawk HT

Sample ID: **MB-47808**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **47808**	RunNo: **63335**
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162531** 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	0.94		1.000		94.0	80	120			

Sample ID: **LCS-47808**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **47808**	RunNo: **63335**
Prep Date: **9/30/2019**	Analysis Date: **10/1/2019**	SeqNo: **2162532** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	109	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	110	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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 Limit

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: **1909G80** RcptNo: **1**

Received By: **Anne Thorne** **9/28/2019 10:27:00 AM** Anne Thorne

Completed By: **Erin Melendrez** **9/30/2019 8:37:13 AM** [signature]

Reviewed By: ENM 9/30/19

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: DAD 9/30/19

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Yes			

Chain-of-Custody Record

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

Client: SMA Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other ______

☐ EDD (Type) ______

Turn-Around Time: ☐ Standard ☒ Rush 3 day

Project Name: Mohawk HT

Project #:

Project Manager: Ashley Maxwell

Sampler:

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 4.8 +0.0 = 4.8 (°C)

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1909G80	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)						
9/25/19	1215	Soil	CL1 @ 1.5'	4oz		-001	X	X					X									
9/25/19	1220	Soil	CL2 @ 1.5'	↓		-002	↓	↓					↓									
9/26/19	1633	Soil	CSW1	↓		-003	↓	↓					↓									
9/26/19	1530	Soil	CSW2	↓		-004	↓	↓					↓									

Date	Time	Relinquished by	Received by	Via	Date	Time
9/27/19	0700	Henryetta Price	Chupurg	Sauw	9/27	0900
9/27	1900	Chupurg Sauw	[signature]		09/28/19	1027

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

October 17, 2019

Ashley Maxwell

Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-8801
FAX

RE: Mohawk HT OrderNo.: 1910686

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 4 sample(s) on 10/11/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: North Wall- 0-2'
Project: Mohawk HT
Collection Date: 10/8/2019 11:50:00 AM
Lab ID: 1910686-001 **Matrix:** SOIL **Received Date:** 10/11/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	19	9.7		mg/Kg	1	10/16/2019 10:02:01 PM	48123
Motor Oil Range Organics (MRO)	63	48		mg/Kg	1	10/16/2019 10:02:01 PM	48123
Surr: DNOP	114	70-130		%Rec	1	10/16/2019 10:02:01 PM	48123
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/14/2019 9:49:43 PM	48111
Surr: BFB	87.1	77.4-118		%Rec	1	10/14/2019 9:49:43 PM	48111

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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: East Wall- 0-2'
Project: Mohawk HT
Collection Date: 10/8/2019 12:15:00 PM
Lab ID: 1910686-002 **Matrix:** SOIL **Received Date:** 10/11/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	67	9.4		mg/Kg	1	10/16/2019 10:24:09 PM	48123
Motor Oil Range Organics (MRO)	230	47		mg/Kg	1	10/16/2019 10:24:09 PM	48123
Surr: DNOP	116	70-130		%Rec	1	10/16/2019 10:24:09 PM	48123
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/14/2019 10:58:49 PM	48111
Surr: BFB	97.8	77.4-118		%Rec	1	10/14/2019 10:58:49 PM	48111

Refer to the QC Summary report and 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 Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: West Wall- 0-2'
Project: Mohawk HT
Collection Date: 10/8/2019 12:32:00 PM
Lab ID: 1910686-003 **Matrix:** SOIL **Received Date:** 10/11/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/15/2019 8:11:50 PM	48123
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/15/2019 8:11:50 PM	48123
Surr: DNOP	99.3	70-130		%Rec	1	10/15/2019 8:11:50 PM	48123
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/14/2019 11:21:44 PM	48111
Surr: BFB	97.9	77.4-118		%Rec	1	10/14/2019 11:21:44 PM	48111

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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: South Wall- 0-2'
Project: Mohawk HT
Collection Date: 10/8/2019 12:45:00 PM
Lab ID: 1910686-004 **Matrix:** SOIL **Received Date:** 10/11/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	10/16/2019 11:08:19 PM	48123
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/16/2019 11:08:19 PM	48123
Surr: DNOP	117	70-130		%Rec	1	10/16/2019 11:08:19 PM	48123
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/14/2019 11:44:39 PM	48111
Surr: BFB	96.9	77.4-118		%Rec	1	10/14/2019 11:44:39 PM	48111

Refer to the QC Summary report and 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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1910686**

17-Oct-19

Client: Souder, Miller & Associates

Project: Mohawk HT

Sample ID: **LCS-48123**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **48123**	RunNo: **63684**
Prep Date: **10/14/2019**	Analysis Date: **10/15/2019**	SeqNo: **2176360** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	60	10	50.00	0	120	63.9	124			
Surr: DNOP	5.0		5.000		99.1	70	130			

Sample ID: **MB-48123**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **48123**	RunNo: **63684**
Prep Date: **10/14/2019**	Analysis Date: **10/15/2019**	SeqNo: **2176361** 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	70	130			

Sample ID: **LCS-48182**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **48182**	RunNo: **63721**
Prep Date: **10/16/2019**	Analysis Date: **10/16/2019**	SeqNo: **2177763** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		93.2	70	130			

Sample ID: **MB-48171**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **48171**	RunNo: **63721**
Prep Date: **10/15/2019**	Analysis Date: **10/16/2019**	SeqNo: **2177765** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		96.6	70	130			

Sample ID: **MB-48182**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **48182**	RunNo: **63721**
Prep Date: **10/16/2019**	Analysis Date: **10/16/2019**	SeqNo: **2177768** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.8		10.00		98.3	70	130			

Sample ID: **LCS-48171**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **48171**	RunNo: **63721**
Prep Date: **10/15/2019**	Analysis Date: **10/16/2019**	SeqNo: **2178334** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.7		5.000		114	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1910686**

17-Oct-19

Client: Souder, Miller & Associates

Project: Mohawk HT

Sample ID: **MB-48111**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **48111**	RunNo: **63673**
Prep Date: **10/11/2019**	Analysis Date: **10/14/2019**	SeqNo: **2175717** 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	930		1000		93.4	77.4	118			

Sample ID: **LCS-48111**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **48111**	RunNo: **63673**
Prep Date: **10/11/2019**	Analysis Date: **10/14/2019**	SeqNo: **2175718** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	82.4	80	120			
Surr: BFB	890		1000		89.5	77.4	118			

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 Limit

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: 1910686 RcptNo: 1

Received By: JUAN ROJAS 10/11/2019 9:20:00 AM

Completed By: Yazmine Garduno 10/11/2019 10:23:47 AM

Reviewed By: DAD 10/11/19

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: DAD 10/11/19

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good				

Chain-of-Custody Record

Client: SMA CARLSBAD

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5 day

Project Name: Mohawk HT

Project #:

Project Manager: Ashley Maxwell

Sampler:

On Ice: ☑ Yes ☐ No

# of Coolers: (1)

Cooler Temp(including CF): 0.3+(-0.3)=0.0(°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1910980
10/8/19	1150	SOIL	North Wall - 0-2'	4oz		-001
↓	1215	↓	EAST WALL - 0-2'	↓		-002
	1232		WEST WALL - 0-2'			-003
↓	1245	↓	South Wall - 0-2'	↓		-004

Date	Time	Relinquished by:
10/9/19	1630	Henrietta Price
Date:	Time:	Relinquished by:

Received by:	Via:	Date	Time
Chad Sur		10/10	0900
Received by:	Via:	Date	Time
[signature]	Carrier	10/11/19	9:20

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)						
	X														
	X														
	X														
	X														

Remarks: email copy to: henrietta.price@Sundermiller.com

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.