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

February 20, 2020

#5E27950-BG31

NMOCD District 1
1625 N. French Drive
Hobbs, New Mexico 88240

OPTO9-200223-C-1410

SUBJECT: Remediation Closure Report for the Pearsall 6 Federal #009 Release (NCE2002741028), Lea County, New Mexico

To Whom It May Concern:

On behalf of Marathon Oil, Miller & Associates (SMA) has prepared this Remediation Closure Report that describes the remediation of a release of liquids related to oil and gas production activities at the Pearsall 6 Federal #009 site. The site is in Unit I, Section 06, Township 18S, Range 32E, Lea County, New Mexico, on Federal (BLM) 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	Pearsall 6 Federal #009	Company	Marathon Oil
API Number	30-025-39135	Location	32.7741432 -103.8006287
Incident Number	NCE2002741028		
Estimated Date of Release	11/24/2019	Date Reported to NMOCD	11/26/2019
Land Owner	BLM	Reported To	NMOCD, BLM
Source of Release	Leak from hammer union on flow line to the well head		
Released Volume	5.6 bbls	Released Material	Crude Oil
Recovered Volume	5.0 bbls	Net Release	0.6 bbls
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	12/09/2019, 1/01/2020		

1.0 Background

On November 24, 2019, a release was discovered at the Pearsall 6 Federal #009 site due to a leak from the hammer union on the flow line to the well head. Initial response activities were conducted by Marathon Oil, and included source elimination, containment and site stabilization activities. A vacuum truck was dispatched which recovered approximately five barrels of fluid. Figure 1 illustrates the vicinity and site location, Figure 2 illustrates the release location. The C-141 form is included in Appendix A.

2.0 Site Information and Closure Criteria

The Pearsall 6 Federal #009 is located approximately six miles southwest of Maljamar, New Mexico on Federal (BLM) land at an elevation of approximately 3800 feet above mean sea level (amsl).

Based upon The New Mexico Office of the State Engineer (NMOSE) online water well database and the United States Geological Survey (USGS) online water well data (Appendix B), depth to groundwater in the area is estimated to be one-hundred fifty six (156) feet below grade surface (bgs). There are no known water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed 1/22/2020). The nearest significant watercourse is an unnamed draw approximately 18,000 feet to the east. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

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

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

3.0 Release Characterization and Remediation Activities

On December 9, 2019, SMA personnel arrived on site in response to the release associated with Pearsall 6 Federal #009. SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly stained area. Soil samples were field-screened for chloride using an electrical conductivity (EC) meter and for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp.

A total of thirteen (13) sample locations and one background (L1-L12, BG) were investigated using a hand-auger, to depths up to 2 feet bgs. A minimum of two samples were collected at each sampling location and field-screened using the methods above. A total of thirty-six (36) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D.

On January 1, 2020, SMA returned to the site to guide the excavation of contaminated soil. SMA guided the excavation activities by collecting soil samples for field screening. Samples were screened for chloride using an electrical conductivity (EC) and for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria would be met.

SMA conducted confirmation sampling of the walls and base of the excavation. The entire area was excavated to a depth of one (1) foot below grade surface (bgs). On January 13, 2020, SMA returned to the site to extend the area of sample location SW4 to the east, due to laboratory results exceeding the NMOCD Closure Criteria for the combination of GRO and DRO

The confirmation samples were collected from within the excavation in accordance with a systematic sampling approach, as defined by SW846 using Gilbert, 1987 equation 5.2.3 for Stratified Random Sampling (Appendix C). The systemic method meets EPAs data quality assessments standards (DQA) for composite sampling. Confirmation samples were compromised of five-point composites of the base (BH1-BH8) and walls (SW1-SW9). A photo log of the open excavation can be found in Appendix D.

A total of eighteen (18) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Laboratory samples were collected in accordance with the sampling protocol included in Appendix D. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix E).

Figure 3 shows the extent of the excavation and closure sample locations. Laboratory results are summarized in Table 3. Laboratory reports are included in Appendix E.

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 Environmental Solutions near Hobbs, NM, an NMOCD permitted disposal facility.

4.0 Scope and Limitations

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing this closure report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact either Ashley Maxwell at 505-320-8975 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:

Ashley Maxwell
Staff Scientist

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

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

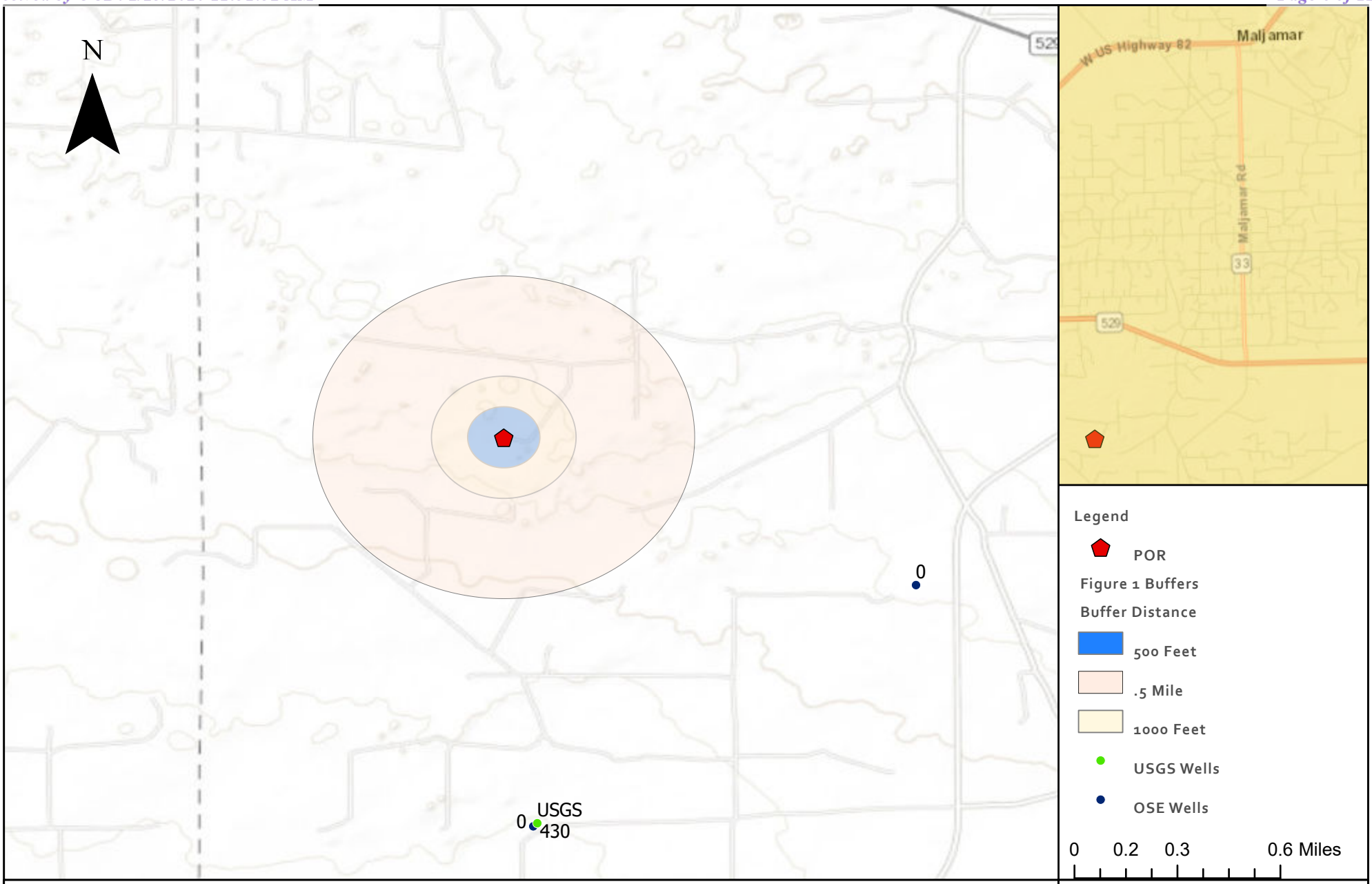
Tables:

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

Appendices:

Appendix A: Form C141
Appendix B: NMOSE Wells Report
Appendix C: VSP Sampling Protocol
Appendix D: Sampling Protocol, Field Notes & Photo Log
Appendix E: Laboratory Analytical Reports

FIGURES



Regional Vicinity & Wellhead Protection Map
Pearsall 6 Federal #009 - Marathon Oil
Lea County, New Mexico

Figure 1

P:\5-Marathon MSA 2019 (5E27950)\GIS\ARCGIS\MARATHON_MIT.aprx

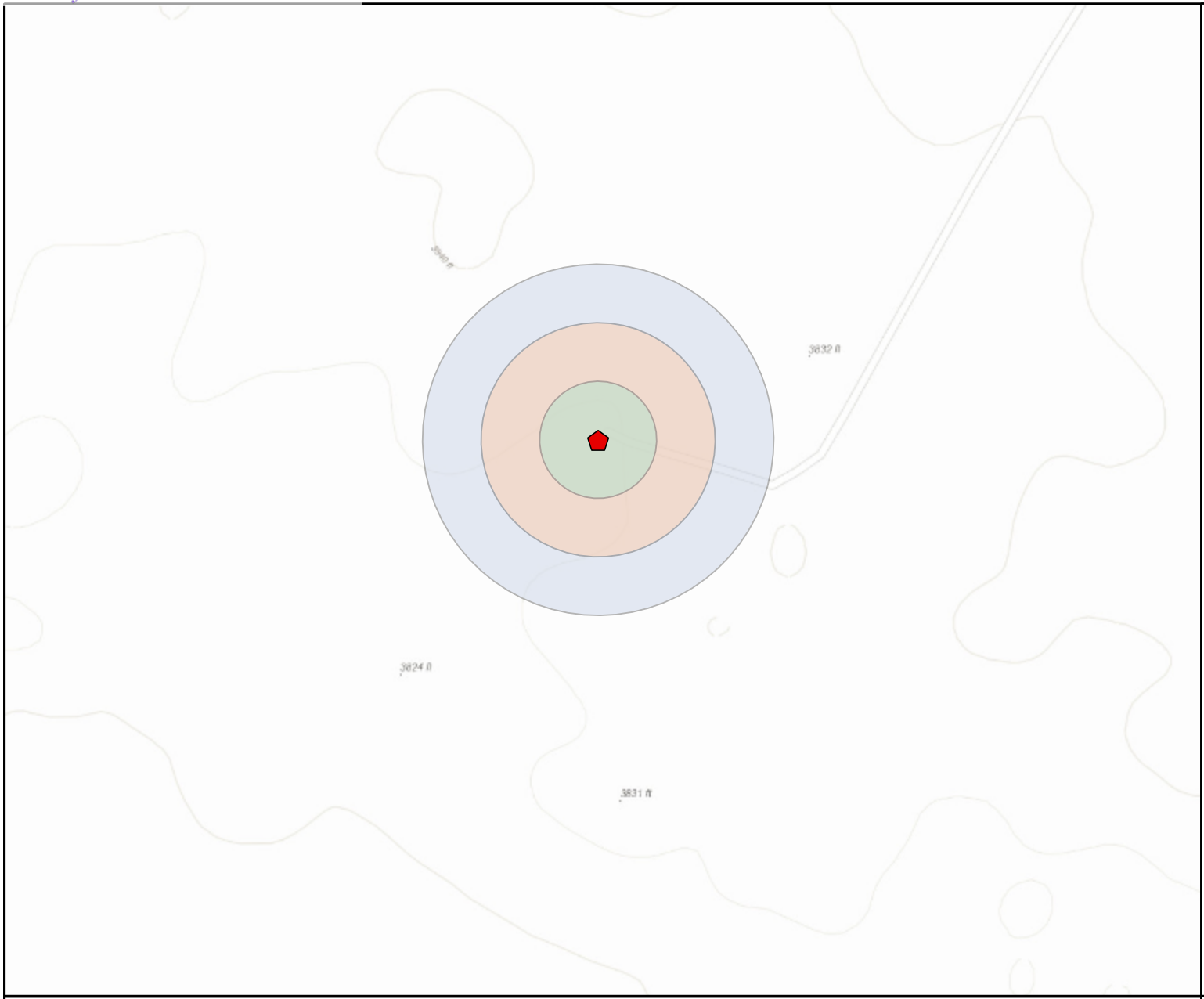
Date Saved: 12/4/2019

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

Drawn MRS
Date 12/4/2019
Checked
Approved

SMA

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



Legend

- Point of Release

Buffer Distance

- 100 Feet
- 200 Feet
- 300 Feet
- Streams Canals
- Rivers
- Flowlines_SENM
- NM Wetlands
- Lakes_Playas
- FEMA_Flood_Zones_2011

N

0 80 160 320 US Feet

Surface Water Protection Map
Pearsall 6 Federal #009 - Marathon Oil
Lea County, New Mexico

Figure 2

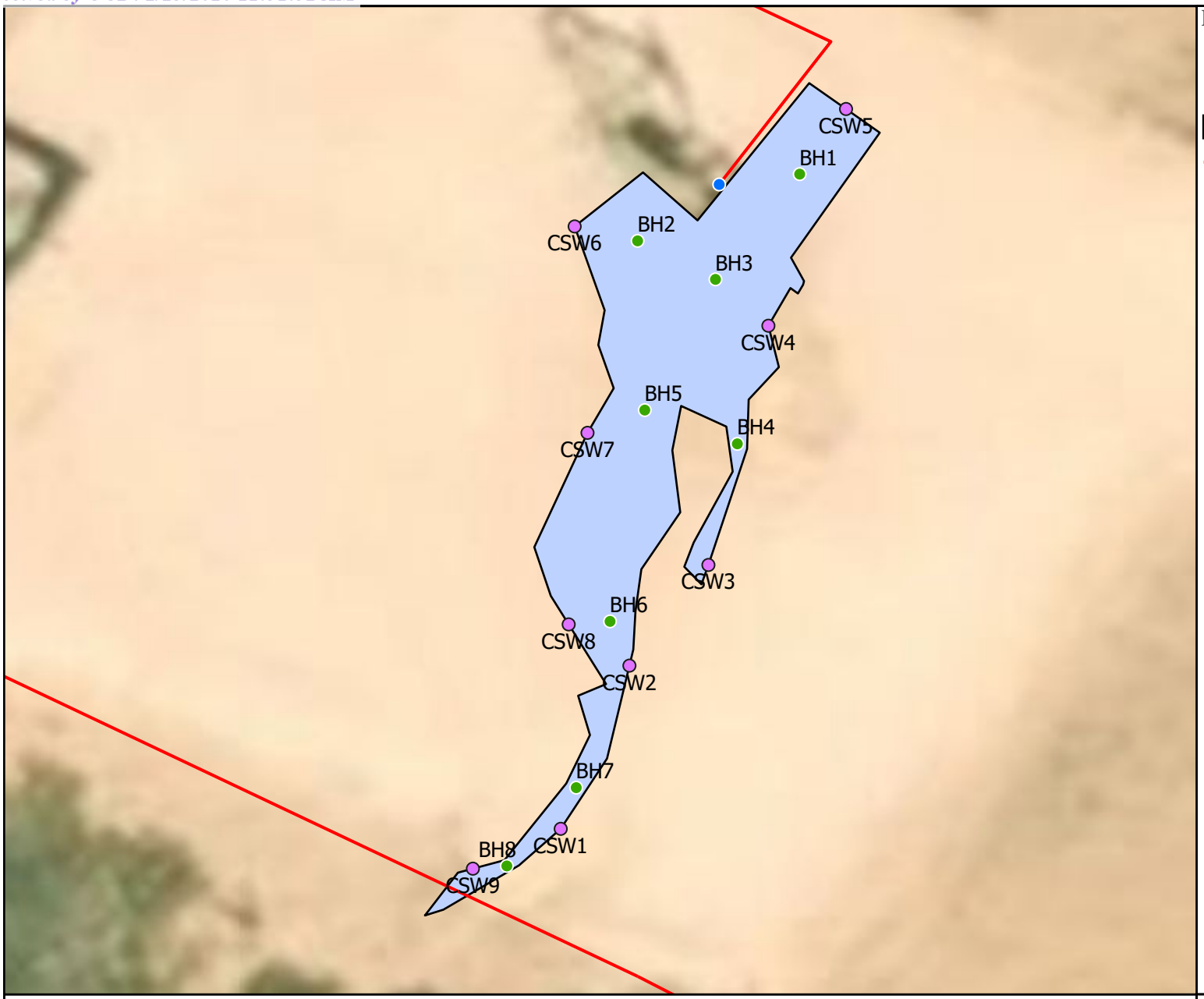
P:\5-Marathon MSA 2019 (5E27950)\GIS\ARCGIS\MARATHON_MIT.aprx

Date Saved: 12/4/2019

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

Drawn MJP
Date 12/4/2019
Checked
Approved

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



Legend

- Sidewall Sample Location
- Point of Release
- 1' Excavation Area
- Pipelines
- Bottom Hole Sample Locations

N

0 14.5 29 58

Feet

Excavation and Closure Sample Location Map
Pearsall 6 Federal #009 - Marathon Oil
UL: I S: 06 T: 18S R: 32E Lea County, New Mexico

Figure 3

\\192.168.22.10\Projects\5-Marathon MSA 2019 (5E27950)\GIS\ARCGIS\MARATHON_MIT.aprx

Date Saved: 1/22/2020

Revisions

By:_____ Date:_____ Descr:_____

By:_____ Date:_____ Descr:_____

Drawn Lynn A. Acosta
Date 1/22/2020
Checked
Approved

SMA

201 South Halagueno Street
Carlsbad, New Mexico 88220
(575) 689-7040
Serving the Southwest & Rocky Mountains

TABLES

Table 2:
NMOCD Closure Criteria

Marathon Oil
Pearsall 6 Federal #009

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	156	USGS Well #74501 - Appendix B
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	N/A	
Hortizontal Distance to Nearest Significant Watercourse (ft)	13,340	"Little Lake" to the southeast

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		**Closure Criteria (units in mg/kg)**				
		Chloride *numerical limit or background, whichever is greater	**TPH**	**GRO + DRO**	**BTEX**	**Benzene**
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'	x	20000	2500	1000	50	10
Surface Water	**yes or no**	**if yes, then**				
<300' from continuously flowing watercourse or other significant watercourse?	no	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	no					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	no					
<1000' from fresh water well or spring?	no					
Human and Other Areas						
<300' from an occupied permanent residence, school, hospital, institution or church?	no					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	no					
<100' from wetland?	no					
within area overlying a subsurface mine	no					
within an unstable area?	no					
within a 100-year floodplain?	no					

Table 3:
Summary of Sample Results

Marathon Oil
Pearsall 6 Federal #009

Sample ID	Sample Date	Depth (feet bgs)	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria			50	10	1000			2500	20000
Closure Samples									
BH1	1/1/2020	1	<0.217	<0.024	<4.8	190	130	320	89
BH2	1/1/2020	1	<0.217	<0.023	<4.7	<9	<45	<58.7	170
BH3	1/1/2020	1	<0.213	<0.024	<4.7	<9.6	<48	<62.3	84
BH4	1/1/2020	1	<0.222	<0.025	<4.9	9.6	<47	9.6	120
BH5	1/1/2020	1	<0.222	<0.025	<4.9	<9.9	<50	<64.8	170
BH6	1/1/2020	1	<0.210	<0.023	<4.7	13.0	<42	13	180
BH7	1/1/2020	1	<0.221	<0.025	<4.9	<9.3	<46	<60.2	<60
BH8	1/1/2020	1	<0.216	<0.024	<4.8	710	630	1340	<60
CSW1	1/1/2020	0-1	<0.219	<0.024	<4.9	<9.2	<46	<60.1	<60
CSW2	1/1/2020	0-1	<0.216	<0.024	<4.8	<8.6	<43	<56.4	<60
CSW3	1/1/2020	0-1	<0.215	0.024	<4.8	<9.3	<47	<60.1	410
CSW4	1/1/2020	0-1	<0.213	<0.024	<4.7	1400	500	1900	190
	1/13/2020	0-1	-	-	<5.0	<9.9	<49	<63.9	-
CSW5	1/1/2020	0-1	<0.216	<0.024	<4.8	<9.5	<48	<63.2	<60
CSW6	1/1/2020	0-1	<0.222	<0.025	<4.9	<9.7	<48	<62.6	<60
CSW7	1/1/2020	0-1	<0.212	<0.024	<4.7	58	100	158	91
CSW8	1/1/2020	0-1	<0.222	<0.025	<4.9	<9.7	<48	<62.6	200
CSW9	1/1/2020	0-1	<0.207	<0.023	<4.6	<9.5	<47	<61.1	<60

APPENDIX A

FORM C141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
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)*
Contact mailing address 4111 S. Tidwell Rd., Carlsbad, NM 8220	

Location of Release Source

Latitude 32.7741432 Longitude - 103.8006287
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PEARSALL 6 FEDERAL #009	Site Type Oil and gas drilling facility
Date Release Discovered 11/24/19	API# *(if applicable)* 30-025-39135

Unit Letter	Section	Township	Range	County
I	06	18S	32E	Lea

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) 5.6 bbls	Volume Recovered (bbls) 5 bbls
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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

Operator reported spill due to a leak from hammer union on flow line to the well head. Approximately 5.6 bbls of oil spilled onto the ground. A vac truck was immediately dispatched to recover fluids. The vac truck recovered 5 bbls.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

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: Isaac Castro Title: Environmental Professional

Signature: Isaac Castro Date: 11/26/19

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Melodie Sanjari

Title: Environmental Professional

Signature: Melodie Sanjari

Date: 1/20/2020

email: msanjari@marathonoil.com

Telephone: 575-988-0561

OCD Only

Received by: _____

Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Melodie Sanjari Title: Environmental Professional

Signature: *Melodie Sanjari* Date: 1/20/2020

email: msanjari@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: _____ Date: _____

Printed Name: _____ Title: _____

APPENDIX B
NMOSE WELLS REPORT

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00814 POD1		CP	LE	2	2		08	18S	32E	614074	3626168*	1887	480		
CP 00672		CP	LE	4	4		07	18S	32E	612475	3624947*	1943	524	430	94
CP 00672 CLW475398	O	CP	LE	4	4		07	18S	32E	612475	3624947*	1943	540	460	80

Average Depth to Water: **445 feet**

Minimum Depth: **430 feet**

Maximum Depth: **460 feet**

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 612328.25 **Northing (Y):** 3626885.36 **Radius:** 2000

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

National Water Information System: Web Interface

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

site_no list =

- 324519103474501

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

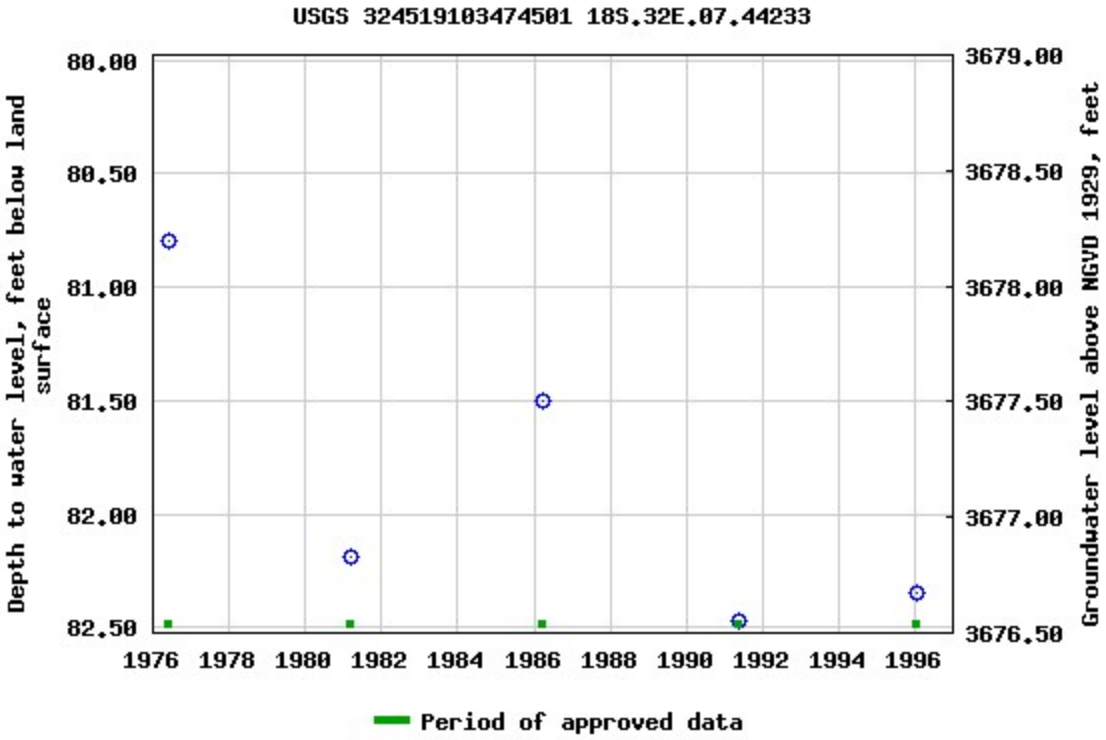
USGS 324519103474501 18S.32E.07.44233

Available data for this site Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°45'24", Longitude 103°47'55" NAD27
Land-surface elevation 3,759.00 feet above NGVD29
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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

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

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2019-12-04 15:43:47 EST
0.57 0.48 nadww01

SUBJECT Pearsall DTGW Federal PROJECT PAGE

CLIENT Marathon DATE 12/4 BY MRS/MJP CHECKED BY

elevation: 3832

pod#	depth to w.	elevation of loc.	elevation of gw.	dtgw
CP00672	430	3762	3332	500
~~CP00672 CLW~~	~~460~~			
C 00566	65	3866	3801	31
USGS 74501	~~3802~~		3676	156.

APPENDIX C
VSP SAMPLING PROTOCOL

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

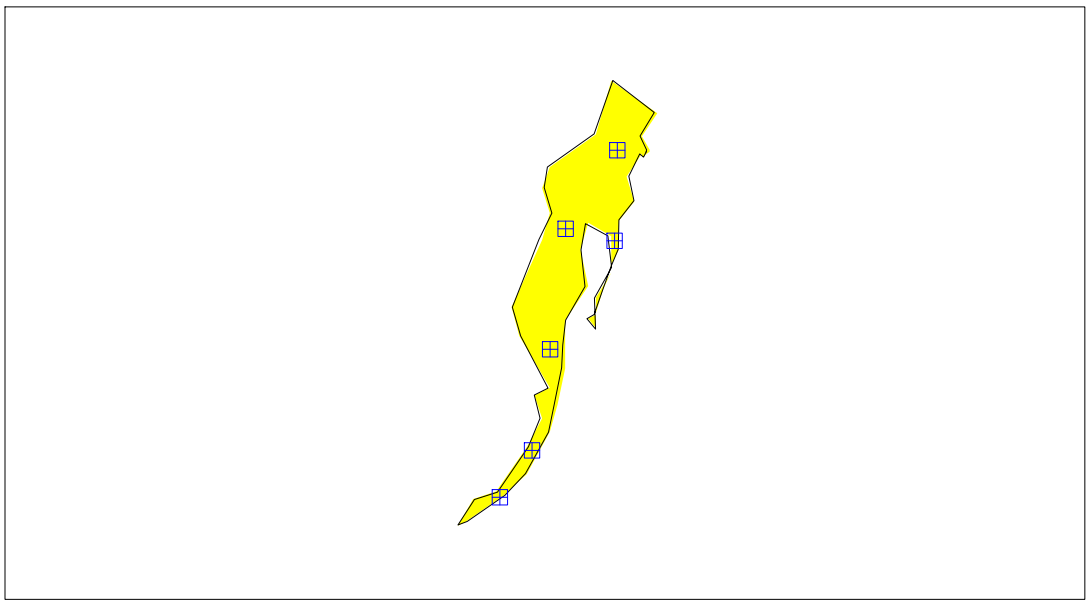
Summary

This report summarizes the stratified sampling design used, associated statistical assumptions, as well as general guidelines for conducting post-sampling data analysis. Sampling plan components presented here include how many sampling locations to choose and where within the sampling area to collect those samples. The type of medium to sample (i.e., soil, groundwater, etc.) and how to analyze the samples (in-situ, fixed laboratory, etc.) are addressed in other sections of the sampling plan. It is important to note that the decision for sample size calculation is determined for the combined strata, rather than any individual strata.

The following table summarizes the proportion stratified sampling design developed. A figure that shows sampling locations in the field and a table that lists sampling location coordinates are also provided below.

SUMMARY OF SAMPLING DESIGN	
Primary Objective of Design	Estimate the population proportion of all strata combined
Criteria for Determining Total Number of Samples	Achieve pre-specified precision of the estimated proportion for specified stratum costs, but no restriction on total costs
Sample Placement (Location) in the Field	Random sampling within grids within each stratum
Formula for calculating number of sampling locations	From Gilbert (1987, page 51)
Method for calculating number of sampling locations in each stratum	Optimal Allocation
Calculated total number of samples	6
Stratum 1	6
Total area of all strata	318.16 m^2
Total cost of sampling [a]	

[a] Including measurement analyses and fixed overhead costs. See the Cost of Sampling section for an explanation of the costs presented here.



Area: Area 1

X Coord	Y Coord	Label	Value	Type	Historical	Sample Area
-11555044.5026	3865321.4670			Random in Grid		
-11555040.3251	3865327.5857			Random in Grid		
-11555037.9634	3865340.7467			Random in Grid		
-11555035.9456	3865356.4481			Random in Grid		
-11555029.5537	3865354.8875			Random in Grid		
-11555029.2124	3865366.6973			Random in Grid		

Primary Sampling Objective
The primary purpose of sampling at this site is to estimate the proportion for the entire site, i.e., for all strata combined, such that the estimated proportion has the minimum possible standard deviation under the condition that the sampling and measurement costs cannot exceed a specified amount. Preexisting information was used to divide the site into 1 non-overlapping strata that were expected to be more homogeneous internally than for the entire site (all strata combined). The expected variability of values within each stratum was estimated or approximated, and the stratum weights, W_h, were determined so that the total number of samples could be allocated appropriately among the strata.

Number of Total Samples: Calculation Equation and Inputs
The total number of samples is computed to achieve the pre-specified precision of the estimated population proportion for specified stratum costs, but no restriction on total costs. *Note that the calculation is for the total number of samples, i.e., for combined strata, rather than individual strata.*

The formula used to calculate the total number of samples is:

$$n = \frac{\left(\sum_{h=1}^{L} W_h \sqrt{P_h(1-P_h)}\sqrt{c_h}\right)\sum_{h=1}^{L} \frac{W_h \sqrt{P_h(1-P_h)}}{\sqrt{c_h}}}{V + {}^{1}\!/_{N}\sum_{h=1}^{L} W_h P_h(1-P_h)}$$

where
L is the number of strata, $h=1,2,...,L$,
P_h is the estimated proportion of measurements in stratum h,
$W_h = N_h / N$ is the weight associated with stratum h,
N_h is the total number of possible sampling locations (units) in stratum h,
N is the total number of possible units in all strata combined, $N = \sum_{h=1}^{L} N_h$
V is the pre-specified variance or precision, and
c_h is the cost of collecting and measuring a sample in stratum h.

The values of these inputs that result in the calculated number of sampling locations are:

Parameter	Stratum
	1
P_h	0.2
C_h	
W_h	318.16

Parameter	Input Value
V	1

Allocation of Samples to Strata

The total number of samples is allocated to the individual strata on an optimal basis using the formula:

$$n_h = n \frac{N_h \sqrt{P_h(1-P_h)} / \sqrt{c_h}}{\sum_{h=1}^{L} N_h \sqrt{P_h(1-P_h)} / \sqrt{c_h}}$$

where

n_h is the number of samples allocated to stratum h,
L is the number of strata,
N_h is the total number of units in stratum h,
P_h is the proportion in stratum h,
c_h is the cost per population unit in stratum h.

n is the total number of units sampled in all strata, $n = \sum_{h=1}^{L} n_h$

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

Stratum	Number of Samples
1	6
Total Samples	6

Method for Determining Sampling Locations
Five methods for determining sample locations are provided in VSP: 1) simple random sampling, 2) random sampling within grids, 3) systematic sampling with a random start, 4) systematic sampling with a fixed start and 5) adaptive grid sampling. One may use a different method for each stratum, based on the conceptual site model and decision to be made for a given stratum. For this site, sample locations were chosen using random sampling within grids in each stratum.

Locating the sample points using a random sampling within grids method combines appealing aspects of both the random and the systematic grid methods. It provides data that are separated by many distances, providing information about the spatial structure of the potential contamination. It also ensures good coverage of the entire site, although not as completely as if systematic grid sampling were performed.

Statistical Assumptions
The assumptions associated with the formulas for computing the number of samples are:
1. The estimated stratum proportions, P_h, are reasonable and representative of the stratum populations being sampled.
2. The sampling locations are selected using simple random sampling.
3. The stratum costs, C_h, and the fixed cost C_0, are accurate.

The first and third assumptions will be assessed in a post data collection analysis. The second assumption, although not strictly valid for strata where systematic grid sampling was used rather than simple random sampling, is not expected to significantly affect conclusions of the study because (1) the gridded sample locations were selected based on a random start and (2) any patterns of contamination in the field that may exist are not expected to coincide with the regularity of the grid sampling pattern.

Cost of Sampling
The total cost of the completed sampling program depends on several cost inputs, some of which are fixed, and others that are based on the number of samples collected and measured. Based on the numbers of samples determined above, the estimated total cost of sampling and analysis at this site is $4,000.00, which averages out to a per sample cost of $666.67. The following table summarizes the inputs and resulting cost estimates.

COST INFORMATION				
Stratum	**Samples**	**Collection Cost Per Sample**	**Analytic Cost Per Sample**	**Total Cost**
1	6			

Total Samples:	**6**		**Subtotal:**	
			Fixed Startup Cost:	
			Grand Total:	

Recommended Data Analysis Activities

Post data collection activities generally follow those outlined in EPA's Guidance for Data Quality Assessment (EPA, 2000). The data analysts will become familiar with the context of the problem and goals for data collection and assessment. The data will be verified and validated before being subjected to statistical or other analyses. Graphical and analytical tools will be used to verify to the extent possible the assumptions of any statistical analyses that are performed as well as to achieve a general understanding of the data. The data will be assessed to determine whether they are adequate in both quality and quantity to support the primary objective of sampling.

Estimates for the proportion of the population values will be calculated using the formulas appropriate for stratified sampling; these formulas are found in EPA QA/G-5S (EPA, 2001). Results of the exploratory and quantitative assessments of the data will be reported, along with conclusions that may be supported by them.

APPENDIX D

SAMPLING PROTOCOL, FIELD NOTES & PHOTO LOG

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 Pearsall 6 Federal #009 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 (such as the liner within the battery and the construction of a new facility) 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 seventeen (17) 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.

SMA Field Screening

Location Name: Pearsall #6

Date: 1/1/20

Sample Name:	Soil Type:	Depth (BGS)	Collection Time:	EC (ppm)	Temp (°C)	PID Reading	PF
BH 8	Sand	1'	1055	0.37	18.8	43.2	—
BH 7			1058	0.31	16.9	12.3	—
BH 6			1120	0.16	15.2	85.3	—
BH 5			1208	0.13	15.1	13.2	—
BH 4			1336	0.15	18.7	68.0	—
BH 3			1212	0.08	19.1	17	—
BH 2			1151	0.09	16.6	33.1	—
BH 1			1428	0.23	17.2	9.3	—
CSW1		0-1'	1335	0.04	18.5	6.8	—
CSW2			1338	0.13	18.7	9.3	—
CSW3			1340	0.34	18.5	9.7	—
CSW4			1343	0.20	18.9	24.5	—
CSW5			1444	0.03	16.8	7.5	—
CSW6			1447	0.05	16.8	5.5	—
CSW7			1417	0.017	17.5	6.3	—
CSW8			1414	0.06	18.1	5.4	—
CSW9			1403	0.04	18.5	5.2	—

SMA Field Screening

Location Name: Pearsall 6-9

Date: 1/13/2020

Sample Name:	Soil Type:	Depth (BGS)	Collection Time:	EC (ppm)	Temp (°C)	PID Reading	PF
CSW 4	Sandy loam	0-1'	8:30	0.05	21.0	0.9 ppm	


SE
S
SW
120
150
180
210
240
188°S (T)
32°46'26"N, 103°48'2"W ±16ft
3838ft
Pearsall 6 Federal #9
Lynn A. Acosta
Marathon Oil
01 Jan 2020, 15:11:56


NW N NE E
330 0 30 60 90
22°N (T) 32°46'26"N, 103°48'2"W ±16ft 3828ft
Pearsall 6 Federal #9
Lynn A. Acosta
Marathon Oil
01 Jan 2020, 15:14:18


SE
S
SW
120
150
180
210
240
188°S (T)
32°46'26"N, 103°48'2"W ±16ft
3838ft
Pearsall 6 Federal #9
Lynn A. Acosta
Marathon Oil
01 Jan 2020, 15:11:56


N
NE
E
330
0
30
60
90
39°NE (T)
32°46'26"N, 103°48'2"W ±16ft
3833ft
Pearsall 6 Federal #9
Lynn A. Acosta
Marathon Oil
01 Jan 2020, 15:11:19


NW
N
NE
330
0
30
60
15°N (T) 32°46'26"N, 103°48'2"W ±16ft 3824ft
Pearsall 6 Federal #9
Lynn A. Acosta
Marathon Oil
01 Jan 2020, 15:14:32


E
90
120
SE
150
S
180
133°SE (T) 32°46'27"N, 103°48'2"W ±16ft 3825ft
Pearsall 6 Federal #9
Lynn A. Acosta
Marathon Oil
01 Jan 2020, 15:15:26

APPENDIX E

LABORATORY ANALYTICAL RESULTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 16, 2019

Ashley Maxwell

Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL:
FAX

RE: Pearsall 6 9 OrderNo.: 1912470

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 38 sample(s) on 12/10/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

CLIENT: Souder, Miller & Associates
Client Sample ID: L1 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 9:15:00 AM
Lab ID: 1912470-001 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	170	60		mg/Kg	20	12/11/2019 7:05:06 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	670	48		mg/Kg	5	12/13/2019 10:28:25 AM	49263
Motor Oil Range Organics (MRO)	550	240		mg/Kg	5	12/13/2019 10:28:25 AM	49263
Surr: DNOP	194	70-130	S	%Rec	5	12/13/2019 10:28:25 AM	49263
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/11/2019 3:03:25 PM	49258
Surr: BFB	82.3	66.6-105		%Rec	1	12/11/2019 3:03:25 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.026	0.023		mg/Kg	1	12/11/2019 3:03:25 PM	49258
Toluene	ND	0.047		mg/Kg	1	12/11/2019 3:03:25 PM	49258
Ethylbenzene	ND	0.047		mg/Kg	1	12/11/2019 3:03:25 PM	49258
Xylenes, Total	ND	0.093		mg/Kg	1	12/11/2019 3:03:25 PM	49258
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	12/11/2019 3:03:25 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 9:20:00 AM
Lab ID: 1912470-002 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	270	60		mg/Kg	20	12/11/2019 7:17:27 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	12/11/2019 9:28:49 PM	49263
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/11/2019 9:28:49 PM	49263
Surr: DNOP	147	70-130	S	%Rec	1	12/11/2019 9:28:49 PM	49263
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/11/2019 3:26:47 PM	49258
Surr: BFB	81.9	66.6-105		%Rec	1	12/11/2019 3:26:47 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/11/2019 3:26:47 PM	49258
Toluene	ND	0.047		mg/Kg	1	12/11/2019 3:26:47 PM	49258
Ethylbenzene	ND	0.047		mg/Kg	1	12/11/2019 3:26:47 PM	49258
Xylenes, Total	ND	0.094		mg/Kg	1	12/11/2019 3:26:47 PM	49258
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	12/11/2019 3:26:47 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 9:25:00 AM
Lab ID: 1912470-003 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	440	60		mg/Kg	20	12/13/2019 11:24:20 AM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/13/2019 11:40:32 AM	49325
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/13/2019 11:40:32 AM	49325
Surr: DNOP	83.3	70-130		%Rec	1	12/13/2019 11:40:32 AM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/13/2019 9:39:45 AM	49313
Surr: BFB	88.4	66.6-105		%Rec	1	12/13/2019 9:39:45 AM	49313
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/13/2019 9:39:45 AM	49313
Toluene	ND	0.049		mg/Kg	1	12/13/2019 9:39:45 AM	49313
Ethylbenzene	ND	0.049		mg/Kg	1	12/13/2019 9:39:45 AM	49313
Xylenes, Total	ND	0.097		mg/Kg	1	12/13/2019 9:39:45 AM	49313
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	12/13/2019 9:39:45 AM	49313

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 9:30:00 AM
Lab ID: 1912470-004 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	430	60		mg/Kg	20	12/11/2019 7:54:30 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	29000	960		mg/Kg	100	12/12/2019 9:04:42 PM	49315
Motor Oil Range Organics (MRO)	13000	4800		mg/Kg	100	12/12/2019 9:04:42 PM	49315
Surr: DNOP	0	70-130	S	%Rec	100	12/12/2019 9:04:42 PM	49315
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	3900	500		mg/Kg	100	12/12/2019 12:00:38 PM	49258
Surr: BFB	217	66.6-105	S	%Rec	100	12/12/2019 12:00:38 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	88	2.5		mg/Kg	100	12/12/2019 12:00:38 PM	49258
Toluene	290	5.0		mg/Kg	100	12/12/2019 12:00:38 PM	49258
Ethylbenzene	160	5.0		mg/Kg	100	12/12/2019 12:00:38 PM	49258
Xylenes, Total	210	9.9		mg/Kg	100	12/12/2019 12:00:38 PM	49258
Surr: 4-Bromofluorobenzene	134	80-120	S	%Rec	100	12/12/2019 12:00:38 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 9:35:00 AM
Lab ID: 1912470-005 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	250	60		mg/Kg	20	12/11/2019 8:06:51 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/12/2019 9:26:39 PM	49315
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/12/2019 9:26:39 PM	49315
Surr: DNOP	104	70-130		%Rec	1	12/12/2019 9:26:39 PM	49315
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/11/2019 5:47:54 PM	49258
Surr: BFB	88.0	66.6-105		%Rec	1	12/11/2019 5:47:54 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/11/2019 5:47:54 PM	49258
Toluene	ND	0.046		mg/Kg	1	12/11/2019 5:47:54 PM	49258
Ethylbenzene	ND	0.046		mg/Kg	1	12/11/2019 5:47:54 PM	49258
Xylenes, Total	ND	0.092		mg/Kg	1	12/11/2019 5:47:54 PM	49258
Surr: 4-Bromofluorobenzene	96.9	80-120		%Rec	1	12/11/2019 5:47:54 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 9:40:00 AM
Lab ID: 1912470-006 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	370	60		mg/Kg	20	12/13/2019 12:01:23 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	25	9.6		mg/Kg	1	12/13/2019 12:07:45 PM	49325
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/13/2019 12:07:45 PM	49325
Surr: DNOP	86.7	70-130		%Rec	1	12/13/2019 12:07:45 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/13/2019 10:29:14 AM	49313
Surr: BFB	86.5	66.6-105		%Rec	1	12/13/2019 10:29:14 AM	49313
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/13/2019 10:29:14 AM	49313
Toluene	ND	0.047		mg/Kg	1	12/13/2019 10:29:14 AM	49313
Ethylbenzene	ND	0.047		mg/Kg	1	12/13/2019 10:29:14 AM	49313
Xylenes, Total	ND	0.094		mg/Kg	1	12/13/2019 10:29:14 AM	49313
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/13/2019 10:29:14 AM	49313

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 9:45:00 AM
Lab ID: 1912470-007 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	180	60		mg/Kg	20	12/11/2019 8:19:12 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	1400	98		mg/Kg	10	12/12/2019 9:48:30 PM	49315
Motor Oil Range Organics (MRO)	1700	490		mg/Kg	10	12/12/2019 9:48:30 PM	49315
Surr: DNOP	0	70-130	S	%Rec	10	12/12/2019 9:48:30 PM	49315
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/11/2019 6:11:23 PM	49258
Surr: BFB	87.2	66.6-105		%Rec	1	12/11/2019 6:11:23 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.12	0.024		mg/Kg	1	12/11/2019 6:11:23 PM	49258
Toluene	0.40	0.049		mg/Kg	1	12/11/2019 6:11:23 PM	49258
Ethylbenzene	0.14	0.049		mg/Kg	1	12/11/2019 6:11:23 PM	49258
Xylenes, Total	0.17	0.097		mg/Kg	1	12/11/2019 6:11:23 PM	49258
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	12/11/2019 6:11:23 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 9:50:00 AM
Lab ID: 1912470-008 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	150	60		mg/Kg	20	12/11/2019 8:31:34 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	12/11/2019 11:39:53 PM	49263
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	12/11/2019 11:39:53 PM	49263
Surr: DNOP	133	70-130	S	%Rec	1	12/11/2019 11:39:53 PM	49263
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/11/2019 6:34:53 PM	49258
Surr: BFB	85.7	66.6-105		%Rec	1	12/11/2019 6:34:53 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/11/2019 6:34:53 PM	49258
Toluene	ND	0.047		mg/Kg	1	12/11/2019 6:34:53 PM	49258
Ethylbenzene	ND	0.047		mg/Kg	1	12/11/2019 6:34:53 PM	49258
Xylenes, Total	ND	0.094		mg/Kg	1	12/11/2019 6:34:53 PM	49258
Surr: 4-Bromofluorobenzene	99.7	80-120		%Rec	1	12/11/2019 6:34:53 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 9:55:00 AM
Lab ID: 1912470-009 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	140	60		mg/Kg	20	12/13/2019 12:13:44 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/13/2019 12:16:54 PM	49325
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/13/2019 12:16:54 PM	49325
Surr: DNOP	116	70-130		%Rec	1	12/13/2019 12:16:54 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/13/2019 11:15:08 AM	49313
Surr: BFB	74.9	66.6-105		%Rec	1	12/13/2019 11:15:08 AM	49313
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/13/2019 11:15:08 AM	49313
Toluene	ND	0.048		mg/Kg	1	12/13/2019 11:15:08 AM	49313
Ethylbenzene	ND	0.048		mg/Kg	1	12/13/2019 11:15:08 AM	49313
Xylenes, Total	ND	0.096		mg/Kg	1	12/13/2019 11:15:08 AM	49313
Surr: 4-Bromofluorobenzene	90.0	80-120		%Rec	1	12/13/2019 11:15:08 AM	49313

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:00:00 AM
Lab ID: 1912470-010 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/11/2019 8:43:55 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	47000	1000		mg/Kg	100	12/12/2019 10:10:41 PM	49315
Motor Oil Range Organics (MRO)	20000	5000		mg/Kg	100	12/12/2019 10:10:41 PM	49315
Surr: DNOP	0	70-130	S	%Rec	100	12/12/2019 10:10:41 PM	49315
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	6500	500		mg/Kg	100	12/12/2019 12:23:52 PM	49258
Surr: BFB	288	66.6-105	S	%Rec	100	12/12/2019 12:23:52 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	210	2.5		mg/Kg	100	12/12/2019 12:23:52 PM	49258
Toluene	580	9.9		mg/Kg	200	12/12/2019 2:21:50 PM	49258
Ethylbenzene	280	5.0		mg/Kg	100	12/12/2019 12:23:52 PM	49258
Xylenes, Total	350	9.9		mg/Kg	100	12/12/2019 12:23:52 PM	49258
Surr: 4-Bromofluorobenzene	152	80-120	S	%Rec	100	12/12/2019 12:23:52 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:05:00 AM
Lab ID: 1912470-011 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/11/2019 8:56:16 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.2		mg/Kg	1	12/12/2019 10:04:13 AM	49285
Motor Oil Range Organics (MRO)	ND	41		mg/Kg	1	12/12/2019 10:04:13 AM	49285
Surr: DNOP	103	70-130		%Rec	1	12/12/2019 10:04:13 AM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/12/2019 12:47:29 PM	49258
Surr: BFB	77.7	66.6-105		%Rec	1	12/12/2019 12:47:29 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/12/2019 12:47:29 PM	49258
Toluene	ND	0.049		mg/Kg	1	12/12/2019 12:47:29 PM	49258
Ethylbenzene	ND	0.049		mg/Kg	1	12/12/2019 12:47:29 PM	49258
Xylenes, Total	ND	0.098		mg/Kg	1	12/12/2019 12:47:29 PM	49258
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	12/12/2019 12:47:29 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:10:00 AM
Lab ID: 1912470-012 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	12/13/2019 12:26:05 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	21	8.6		mg/Kg	1	12/13/2019 12:26:03 PM	49325
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	12/13/2019 12:26:03 PM	49325
Surr: DNOP	103	70-130		%Rec	1	12/13/2019 12:26:03 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/13/2019 9:41:20 AM	49317
Surr: BFB	79.2	66.6-105		%Rec	1	12/13/2019 9:41:20 AM	49317
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/13/2019 9:41:20 AM	49317
Toluene	ND	0.048		mg/Kg	1	12/13/2019 9:41:20 AM	49317
Ethylbenzene	ND	0.048		mg/Kg	1	12/13/2019 9:41:20 AM	49317
Xylenes, Total	ND	0.096		mg/Kg	1	12/13/2019 9:41:20 AM	49317
Surr: 4-Bromofluorobenzene	94.6	80-120		%Rec	1	12/13/2019 9:41:20 AM	49317

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:20:00 AM
Lab ID: 1912470-013 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/11/2019 9:33:17 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	59000	800		mg/Kg	100	12/12/2019 11:09:51 AM	49285
Motor Oil Range Organics (MRO)	25000	4000		mg/Kg	100	12/12/2019 11:09:51 AM	49285
Surr: DNOP	0	70-130	S	%Rec	100	12/12/2019 11:09:51 AM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	2400	240		mg/Kg	50	12/11/2019 7:45:14 PM	49258
Surr: BFB	310	66.6-105	S	%Rec	50	12/11/2019 7:45:14 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	45	1.2		mg/Kg	50	12/11/2019 7:45:14 PM	49258
Toluene	150	2.4		mg/Kg	50	12/11/2019 7:45:14 PM	49258
Ethylbenzene	110	2.4		mg/Kg	50	12/11/2019 7:45:14 PM	49258
Xylenes, Total	150	4.8		mg/Kg	50	12/11/2019 7:45:14 PM	49258
Surr: 4-Bromofluorobenzene	153	80-120	S	%Rec	50	12/11/2019 7:45:14 PM	49258

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

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:25:00 AM
Lab ID: 1912470-014 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/11/2019 9:45:38 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	12/12/2019 11:31:48 AM	49285
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/12/2019 11:31:48 AM	49285
Surr: DNOP	132	70-130	S	%Rec	1	12/12/2019 11:31:48 AM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/11/2019 8:08:45 PM	49258
Surr: BFB	84.3	66.6-105		%Rec	1	12/11/2019 8:08:45 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/11/2019 8:08:45 PM	49258
Toluene	ND	0.049		mg/Kg	1	12/11/2019 8:08:45 PM	49258
Ethylbenzene	ND	0.049		mg/Kg	1	12/11/2019 8:08:45 PM	49258
Xylenes, Total	ND	0.097		mg/Kg	1	12/11/2019 8:08:45 PM	49258
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	12/11/2019 8:08:45 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:30:00 AM
Lab ID: 1912470-015 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	12/13/2019 12:38:26 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	420	9.8		mg/Kg	1	12/13/2019 12:54:58 PM	49325
Motor Oil Range Organics (MRO)	240	49		mg/Kg	1	12/13/2019 12:54:58 PM	49325
Surr: DNOP	161	70-130	S	%Rec	1	12/13/2019 12:54:58 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/13/2019 10:05:00 AM	49317
Surr: BFB	131	66.6-105	S	%Rec	1	12/13/2019 10:05:00 AM	49317
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/13/2019 10:05:00 AM	49317
Toluene	ND	0.049		mg/Kg	1	12/13/2019 10:05:00 AM	49317
Ethylbenzene	0.060	0.049		mg/Kg	1	12/13/2019 10:05:00 AM	49317
Xylenes, Total	0.16	0.097		mg/Kg	1	12/13/2019 10:05:00 AM	49317
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	12/13/2019 10:05:00 AM	49317

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L6 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:35:00 AM
Lab ID: 1912470-016 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	660	61		mg/Kg	20	12/11/2019 10:22:39 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	19000	360		mg/Kg	50	12/12/2019 11:53:54 AM	49285
Motor Oil Range Organics (MRO)	7600	1800		mg/Kg	50	12/12/2019 11:53:54 AM	49285
Surr: DNOP	0	70-130	S	%Rec	50	12/12/2019 11:53:54 AM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	350	25		mg/Kg	5	12/11/2019 8:32:10 PM	49258
Surr: BFB	613	66.6-105	S	%Rec	5	12/11/2019 8:32:10 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.75	0.12		mg/Kg	5	12/11/2019 8:32:10 PM	49258
Toluene	6.9	0.25		mg/Kg	5	12/11/2019 8:32:10 PM	49258
Ethylbenzene	14	0.25		mg/Kg	5	12/11/2019 8:32:10 PM	49258
Xylenes, Total	25	0.50		mg/Kg	5	12/11/2019 8:32:10 PM	49258
Surr: 4-Bromofluorobenzene	215	80-120	S	%Rec	5	12/11/2019 8:32:10 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L6 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:40:00 AM
Lab ID: 1912470-017 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	230	60		mg/Kg	20	12/11/2019 10:34:59 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	12/12/2019 12:15:51 PM	49285
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	12/12/2019 12:15:51 PM	49285
Surr: DNOP	126	70-130		%Rec	1	12/12/2019 12:15:51 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/12/2019 1:11:03 PM	49258
Surr: BFB	80.4	66.6-105		%Rec	1	12/12/2019 1:11:03 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/12/2019 1:11:03 PM	49258
Toluene	ND	0.048		mg/Kg	1	12/12/2019 1:11:03 PM	49258
Ethylbenzene	ND	0.048		mg/Kg	1	12/12/2019 1:11:03 PM	49258
Xylenes, Total	ND	0.096		mg/Kg	1	12/12/2019 1:11:03 PM	49258
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	12/12/2019 1:11:03 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L6 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:45:00 AM
Lab ID: 1912470-018 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	70	60		mg/Kg	20	12/13/2019 12:50:46 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/13/2019 12:44:36 PM	49325
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/13/2019 12:44:36 PM	49325
Surr: DNOP	92.8	70-130		%Rec	1	12/13/2019 12:44:36 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/13/2019 10:28:43 AM	49317
Surr: BFB	80.7	66.6-105		%Rec	1	12/13/2019 10:28:43 AM	49317
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/13/2019 10:28:43 AM	49317
Toluene	ND	0.048		mg/Kg	1	12/13/2019 10:28:43 AM	49317
Ethylbenzene	ND	0.048		mg/Kg	1	12/13/2019 10:28:43 AM	49317
Xylenes, Total	ND	0.096		mg/Kg	1	12/13/2019 10:28:43 AM	49317
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	1	12/13/2019 10:28:43 AM	49317

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:50:00 AM
Lab ID: 1912470-019 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	76	60		mg/Kg	20	12/11/2019 10:47:20 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	35000	450		mg/Kg	50	12/12/2019 12:37:52 PM	49285
Motor Oil Range Organics (MRO)	14000	2300		mg/Kg	50	12/12/2019 12:37:52 PM	49285
Surr: DNOP	0	70-130	S	%Rec	50	12/12/2019 12:37:52 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1500	47		mg/Kg	10	12/11/2019 10:28:58 PM	49258
Surr: BFB	878	66.6-105	S	%Rec	10	12/11/2019 10:28:58 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	19	0.23		mg/Kg	10	12/11/2019 10:28:58 PM	49258
Toluene	110	2.3		mg/Kg	50	12/12/2019 1:34:38 PM	49258
Ethylbenzene	95	2.3		mg/Kg	50	12/12/2019 1:34:38 PM	49258
Xylenes, Total	110	0.93		mg/Kg	10	12/11/2019 10:28:58 PM	49258
Surr: 4-Bromofluorobenzene	316	80-120	S	%Rec	10	12/11/2019 10:28:58 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 10:55:00 AM
Lab ID: 1912470-020 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/11/2019 10:59:41 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	12/12/2019 12:59:52 PM	49285
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/12/2019 12:59:52 PM	49285
Surr: DNOP	141	70-130	S	%Rec	1	12/12/2019 12:59:52 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/12/2019 1:58:15 PM	49258
Surr: BFB	77.8	66.6-105		%Rec	1	12/12/2019 1:58:15 PM	49258
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/12/2019 1:58:15 PM	49258
Toluene	ND	0.048		mg/Kg	1	12/12/2019 1:58:15 PM	49258
Ethylbenzene	ND	0.048		mg/Kg	1	12/12/2019 1:58:15 PM	49258
Xylenes, Total	ND	0.096		mg/Kg	1	12/12/2019 1:58:15 PM	49258
Surr: 4-Bromofluorobenzene	93.5	80-120		%Rec	1	12/12/2019 1:58:15 PM	49258

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:00:00 AM
Lab ID: 1912470-021 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	64	60		mg/Kg	20	12/13/2019 1:27:49 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/13/2019 1:04:13 PM	49325
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/13/2019 1:04:13 PM	49325
Surr: DNOP	94.3	70-130		%Rec	1	12/13/2019 1:04:13 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/13/2019 10:52:29 AM	49317
Surr: BFB	80.0	66.6-105		%Rec	1	12/13/2019 10:52:29 AM	49317
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/13/2019 10:52:29 AM	49317
Toluene	ND	0.050		mg/Kg	1	12/13/2019 10:52:29 AM	49317
Ethylbenzene	ND	0.050		mg/Kg	1	12/13/2019 10:52:29 AM	49317
Xylenes, Total	ND	0.099		mg/Kg	1	12/13/2019 10:52:29 AM	49317
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	12/13/2019 10:52:29 AM	49317

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L8 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:05:00 AM
Lab ID: 1912470-022 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	190	60		mg/Kg	20	12/11/2019 11:12:02 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	33000	450		mg/Kg	50	12/12/2019 1:22:07 PM	49285
Motor Oil Range Organics (MRO)	13000	2300		mg/Kg	50	12/12/2019 1:22:07 PM	49285
Surr: DNOP	0	70-130	S	%Rec	50	12/12/2019 1:22:07 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1000	23		mg/Kg	5	12/11/2019 10:20:41 AM	49264
Surr: BFB	1380	66.6-105	S	%Rec	5	12/11/2019 10:20:41 AM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	5.8	0.12		mg/Kg	5	12/11/2019 10:20:41 AM	49264
Toluene	53	2.3		mg/Kg	50	12/12/2019 11:24:33 AM	49264
Ethylbenzene	60	2.3		mg/Kg	50	12/12/2019 11:24:33 AM	49264
Xylenes, Total	92	4.6		mg/Kg	50	12/12/2019 11:24:33 AM	49264
Surr: 4-Bromofluorobenzene	140	80-120	S	%Rec	50	12/12/2019 11:24:33 AM	49264

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L8 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:10:00 AM
Lab ID: 1912470-023 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	180	60		mg/Kg	20	12/11/2019 11:24:23 PM	49294
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	12/12/2019 1:44:07 PM	49285
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/12/2019 1:44:07 PM	49285
Surr: DNOP	122	70-130		%Rec	1	12/12/2019 1:44:07 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/11/2019 11:15:31 PM	49264
Surr: BFB	80.3	66.6-105		%Rec	1	12/11/2019 11:15:31 PM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/11/2019 11:15:31 PM	49264
Toluene	ND	0.049		mg/Kg	1	12/11/2019 11:15:31 PM	49264
Ethylbenzene	ND	0.049		mg/Kg	1	12/11/2019 11:15:31 PM	49264
Xylenes, Total	ND	0.098		mg/Kg	1	12/11/2019 11:15:31 PM	49264
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	12/11/2019 11:15:31 PM	49264

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L8 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:15:00 AM
Lab ID: 1912470-024 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	190	60		mg/Kg	20	12/13/2019 1:40:10 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/13/2019 1:13:27 PM	49325
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/13/2019 1:13:27 PM	49325
Surr: DNOP	85.0	70-130		%Rec	1	12/13/2019 1:13:27 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/13/2019 11:16:02 AM	49317
Surr: BFB	77.4	66.6-105		%Rec	1	12/13/2019 11:16:02 AM	49317
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/13/2019 11:16:02 AM	49317
Toluene	ND	0.047		mg/Kg	1	12/13/2019 11:16:02 AM	49317
Ethylbenzene	ND	0.047		mg/Kg	1	12/13/2019 11:16:02 AM	49317
Xylenes, Total	ND	0.094		mg/Kg	1	12/13/2019 11:16:02 AM	49317
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	12/13/2019 11:16:02 AM	49317

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L9 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:30:00 AM
Lab ID: 1912470-025 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/12/2019 11:40:50 AM	49307
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	52000	880		mg/Kg	100	12/12/2019 2:06:12 PM	49285
Motor Oil Range Organics (MRO)	22000	4400		mg/Kg	100	12/12/2019 2:06:12 PM	49285
Surr: DNOP	0	70-130	S	%Rec	100	12/12/2019 2:06:12 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1200	98		mg/Kg	20	12/12/2019 12:25:12 AM	49264
Surr: BFB	474	66.6-105	S	%Rec	20	12/12/2019 12:25:12 AM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	3.6	0.49		mg/Kg	20	12/12/2019 12:25:12 AM	49264
Toluene	43	0.98		mg/Kg	20	12/12/2019 12:25:12 AM	49264
Ethylbenzene	63	0.98		mg/Kg	20	12/12/2019 12:25:12 AM	49264
Xylenes, Total	98	2.0		mg/Kg	20	12/12/2019 12:25:12 AM	49264
Surr: 4-Bromofluorobenzene	197	80-120	S	%Rec	20	12/12/2019 12:25:12 AM	49264

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

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L9 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:35:00 AM
Lab ID: 1912470-026 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/12/2019 12:17:51 PM	49307
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	12/12/2019 2:28:29 PM	49285
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/12/2019 2:28:29 PM	49285
Surr: DNOP	105	70-130		%Rec	1	12/12/2019 2:28:29 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/12/2019 11:47:37 AM	49264
Surr: BFB	89.6	66.6-105		%Rec	1	12/12/2019 11:47:37 AM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/12/2019 11:47:37 AM	49264
Toluene	ND	0.048		mg/Kg	1	12/12/2019 11:47:37 AM	49264
Ethylbenzene	ND	0.048		mg/Kg	1	12/12/2019 11:47:37 AM	49264
Xylenes, Total	ND	0.096		mg/Kg	1	12/12/2019 11:47:37 AM	49264
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	12/12/2019 11:47:37 AM	49264

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L9 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:40:00 AM
Lab ID: 1912470-027 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	12/13/2019 1:52:31 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/13/2019 1:22:40 PM	49325
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/13/2019 1:22:40 PM	49325
Surr: DNOP	121	70-130		%Rec	1	12/13/2019 1:22:40 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/13/2019 11:39:31 AM	49317
Surr: BFB	80.6	66.6-105		%Rec	1	12/13/2019 11:39:31 AM	49317
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/13/2019 11:39:31 AM	49317
Toluene	ND	0.049		mg/Kg	1	12/13/2019 11:39:31 AM	49317
Ethylbenzene	ND	0.049		mg/Kg	1	12/13/2019 11:39:31 AM	49317
Xylenes, Total	ND	0.098		mg/Kg	1	12/13/2019 11:39:31 AM	49317
Surr: 4-Bromofluorobenzene	96.9	80-120		%Rec	1	12/13/2019 11:39:31 AM	49317

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L10 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:45:00 AM
Lab ID: 1912470-028 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/12/2019 12:54:56 PM	49307
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	39000	890		mg/Kg	100	12/12/2019 2:50:40 PM	49285
Motor Oil Range Organics (MRO)	17000	4500		mg/Kg	100	12/12/2019 2:50:40 PM	49285
Surr: DNOP	0	70-130	S	%Rec	100	12/12/2019 2:50:40 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	820	47		mg/Kg	10	12/12/2019 1:11:36 AM	49264
Surr: BFB	646	66.6-105	S	%Rec	10	12/12/2019 1:11:36 AM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	2.5	0.24		mg/Kg	10	12/12/2019 1:11:36 AM	49264
Toluene	30	0.47		mg/Kg	10	12/12/2019 1:11:36 AM	49264
Ethylbenzene	42	0.47		mg/Kg	10	12/12/2019 1:11:36 AM	49264
Xylenes, Total	67	0.95		mg/Kg	10	12/12/2019 1:11:36 AM	49264
Surr: 4-Bromofluorobenzene	246	80-120	S	%Rec	10	12/12/2019 1:11:36 AM	49264

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L10 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:50:00 AM
Lab ID: 1912470-029 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/12/2019 1:07:16 PM	49307
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/12/2019 3:56:49 PM	49285
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/12/2019 3:56:49 PM	49285
Surr: DNOP	102	70-130		%Rec	1	12/12/2019 3:56:49 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/12/2019 12:10:35 PM	49264
Surr: BFB	86.8	66.6-105		%Rec	1	12/12/2019 12:10:35 PM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/12/2019 12:10:35 PM	49264
Toluene	ND	0.048		mg/Kg	1	12/12/2019 12:10:35 PM	49264
Ethylbenzene	ND	0.048		mg/Kg	1	12/12/2019 12:10:35 PM	49264
Xylenes, Total	ND	0.097		mg/Kg	1	12/12/2019 12:10:35 PM	49264
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	12/12/2019 12:10:35 PM	49264

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

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L10 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 11:55:00 AM
Lab ID: 1912470-030 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	12/13/2019 2:04:51 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	12/13/2019 1:31:53 PM	49325
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/13/2019 1:31:53 PM	49325
Surr: DNOP	96.7	70-130		%Rec	1	12/13/2019 1:31:53 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/13/2019 12:02:57 PM	49317
Surr: BFB	85.0	66.6-105		%Rec	1	12/13/2019 12:02:57 PM	49317
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/13/2019 12:02:57 PM	49317
Toluene	ND	0.047		mg/Kg	1	12/13/2019 12:02:57 PM	49317
Ethylbenzene	ND	0.047		mg/Kg	1	12/13/2019 12:02:57 PM	49317
Xylenes, Total	ND	0.094		mg/Kg	1	12/13/2019 12:02:57 PM	49317
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	12/13/2019 12:02:57 PM	49317

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L11 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 12:00:00 PM
Lab ID: 1912470-031 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/12/2019 1:44:20 PM	49307
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	48000	930		mg/Kg	100	12/12/2019 4:18:56 PM	49285
Motor Oil Range Organics (MRO)	18000	4600		mg/Kg	100	12/12/2019 4:18:56 PM	49285
Surr: DNOP	0	70-130	S	%Rec	100	12/12/2019 4:18:56 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1300	48		mg/Kg	10	12/12/2019 1:57:58 AM	49264
Surr: BFB	943	66.6-105	S	%Rec	10	12/12/2019 1:57:58 AM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	3.5	0.24		mg/Kg	10	12/12/2019 1:57:58 AM	49264
Toluene	44	0.48		mg/Kg	10	12/12/2019 1:57:58 AM	49264
Ethylbenzene	79	2.4		mg/Kg	50	12/12/2019 12:33:24 PM	49264
Xylenes, Total	100	0.97		mg/Kg	10	12/12/2019 1:57:58 AM	49264
Surr: 4-Bromofluorobenzene	325	80-120	S	%Rec	10	12/12/2019 1:57:58 AM	49264

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L11 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 12:05:00 PM
Lab ID: 1912470-032 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/12/2019 1:56:41 PM	49307
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	12/12/2019 4:40:50 PM	49285
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/12/2019 4:40:50 PM	49285
Surr: DNOP	106	70-130		%Rec	1	12/12/2019 4:40:50 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/12/2019 12:56:09 PM	49264
Surr: BFB	86.7	66.6-105		%Rec	1	12/12/2019 12:56:09 PM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/12/2019 12:56:09 PM	49264
Toluene	ND	0.049		mg/Kg	1	12/12/2019 12:56:09 PM	49264
Ethylbenzene	ND	0.049		mg/Kg	1	12/12/2019 12:56:09 PM	49264
Xylenes, Total	ND	0.099		mg/Kg	1	12/12/2019 12:56:09 PM	49264
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	12/12/2019 12:56:09 PM	49264

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L11 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 12:10:00 PM
Lab ID: 1912470-033 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	59		mg/Kg	20	12/13/2019 2:17:11 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/13/2019 1:41:05 PM	49325
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/13/2019 1:41:05 PM	49325
Surr: DNOP	101	70-130		%Rec	1	12/13/2019 1:41:05 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/13/2019 11:37:55 AM	49317
Surr: BFB	80.1	66.6-105		%Rec	1	12/13/2019 11:37:55 AM	49317
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/13/2019 11:37:55 AM	49317
Toluene	ND	0.047		mg/Kg	1	12/13/2019 11:37:55 AM	49317
Ethylbenzene	ND	0.047		mg/Kg	1	12/13/2019 11:37:55 AM	49317
Xylenes, Total	ND	0.095		mg/Kg	1	12/13/2019 11:37:55 AM	49317
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	12/13/2019 11:37:55 AM	49317

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L12 Surf
Project: Pearsall 6 9
Collection Date: 12/9/2019 12:15:00 PM
Lab ID: 1912470-034 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/12/2019 2:09:02 PM	49307
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	20000	770		mg/Kg	100	12/12/2019 5:03:00 PM	49285
Motor Oil Range Organics (MRO)	9800	3800		mg/Kg	100	12/12/2019 5:03:00 PM	49285
Surr: DNOP	0	70-130	S	%Rec	100	12/12/2019 5:03:00 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	3300	94		mg/Kg	20	12/12/2019 2:44:26 AM	49264
Surr: BFB	595	66.6-105	S	%Rec	20	12/12/2019 2:44:26 AM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	180	2.4		mg/Kg	100	12/12/2019 1:19:09 PM	49264
Toluene	450	4.7		mg/Kg	100	12/12/2019 1:19:09 PM	49264
Ethylbenzene	210	4.7		mg/Kg	100	12/12/2019 1:19:09 PM	49264
Xylenes, Total	200	1.9		mg/Kg	20	12/12/2019 2:44:26 AM	49264
Surr: 4-Bromofluorobenzene	246	80-120	S	%Rec	20	12/12/2019 2:44:26 AM	49264

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L12 1
Project: Pearsall 6 9
Collection Date: 12/9/2019 12:20:00 PM
Lab ID: 1912470-035 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	720	61		mg/Kg	20	12/12/2019 2:21:22 PM	49307
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	21000	480		mg/Kg	50	12/12/2019 5:25:07 PM	49285
Motor Oil Range Organics (MRO)	8900	2400		mg/Kg	50	12/12/2019 5:25:07 PM	49285
Surr: DNOP	0	70-130	S	%Rec	50	12/12/2019 5:25:07 PM	49285
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	2800	490		mg/Kg	100	12/12/2019 1:42:09 PM	49264
Surr: BFB	193	66.6-105	S	%Rec	100	12/12/2019 1:42:09 PM	49264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	73	2.4		mg/Kg	100	12/12/2019 1:42:09 PM	49264
Toluene	220	4.9		mg/Kg	100	12/12/2019 1:42:09 PM	49264
Ethylbenzene	120	4.9		mg/Kg	100	12/12/2019 1:42:09 PM	49264
Xylenes, Total	160	9.7		mg/Kg	100	12/12/2019 1:42:09 PM	49264
Surr: 4-Bromofluorobenzene	128	80-120	S	%Rec	100	12/12/2019 1:42:09 PM	49264

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L12 2
Project: Pearsall 6 9
Collection Date: 12/9/2019 12:25:00 PM
Lab ID: 1912470-036 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1100	60		mg/Kg	20	12/13/2019 2:29:31 PM	49328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	12000	960		mg/Kg	100	12/13/2019 1:50:16 PM	49325
Motor Oil Range Organics (MRO)	6200	4800		mg/Kg	100	12/13/2019 1:50:16 PM	49325
Surr: DNOP	0	70-130	S	%Rec	100	12/13/2019 1:50:16 PM	49325
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	69	4.9		mg/Kg	1	12/13/2019 12:00:45 PM	49317
Surr: BFB	198	66.6-105	S	%Rec	1	12/13/2019 12:00:45 PM	49317
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	2.8	0.025		mg/Kg	1	12/13/2019 12:00:45 PM	49317
Toluene	1.3	0.049		mg/Kg	1	12/13/2019 12:00:45 PM	49317
Ethylbenzene	0.29	0.049		mg/Kg	1	12/13/2019 12:00:45 PM	49317
Xylenes, Total	0.81	0.098		mg/Kg	1	12/13/2019 12:00:45 PM	49317
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	12/13/2019 12:00:45 PM	49317

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BG 1'
Project: Pearsall 6 9
Collection Date: 12/9/2019 12:35:00 PM
Lab ID: 1912470-037 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	12/12/2019 2:33:43 PM	49307

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		

Analytical Report
Lab Order **1912470**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BG 2'
Project: Pearsall 6 9
Collection Date: 12/9/2019 12:40:00 PM
Lab ID: 1912470-038 **Matrix:** SOIL **Received Date:** 12/10/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	12/13/2019 2:41:52 PM	49328

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#: **1912470**
16-Dec-19

Client: Souder, Miller & Associates
Project: Pearsall 6 9

Sample ID: **MB-49294** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **49294** RunNo: **65120**
Prep Date: **12/11/2019** Analysis Date: **12/11/2019** SeqNo: **2234625** Units: **mg/Kg**

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

Sample ID: **LCS-49294** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **49294** RunNo: **65120**
Prep Date: **12/11/2019** Analysis Date: **12/11/2019** SeqNo: **2234626** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.8	90	110			

Sample ID: **MB-49307** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **49307** RunNo: **65161**
Prep Date: **12/12/2019** Analysis Date: **12/12/2019** SeqNo: **2236251** Units: **mg/Kg**

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

Sample ID: **LCS-49307** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **49307** RunNo: **65161**
Prep Date: **12/12/2019** Analysis Date: **12/12/2019** SeqNo: **2236252** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	90	110			

Sample ID: **MB-49328** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **49328** RunNo: **65173**
Prep Date: **12/13/2019** Analysis Date: **12/13/2019** SeqNo: **2237320** Units: **mg/Kg**

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

Sample ID: **LCS-49328** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **49328** RunNo: **65173**
Prep Date: **12/13/2019** Analysis Date: **12/13/2019** SeqNo: **2237321** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	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 Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1912470**
16-Dec-19

Client: Souder, Miller & Associates
Project: Pearsall 6 9

Sample ID: **LCS-49263** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49263** RunNo: **65091**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234585** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	10	50.00	0	126	63.9	124			S
Surr: DNOP	6.0		5.000		119	70	130			

Sample ID: **MB-49263** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49263** RunNo: **65091**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234586** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	70	130			

Sample ID: **1912470-011AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **L4 1** Batch ID: **49285** RunNo: **65131**
Prep Date: **12/11/2019** Analysis Date: **12/12/2019** SeqNo: **2234909** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	7.3	36.71	0	103	57	142			
Surr: DNOP	3.4		3.671		91.3	70	130			

Sample ID: **1912470-011AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **L4 1** Batch ID: **49285** RunNo: **65131**
Prep Date: **12/11/2019** Analysis Date: **12/12/2019** SeqNo: **2234910** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	9.0	45.13	0	114	57	142	30.7	20	R
Surr: DNOP	4.8		4.513		107	70	130	0	0	

Sample ID: **LCS-49285** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49285** RunNo: **65131**
Prep Date: **12/11/2019** Analysis Date: **12/12/2019** SeqNo: **2234922** 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	89.7	63.9	124			
Surr: DNOP	4.3		5.000		86.0	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#: **1912470**
16-Dec-19

Client: Souder, Miller & Associates
Project: Pearsall 6 9

Sample ID: **MB-49285** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49285** RunNo: **65131**
Prep Date: **12/11/2019** Analysis Date: **12/12/2019** SeqNo: **2234923** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		114	70	130			

Sample ID: **LCS-49315** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49315** RunNo: **65131**
Prep Date: **12/12/2019** Analysis Date: **12/12/2019** SeqNo: **2235429** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.3	63.9	124			
Surr: DNOP	4.5		5.000		89.7	70	130			

Sample ID: **MB-49315** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49315** RunNo: **65131**
Prep Date: **12/12/2019** Analysis Date: **12/12/2019** SeqNo: **2235430** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		101	70	130			

Sample ID: **LCS-49325** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49325** RunNo: **65159**
Prep Date: **12/13/2019** Analysis Date: **12/13/2019** SeqNo: **2236364** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.00	0	110	63.9	124			
Surr: DNOP	5.5		5.000		110	70	130			

Sample ID: **MB-49325** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49325** RunNo: **65159**
Prep Date: **12/13/2019** Analysis Date: **12/13/2019** SeqNo: **2236365** 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	8.3		10.00		83.2	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#: **1912470**

16-Dec-19

Client: Souder, Miller & Associates

Project: Pearsall 6 9

Sample ID: **1912470-003AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **L1 2** Batch ID: **49325** RunNo: **65159**

Prep Date: **12/13/2019** Analysis Date: **12/13/2019** SeqNo: **2236658** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.3	46.73	2.967	83.1	57	142			
Surr: DNOP	3.6		4.673		77.5	70	130			

Sample ID: **1912470-003AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **L1 2** Batch ID: **49325** RunNo: **65159**

Prep Date: **12/13/2019** Analysis Date: **12/13/2019** SeqNo: **2236659** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	9.2	45.91	2.967	107	57	142	21.7	20	R
Surr: DNOP	5.2		4.591		114	70	130	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#: **1912470**
16-Dec-19

Client: Souder, Miller & Associates
Project: Pearsall 6 9

Sample ID: **mb-49258** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **49258** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234097** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		88.0	66.6	105			

Sample ID: **lcs-49258** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **49258** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234098** 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	99.6	80	120			
Surr: BFB	990		1000		99.2	66.6	105			

Sample ID: **mb-49264** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **49264** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234122** 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	820		1000		81.9	66.6	105			

Sample ID: **lcs-49264** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **49264** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234123** 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	95.2	80	120			
Surr: BFB	950		1000		95.0	66.6	105			

Sample ID: **mb-49317** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **49317** RunNo: **65166**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236392** 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	820		1000		81.7	66.6	105			

Sample ID: **lcs-49317** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **49317** RunNo: **65166**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236393** 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#: **1912470**
16-Dec-19

Client: Souder, Miller & Associates
Project: Pearsall 6 9

Sample ID: **lcs-49317** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **49317** RunNo: **65166**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236393** 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	95.7	80	120			
Surr: BFB	920		1000		92.1	66.6	105			

Sample ID: **mb-49313** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **49313** RunNo: **65167**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236410** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		89.5	66.6	105			

Sample ID: **lcs-49313** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **49313** RunNo: **65167**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236411** 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	95.4	80	120			
Surr: BFB	990		1000		99.4	66.6	105			

Sample ID: **1912470-012ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **L4 2** Batch ID: **49317** RunNo: **65166**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236810** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	24.15	0	104	69.1	142			
Surr: BFB	900		966.2		93.5	66.6	105			

Sample ID: **1912470-012amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **L4 2** Batch ID: **49317** RunNo: **65166**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236811** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	23.90	0	97.6	69.1	142	7.29	20	
Surr: BFB	850		956.0		88.8	66.6	105	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#: **1912470**
16-Dec-19

Client: Souder, Miller & Associates
Project: Pearsall 6 9

Sample ID: **mb-49258** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **49258** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234140** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: **LCS-49258** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **49258** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234141** 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	95.2	80	120			
Toluene	0.95	0.050	1.000	0	94.6	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: **mb-49264** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **49264** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234165** 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	0.95		1.000		94.5	80	120			

Sample ID: **LCS-49264** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **49264** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234166** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.6	80	120			
Toluene	0.90	0.050	1.000	0	90.5	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1912470**
16-Dec-19

Client: Souder, Miller & Associates
Project: Pearsall 6 9

Sample ID: **1912470-023ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **L8 1** Batch ID: **49264** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234169** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9452	0.01069	95.9	76	123			
Toluene	0.92	0.047	0.9452	0.01500	95.9	80.3	127			
Ethylbenzene	0.93	0.047	0.9452	0.01775	96.9	80.2	131			
Xylenes, Total	2.8	0.095	2.836	0.03863	98.4	78	133			
Surr: 4-Bromofluorobenzene	0.89		0.9452		93.9	80	120			

Sample ID: **1912470-023amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **L8 1** Batch ID: **49264** RunNo: **65101**
Prep Date: **12/10/2019** Analysis Date: **12/12/2019** SeqNo: **2234170** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.024	0.9718	0.01069	95.3	76	123	2.07	20	
Toluene	0.94	0.049	0.9718	0.01500	95.6	80.3	127	2.44	20	
Ethylbenzene	0.95	0.049	0.9718	0.01775	96.1	80.2	131	1.96	20	
Xylenes, Total	2.9	0.097	2.915	0.03863	97.9	78	133	2.19	20	
Surr: 4-Bromofluorobenzene	0.94		0.9718		96.3	80	120	0	0	

Sample ID: **mb-49317** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **49317** RunNo: **65166**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236401** 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		98.7	80	120			

Sample ID: **LCS-49317** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **49317** RunNo: **65166**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236402** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.5	80	120			
Toluene	0.92	0.050	1.000	0	91.5	80	120			
Ethylbenzene	0.92	0.050	1.000	0	91.5	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.6	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1912470**
16-Dec-19

Client: Souder, Miller & Associates
Project: Pearsall 6 9

Sample ID: **mb-49313** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **49313** RunNo: **65167**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236426** 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		109	80	120			

Sample ID: **LCS-49313** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **49313** RunNo: **65167**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236427** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.0	80	120			
Toluene	0.93	0.050	1.000	0	93.1	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.6	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID: **1912470-015ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **L5 2** Batch ID: **49317** RunNo: **65166**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236816** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.024	0.9588	0	102	76	123			
Toluene	1.0	0.048	0.9588	0.01526	103	80.3	127			
Ethylbenzene	1.1	0.048	0.9588	0.05967	105	80.2	131			
Xylenes, Total	3.2	0.096	2.876	0.1593	105	78	133			
Surr: 4-Bromofluorobenzene	1.0		0.9588		107	80	120			

Sample ID: **1912470-015amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **L5 2** Batch ID: **49317** RunNo: **65166**
Prep Date: **12/12/2019** Analysis Date: **12/13/2019** SeqNo: **2236817** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	0.9891	0	98.3	76	123	0.323	20	
Toluene	0.99	0.049	0.9891	0.01526	98.9	80.3	127	1.18	20	
Ethylbenzene	1.0	0.049	0.9891	0.05967	97.5	80.2	131	3.85	20	
Xylenes, Total	3.1	0.099	2.967	0.1593	98.9	78	133	2.34	20	
Surr: 4-Bromofluorobenzene	0.95		0.9891		96.5	80	120	0	0	

Qualifiers:

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

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: **1912470** RcptNo: **1**

Received By: **Yazmine Garduno** **12/10/2019 10:55:00 AM**

Completed By: **Yazmine Garduno** **12/10/2019 12:02:29 PM**

Reviewed By: ENM 12/10/19

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

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

Adjusted? _____

Checked by: DAD 12/10/19

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.5	Good				
2	3.5	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 3 Day

Project Name: Pearsall 6-9

Project #:

Project Manager: Ashley Maxwell

Sampler: MJP

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 4.5 (0) = 4.5 / 3.5 (0) = 3.5 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1912470	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/9	9:15	Soil	L1 surf	4oz		-001	✓	✓					✓			
	9:20		L1 1			-002	✓	✓					✓			
	9:25		L1 2			-003	PLEASE HOLD									
	9:30		L2 surf			-004	✓	✓					✓			
	9:35		L2 1			-005	✓	✓					✓			
	9:40		L2 2			-006	PLEASE HOLD									
	9:45		L3 surf			-007	✓	✓					✓			
	9:50		L3 1			-008	✓	✓					✓			
	9:55		L3 2			-009	PLEASE HOLD									
	10:00		L4 surf			-010	✓	✓					✓			
	10:05		L4 1			-011	✓	✓					✓			
	10:10		L4 2			-012	PLEASE HOLD									

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/9	15:00				12/9/19	1500
12/9/19	1900			courier	12/10/19	1055

Remarks:
Direct Bill Marathon
CC Ashley Maxwell

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: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 3 Day

Project Name: Pearsall 6-9

Project #:

Project Manager: Ashley Maxwell

Sampler: MJP

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 4.5 (0) = 4.5 (°C)
3.5 (0) = 3.5 (°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 1912470	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/9	10:20	Soil	L5 surf	4oz		-013	✓	✓					✓			
	10:25		L5 1			-014	✓	✓					✓			
	10:30		L5 2			-015	PLEASE HOLD									
	10:35		L6 surf			-016	✓	✓					✓			
	10:40		L6 1			-017	✓	✓					✓			
	10:45		L6 2			-018	PLEASE HOLD									
	10:50		L7 surf			-019	✓	✓					✓			
	10:55		L7 1			-020	✓	✓					✓			
	11:00		L7 2			-021	PLEASE HOLD									
	11:05		L8 surf			-022	✓	✓					✓			
	11:10		L8 1			-023	✓	✓					✓			
	11:15		L8 2			-024	PLEASE HOLD									

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/9	15:00				12/9/19	1500
12/9/19	1900			Courier	12/10/19	1055

Remarks:
Direct Bill Marathon
CC Ashley Maxwell

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: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 3 Day

Project Name: Pearsall 6-9

Project #:

Project Manager: Ashley Maxwell

Sampler: MJP

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.5(0) = 3.5 (°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. 1912470	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/9	11:30	Soil	L9 surf	4oz		-025	✓	✓					✓			
	11:35		L9 1			-024	✓	✓					✓			
	11:40		L9 2			-027	PLEASE HOLD									
	11:45		L10 surf			-028	✓	✓					✓			
	11:50		L10 1			-029	✓	✓					✓			
	11:55		L10 2			-030	PLEASE HOLD									
	12:00		L11 surf			-031	✓	✓					✓			
	12:05		L11 1			-032	✓	✓					✓			
	12:10		L11 2			-033	PLEASE HOLD									
	12:15		L12 surf			-034	✓	✓					✓			
	12:20		L12 1			-035	✓	✓					✓			
↓	12:25	↓	L12 2	↓		-036	PLEASE HOLD									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/9	15:00				12/9/19	1500
12/9/19	1900				12/10/19	1055

Remarks:
Direct Bill Marathon
CC Ashley Maxwell

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: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 3 Day

Project Name: Pearsall 6-9

Project #:

Project Manager: Ashley Maxwell

Sampler: MJP

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 4.5 (0) = 4.5 (°C)
3.5 (0) 3.5 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No 1911211
12/9	12:35	Soil	BG 1'	4 oz		-037
	12:40	Soil	BG 2'			-038

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)
✓	✓					✓			

PLEASE HOLD

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/9	15:00				12/9/19	1500
12/9/19	1900			courier	12/10/19	1055

Remarks:
Direct Bill Marathon
CC Ashley Maxwell

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

January 09, 2020

Ashley Maxwell

Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL:
FAX

RE: Pearsall 6 OrderNo.: 2001057

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 17 sample(s) on 1/3/2020 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 **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW 1
Project: Pearsall 6
Collection Date: 1/1/2020 1:35:00 PM
Lab ID: 2001057-001 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/6/2020 5:55:46 PM	49640
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/6/2020 11:22:05 AM	49619
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/6/2020 11:22:05 AM	49619
Surr: DNOP	74.6	70-130		%Rec	1	1/6/2020 11:22:05 AM	49619
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/6/2020 9:57:43 PM	49616
Surr: BFB	81.7	66.6-105		%Rec	1	1/6/2020 9:57:43 PM	49616
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/6/2020 9:57:43 PM	49616
Toluene	ND	0.049		mg/Kg	1	1/6/2020 9:57:43 PM	49616
Ethylbenzene	ND	0.049		mg/Kg	1	1/6/2020 9:57:43 PM	49616
Xylenes, Total	ND	0.097		mg/Kg	1	1/6/2020 9:57:43 PM	49616
Surr: 4-Bromofluorobenzene	88.4	80-120		%Rec	1	1/6/2020 9:57:43 PM	49616

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

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW 2
Project: Pearsall 6
Collection Date: 1/1/2020 1:38:00 PM
Lab ID: 2001057-002 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/6/2020 6:33:00 PM	49640
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	1/6/2020 11:31:09 AM	49619
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	1/6/2020 11:31:09 AM	49619
Surr: DNOP	78.5	70-130		%Rec	1	1/6/2020 11:31:09 AM	49619
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/6/2020 10:20:23 PM	49616
Surr: BFB	82.9	66.6-105		%Rec	1	1/6/2020 10:20:23 PM	49616
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/6/2020 10:20:23 PM	49616
Toluene	ND	0.048		mg/Kg	1	1/6/2020 10:20:23 PM	49616
Ethylbenzene	ND	0.048		mg/Kg	1	1/6/2020 10:20:23 PM	49616
Xylenes, Total	ND	0.096		mg/Kg	1	1/6/2020 10:20:23 PM	49616
Surr: 4-Bromofluorobenzene	89.4	80-120		%Rec	1	1/6/2020 10:20:23 PM	49616

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW 3
Project: Pearsall 6
Collection Date: 1/1/2020 1:40:00 PM
Lab ID: 2001057-003 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	410	60		mg/Kg	20	1/6/2020 6:45:24 PM	49640
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/6/2020 11:40:16 AM	49619
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/6/2020 11:40:16 AM	49619
Surr: DNOP	87.8	70-130		%Rec	1	1/6/2020 11:40:16 AM	49619
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/6/2020 10:43:03 PM	49616
Surr: BFB	82.8	66.6-105		%Rec	1	1/6/2020 10:43:03 PM	49616
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/6/2020 10:43:03 PM	49616
Toluene	ND	0.048		mg/Kg	1	1/6/2020 10:43:03 PM	49616
Ethylbenzene	ND	0.048		mg/Kg	1	1/6/2020 10:43:03 PM	49616
Xylenes, Total	ND	0.095		mg/Kg	1	1/6/2020 10:43:03 PM	49616
Surr: 4-Bromofluorobenzene	88.4	80-120		%Rec	1	1/6/2020 10:43:03 PM	49616

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW 4
Project: Pearsall 6
Collection Date: 1/1/2020 1:43:00 PM
Lab ID: 2001057-004 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	190	60		mg/Kg	20	1/6/2020 6:57:49 PM	49640
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	1400	100		mg/Kg	10	1/6/2020 11:49:23 AM	49619
Motor Oil Range Organics (MRO)	500	500		mg/Kg	10	1/6/2020 11:49:23 AM	49619
Surr: DNOP	0	70-130	S	%Rec	10	1/6/2020 11:49:23 AM	49619
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/6/2020 11:05:40 PM	49616
Surr: BFB	84.6	66.6-105		%Rec	1	1/6/2020 11:05:40 PM	49616
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/6/2020 11:05:40 PM	49616
Toluene	ND	0.047		mg/Kg	1	1/6/2020 11:05:40 PM	49616
Ethylbenzene	ND	0.047		mg/Kg	1	1/6/2020 11:05:40 PM	49616
Xylenes, Total	ND	0.095		mg/Kg	1	1/6/2020 11:05:40 PM	49616
Surr: 4-Bromofluorobenzene	88.9	80-120		%Rec	1	1/6/2020 11:05:40 PM	49616

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW 5
Project: Pearsall 6
Collection Date: 1/1/2020 2:44:00 PM
Lab ID: 2001057-005 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	1/6/2020 7:35:03 PM	49640
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/6/2020 11:58:39 AM	49619
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/6/2020 11:58:39 AM	49619
Surr: DNOP	86.6	70-130		%Rec	1	1/6/2020 11:58:39 AM	49619
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/6/2020 11:28:18 PM	49616
Surr: BFB	83.3	66.6-105		%Rec	1	1/6/2020 11:28:18 PM	49616
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/6/2020 11:28:18 PM	49616
Toluene	ND	0.048		mg/Kg	1	1/6/2020 11:28:18 PM	49616
Ethylbenzene	ND	0.048		mg/Kg	1	1/6/2020 11:28:18 PM	49616
Xylenes, Total	ND	0.096		mg/Kg	1	1/6/2020 11:28:18 PM	49616
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	1/6/2020 11:28:18 PM	49616

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW 6
Project: Pearsall 6
Collection Date: 1/1/2020 2:47:00 PM
Lab ID: 2001057-006 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	1/6/2020 2:48:05 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/8/2020 7:20:38 PM	49627
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/8/2020 7:20:38 PM	49627
Surr: DNOP	56.0	55.1-146		%Rec	1	1/8/2020 7:20:38 PM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/6/2020 11:50:56 PM	49616
Surr: BFB	85.9	66.6-105		%Rec	1	1/6/2020 11:50:56 PM	49616
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/6/2020 11:50:56 PM	49616
Toluene	ND	0.049		mg/Kg	1	1/6/2020 11:50:56 PM	49616
Ethylbenzene	ND	0.049		mg/Kg	1	1/6/2020 11:50:56 PM	49616
Xylenes, Total	ND	0.099		mg/Kg	1	1/6/2020 11:50:56 PM	49616
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	1/6/2020 11:50:56 PM	49616

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW 7
Project: Pearsall 6
Collection Date: 1/1/2020 2:17:00 PM
Lab ID: 2001057-007 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	91	60		mg/Kg	20	1/6/2020 3:00:27 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	58	9.7		mg/Kg	1	1/8/2020 8:26:05 PM	49627
Motor Oil Range Organics (MRO)	100	48		mg/Kg	1	1/8/2020 8:26:05 PM	49627
Surr: DNOP	86.0	55.1-146		%Rec	1	1/8/2020 8:26:05 PM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/6/2020 1:40:23 PM	49623
Surr: BFB	87.0	66.6-105		%Rec	1	1/6/2020 1:40:23 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/6/2020 1:40:23 PM	49623
Toluene	ND	0.047		mg/Kg	1	1/6/2020 1:40:23 PM	49623
Ethylbenzene	ND	0.047		mg/Kg	1	1/6/2020 1:40:23 PM	49623
Xylenes, Total	ND	0.094		mg/Kg	1	1/6/2020 1:40:23 PM	49623
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	1/6/2020 1:40:23 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW 8
Project: Pearsall 6
Collection Date: 1/1/2020 2:14:00 PM
Lab ID: 2001057-008 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	200	60		mg/Kg	20	1/6/2020 3:12:48 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/7/2020 9:50:20 AM	49627
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/7/2020 9:50:20 AM	49627
Surr: DNOP	96.4	70-130		%Rec	1	1/7/2020 9:50:20 AM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/6/2020 2:51:03 PM	49623
Surr: BFB	83.4	66.6-105		%Rec	1	1/6/2020 2:51:03 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	1/6/2020 2:51:03 PM	49623
Toluene	ND	0.049		mg/Kg	1	1/6/2020 2:51:03 PM	49623
Ethylbenzene	ND	0.049		mg/Kg	1	1/6/2020 2:51:03 PM	49623
Xylenes, Total	ND	0.099		mg/Kg	1	1/6/2020 2:51:03 PM	49623
Surr: 4-Bromofluorobenzene	98.5	80-120		%Rec	1	1/6/2020 2:51:03 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW 9
Project: Pearsall 6
Collection Date: 1/1/2020 2:03:00 PM
Lab ID: 2001057-009 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	1/6/2020 3:25:09 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/7/2020 9:59:25 AM	49627
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/7/2020 9:59:25 AM	49627
Surr: DNOP	93.0	70-130		%Rec	1	1/7/2020 9:59:25 AM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/6/2020 4:01:23 PM	49623
Surr: BFB	88.4	66.6-105		%Rec	1	1/6/2020 4:01:23 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	1/6/2020 4:01:23 PM	49623
Toluene	ND	0.046		mg/Kg	1	1/6/2020 4:01:23 PM	49623
Ethylbenzene	ND	0.046		mg/Kg	1	1/6/2020 4:01:23 PM	49623
Xylenes, Total	ND	0.092		mg/Kg	1	1/6/2020 4:01:23 PM	49623
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/6/2020 4:01:23 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 1
Project: Pearsall 6
Collection Date: 1/1/2020 2:23:00 PM
Lab ID: 2001057-010 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	89	60		mg/Kg	20	1/6/2020 4:02:12 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	190	8.6		mg/Kg	1	1/8/2020 8:47:58 PM	49627
Motor Oil Range Organics (MRO)	130	43		mg/Kg	1	1/8/2020 8:47:58 PM	49627
Surr: DNOP	91.1	55.1-146		%Rec	1	1/8/2020 8:47:58 PM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/6/2020 4:24:57 PM	49623
Surr: BFB	88.4	66.6-105		%Rec	1	1/6/2020 4:24:57 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/6/2020 4:24:57 PM	49623
Toluene	ND	0.048		mg/Kg	1	1/6/2020 4:24:57 PM	49623
Ethylbenzene	ND	0.048		mg/Kg	1	1/6/2020 4:24:57 PM	49623
Xylenes, Total	ND	0.097		mg/Kg	1	1/6/2020 4:24:57 PM	49623
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	1/6/2020 4:24:57 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 2
Project: Pearsall 6
Collection Date: 1/1/2020 2:51:00 PM
Lab ID: 2001057-011 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	170	60		mg/Kg	20	1/6/2020 4:14:33 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	1/7/2020 10:17:44 AM	49627
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/7/2020 10:17:44 AM	49627
Surr: DNOP	96.1	70-130		%Rec	1	1/7/2020 10:17:44 AM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/6/2020 4:48:25 PM	49623
Surr: BFB	86.0	66.6-105		%Rec	1	1/6/2020 4:48:25 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.023		mg/Kg	1	1/6/2020 4:48:25 PM	49623
Toluene	ND	0.047		mg/Kg	1	1/6/2020 4:48:25 PM	49623
Ethylbenzene	ND	0.047		mg/Kg	1	1/6/2020 4:48:25 PM	49623
Xylenes, Total	ND	0.093		mg/Kg	1	1/6/2020 4:48:25 PM	49623
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	1/6/2020 4:48:25 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 3
Project: Pearsall 6
Collection Date: 1/1/2020 12:12:00 PM
Lab ID: 2001057-012 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	84	61		mg/Kg	20	1/6/2020 4:26:54 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/7/2020 10:26:52 AM	49627
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/7/2020 10:26:52 AM	49627
Surr: DNOP	106	70-130		%Rec	1	1/7/2020 10:26:52 AM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/6/2020 5:11:52 PM	49623
Surr: BFB	86.2	66.6-105		%Rec	1	1/6/2020 5:11:52 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/6/2020 5:11:52 PM	49623
Toluene	ND	0.047		mg/Kg	1	1/6/2020 5:11:52 PM	49623
Ethylbenzene	ND	0.047		mg/Kg	1	1/6/2020 5:11:52 PM	49623
Xylenes, Total	ND	0.095		mg/Kg	1	1/6/2020 5:11:52 PM	49623
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	1/6/2020 5:11:52 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 4
Project: Pearsall 6
Collection Date: 1/1/2020 1:30:00 PM
Lab ID: 2001057-013 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	120	60		mg/Kg	20	1/6/2020 4:39:14 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	9.6	9.4		mg/Kg	1	1/7/2020 10:46:24 AM	49627
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/7/2020 10:46:24 AM	49627
Surr: DNOP	96.1	70-130		%Rec	1	1/7/2020 10:46:24 AM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/6/2020 5:35:21 PM	49623
Surr: BFB	90.6	66.6-105		%Rec	1	1/6/2020 5:35:21 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	1/6/2020 5:35:21 PM	49623
Toluene	ND	0.049		mg/Kg	1	1/6/2020 5:35:21 PM	49623
Ethylbenzene	ND	0.049		mg/Kg	1	1/6/2020 5:35:21 PM	49623
Xylenes, Total	ND	0.099		mg/Kg	1	1/6/2020 5:35:21 PM	49623
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	1/6/2020 5:35:21 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 5
Project: Pearsall 6
Collection Date: 1/1/2020 12:08:00 PM
Lab ID: 2001057-014 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	170	60		mg/Kg	20	1/6/2020 5:16:17 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/7/2020 10:55:30 AM	49627
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/7/2020 10:55:30 AM	49627
Surr: DNOP	110	70-130		%Rec	1	1/7/2020 10:55:30 AM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/6/2020 5:58:40 PM	49623
Surr: BFB	89.8	66.6-105		%Rec	1	1/6/2020 5:58:40 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/6/2020 5:58:40 PM	49623
Toluene	ND	0.049		mg/Kg	1	1/6/2020 5:58:40 PM	49623
Ethylbenzene	ND	0.049		mg/Kg	1	1/6/2020 5:58:40 PM	49623
Xylenes, Total	ND	0.099		mg/Kg	1	1/6/2020 5:58:40 PM	49623
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	1/6/2020 5:58:40 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 6
Project: Pearsall 6
Collection Date: 1/1/2020 11:20:00 AM
Lab ID: 2001057-015 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	180	60		mg/Kg	20	1/6/2020 5:28:41 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	13	8.4		mg/Kg	1	1/7/2020 11:04:39 AM	49627
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	1/7/2020 11:04:39 AM	49627
Surr: DNOP	101	70-130		%Rec	1	1/7/2020 11:04:39 AM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/6/2020 6:22:02 PM	49623
Surr: BFB	81.2	66.6-105		%Rec	1	1/6/2020 6:22:02 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	1/6/2020 6:22:02 PM	49623
Toluene	ND	0.047		mg/Kg	1	1/6/2020 6:22:02 PM	49623
Ethylbenzene	ND	0.047		mg/Kg	1	1/6/2020 6:22:02 PM	49623
Xylenes, Total	ND	0.093		mg/Kg	1	1/6/2020 6:22:02 PM	49623
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	1/6/2020 6:22:02 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 7
Project: Pearsall 6
Collection Date: 1/1/2020 10:58:00 AM
Lab ID: 2001057-016 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	1/6/2020 5:41:01 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/7/2020 11:13:45 AM	49627
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/7/2020 11:13:45 AM	49627
Surr: DNOP	92.6	70-130		%Rec	1	1/7/2020 11:13:45 AM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/6/2020 6:45:25 PM	49623
Surr: BFB	82.3	66.6-105		%Rec	1	1/6/2020 6:45:25 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/6/2020 6:45:25 PM	49623
Toluene	ND	0.049		mg/Kg	1	1/6/2020 6:45:25 PM	49623
Ethylbenzene	ND	0.049		mg/Kg	1	1/6/2020 6:45:25 PM	49623
Xylenes, Total	ND	0.098		mg/Kg	1	1/6/2020 6:45:25 PM	49623
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	1/6/2020 6:45:25 PM	49623

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		

Analytical Report
Lab Order **2001057**
Date Reported: **1/9/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: BH 8
Project: Pearsall 6
Collection Date: 1/1/2020 10:55:00 AM
Lab ID: 2001057-017 **Matrix:** SOIL **Received Date:** 1/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	1/6/2020 5:53:22 PM	49642
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	710	93		mg/Kg	10	1/7/2020 11:22:52 AM	49627
Motor Oil Range Organics (MRO)	630	460		mg/Kg	10	1/7/2020 11:22:52 AM	49627
Surr: DNOP	0	70-130	S	%Rec	10	1/7/2020 11:22:52 AM	49627
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/6/2020 8:42:05 PM	49623
Surr: BFB	85.2	66.6-105		%Rec	1	1/6/2020 8:42:05 PM	49623
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/6/2020 8:42:05 PM	49623
Toluene	ND	0.048		mg/Kg	1	1/6/2020 8:42:05 PM	49623
Ethylbenzene	ND	0.048		mg/Kg	1	1/6/2020 8:42:05 PM	49623
Xylenes, Total	ND	0.096		mg/Kg	1	1/6/2020 8:42:05 PM	49623
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	1/6/2020 8:42:05 PM	49623

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#: **2001057**

09-Jan-20

Client: Souder, Miller & Associates

Project: Pearsall 6

Sample ID: **MB-49640** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **49640** RunNo: **65598**

Prep Date: **1/6/2020** Analysis Date: **1/6/2020** SeqNo: **2253170** Units: **mg/Kg**

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

Sample ID: **LCS-49640** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **49640** RunNo: **65598**

Prep Date: **1/6/2020** Analysis Date: **1/6/2020** SeqNo: **2253171** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Sample ID: **MB-49642** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **49642** RunNo: **65601**

Prep Date: **1/6/2020** Analysis Date: **1/6/2020** SeqNo: **2253254** Units: **mg/Kg**

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

Sample ID: **LCS-49642** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **49642** RunNo: **65601**

Prep Date: **1/6/2020** Analysis Date: **1/6/2020** SeqNo: **2253255** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	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#: **2001057**

09-Jan-20

Client: Souder, Miller & Associates

Project: Pearsall 6

Sample ID: **LCS-49619** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **49619** RunNo: **65568**

Prep Date: **1/3/2020** Analysis Date: **1/6/2020** SeqNo: **2252335** 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	107	63.9	124			
Surr: DNOP	5.1		5.000		103	70	130			

Sample ID: **MB-49619** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **49619** RunNo: **65568**

Prep Date: **1/3/2020** Analysis Date: **1/6/2020** SeqNo: **2252336** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		114	70	130			

Sample ID: **LCS-49627** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **49627** RunNo: **65612**

Prep Date: **1/6/2020** Analysis Date: **1/7/2020** SeqNo: **2253783** 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	99.2	63.9	124			
Surr: DNOP	4.6		5.000		92.9	70	130			

Sample ID: **LCS-49646** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **49646** RunNo: **65612**

Prep Date: **1/6/2020** Analysis Date: **1/7/2020** SeqNo: **2253784** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		106	70	130			

Sample ID: **MB-49627** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **49627** RunNo: **65612**

Prep Date: **1/6/2020** Analysis Date: **1/7/2020** SeqNo: **2253786** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		104	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#: **2001057**
09-Jan-20

Client: Souder, Miller & Associates
Project: Pearsall 6

Sample ID: **2001057-006AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **CSW 6** Batch ID: **49627** RunNo: **65653**
Prep Date: **1/6/2020** Analysis Date: **1/8/2020** SeqNo: **2255019** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.2	46.04	5.233	88.4	47.4	136			
Surr: DNOP	3.1		4.604		67.8	55.1	146			

Sample ID: **2001057-006AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **CSW 6** Batch ID: **49627** RunNo: **65653**
Prep Date: **1/6/2020** Analysis Date: **1/8/2020** SeqNo: **2255020** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.9	49.46	5.233	84.1	47.4	136	18.1	43.4	
Surr: DNOP	3.4		4.946		68.7	55.1	146	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#: **2001057**
09-Jan-20

Client: Souder, Miller & Associates
Project: Pearsall 6

Sample ID: **mb-49616**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **49616**	RunNo: **65590**
Prep Date: **1/3/2020**	Analysis Date: **1/6/2020**	SeqNo: **2252791** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		88.2	66.6	105			

Sample ID: **lcs-49616**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **49616**	RunNo: **65590**
Prep Date: **1/3/2020**	Analysis Date: **1/6/2020**	SeqNo: **2252792** 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	97.5	80	120			
Surr: BFB	970		1000		96.6	66.6	105			

Sample ID: **mb-49623**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **49623**	RunNo: **65589**
Prep Date: **1/3/2020**	Analysis Date: **1/6/2020**	SeqNo: **2252860** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		87.6	66.6	105			

Sample ID: **lcs-49623**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **49623**	RunNo: **65589**
Prep Date: **1/3/2020**	Analysis Date: **1/6/2020**	SeqNo: **2252861** 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	94.8	80	120			
Surr: BFB	970		1000		97.1	66.6	105			

Sample ID: **2001057-007ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CSW 7**	Batch ID: **49623**	RunNo: **65589**
Prep Date: **1/3/2020**	Analysis Date: **1/6/2020**	SeqNo: **2252865** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	23.92	0	94.5	69.1	142			
Surr: BFB	1000		956.9		105	66.6	105			S

Sample ID: **2001057-007amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CSW 7**	Batch ID: **49623**	RunNo: **65589**
Prep Date: **1/3/2020**	Analysis Date: **1/6/2020**	SeqNo: **2252866** 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#: **2001057**
09-Jan-20

Client: Souder, Miller & Associates
Project: Pearsall 6

Sample ID: **2001057-007amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CSW 7** Batch ID: **49623** RunNo: **65589**
Prep Date: **1/3/2020** Analysis Date: **1/6/2020** SeqNo: **2252866** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.51	0	98.9	69.1	142	7.01	20	
Surr: BFB	1100		980.4		113	66.6	105	0	0	S

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#: **2001057**

09-Jan-20

Client: Souder, Miller & Associates

Project: Pearsall 6

Sample ID: **mb-49616** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **49616** RunNo: **65590**

Prep Date: **1/3/2020** Analysis Date: **1/6/2020** SeqNo: **2252824** 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	0.95		1.000		94.6	80	120			

Sample ID: **LCS-49616** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **49616** RunNo: **65590**

Prep Date: **1/3/2020** Analysis Date: **1/6/2020** SeqNo: **2252826** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.3	80	120			
Toluene	0.96	0.050	1.000	0	95.6	80	120			
Ethylbenzene	0.95	0.050	1.000	0	94.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.8	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	80	120			

Sample ID: **mb-49623** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **49623** RunNo: **65589**

Prep Date: **1/3/2020** Analysis Date: **1/6/2020** SeqNo: **2252889** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	80	120			

Sample ID: **LCS-49623** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **49623** RunNo: **65589**

Prep Date: **1/3/2020** Analysis Date: **1/6/2020** SeqNo: **2252890** 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	95.4	80	120			
Toluene	0.95	0.050	1.000	0	95.1	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.0	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2001057**
09-Jan-20

Client: Souder, Miller & Associates
Project: Pearsall 6

Sample ID: **2001057-008ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CSW 8** Batch ID: **49623** RunNo: **65589**
Prep Date: **1/3/2020** Analysis Date: **1/6/2020** SeqNo: **2252894** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9980	0	93.1	78.5	119			
Toluene	0.94	0.050	0.9980	0.01471	92.9	75.7	123			
Ethylbenzene	0.93	0.050	0.9980	0	93.2	74.3	126			
Xylenes, Total	2.8	0.10	2.994	0.01915	93.3	72.9	130			
Surr: 4-Bromofluorobenzene	1.0		0.9980		103	80	120			

Sample ID: **2001057-008amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **CSW 8** Batch ID: **49623** RunNo: **65589**
Prep Date: **1/3/2020** Analysis Date: **1/6/2020** SeqNo: **2252896** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.024	0.9533	0	92.1	78.5	119	5.59	20	
Toluene	0.88	0.048	0.9533	0.01471	90.8	75.7	123	6.76	20	
Ethylbenzene	0.87	0.048	0.9533	0	91.4	74.3	126	6.60	20	
Xylenes, Total	2.7	0.095	2.860	0.01915	92.0	72.9	130	5.95	20	
Surr: 4-Bromofluorobenzene	0.96		0.9533		101	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

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: **2001057** RcptNo: **1**

Received By: **Yazmine Garduno** **1/3/2020 9:00:00 AM**

Completed By: **Desiree Dominguez** **1/3/2020 11:27:15 AM**

Reviewed By: IO 01/3/2020

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
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: YG 1/3/20

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	0.8	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 turn

Project Name: Pearsall #6

Project #:

Project Manager: Ashley Maxwell

Sampler: LAA

On Ice: ☑ Yes ☐ No

# of Coolers: ~~0.4-0~~ 1 YG 1/3/20

Cooler Temp (including CF): D9-0.1=0.8 (°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. Z001057	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)						
1/1/20	1335	Soil	CSW1	4 oz		-001	X	X					X									
	1338		CSW2			-002	X	X					X									
	1340		CSW3			-003	X	X					X									
	1343		CSW4			-004	X	X					X									
	1444		CSW5			-005	X	X					X									
	1447		CSW6			-006	X	X					X									
	1417		CSW7			-007	X	X					X									
	1414		CSW8			-008	X	X					X									
	1403		CSW9			-009	X	X					X									
	1423		BH1			-010	X	X					X									
	1451		BH2			-011	X	X					X									
	1212		BH3			-012	X	X					X									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
		[signature]	[signature]		1/2/20	1400
1/2/20	1900	[signature]	[signature]	courier	1/3/20	0400

Remarks: 1 of 2 Marathon Oil
Bill direct To Marathon MSA

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: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

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

Project Name: Pearsall #6

Project #:

Project Manager: Ashley Maxwell

Sampler: LAA

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.1-0.1=0.6 (°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. Z001057	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)						
1/1/20	1330	Soil	BH4	4 oz		-013	X	X					X									
|	1208	|	BH5	|		-014	X	X					X									
|	1120	|	BH6	|		-015	✓	X					X									
|	1058	|	BH7	|		-016	X	X					X									
|	1055	|	BH8	|		-017	X	X					X									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			[signature]		1/2/20	900
1/2/20	1900	[signature]	[signature]	courier	1/3/20	0900

Remarks: 2 of 2 Marathon Oil
Bill Direct To Marathon MSA

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

January 17, 2020

Ashley Maxwell

Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL:
FAX

RE: Pearsall 6 OrderNo.: 2001490

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/14/2020 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 **2001490**
Date Reported: **1/17/2020**

CLIENT: Souder, Miller & Associates
Client Sample ID: CSW4
Project: Pearsall 6
Collection Date: 1/13/2020 8:30:00 AM
Lab ID: 2001490-001 **Matrix:** SOIL **Received Date:** 1/14/2020 9:00:00 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	1/16/2020 3:18:58 PM	49817
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/16/2020 3:18:58 PM	49817
Surr: DNOP	87.7	55.1-146		%Rec	1	1/16/2020 3:18:58 PM	49817
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/15/2020 9:38:41 PM	49809
Surr: BFB	79.5	66.6-105		%Rec	1	1/15/2020 9:38:41 PM	49809

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#: **2001490**

17-Jan-20

Client: Souder, Miller & Associates

Project: Pearsall 6

Sample ID: **LCS-49817** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **49817** RunNo: **65840**

Prep Date: **1/15/2020** Analysis Date: **1/16/2020** SeqNo: **2261199** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.0	63.9	124			
Surr: DNOP	4.0		5.000		80.7	55.1	146			

Sample ID: **LCS-49852** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **49852** RunNo: **65840**

Prep Date: **1/16/2020** Analysis Date: **1/16/2020** SeqNo: **2261201** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		76.6	55.1	146			

Sample ID: **MB-49817** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **49817** RunNo: **65840**

Prep Date: **1/15/2020** Analysis Date: **1/16/2020** SeqNo: **2261202** 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		97.6	55.1	146			

Sample ID: **MB-49852** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **49852** RunNo: **65840**

Prep Date: **1/16/2020** Analysis Date: **1/16/2020** SeqNo: **2261204** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		99.5	55.1	146			

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#: **2001490**

17-Jan-20

Client: Souder, Miller & Associates

Project: Pearsall 6

Sample ID: **mb-49809** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **49809** RunNo: **65821**

Prep Date: **1/14/2020** Analysis Date: **1/15/2020** SeqNo: **2260376** 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	830		1000		82.6	66.6	105			

Sample ID: **lcs-49809** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **49809** RunNo: **65821**

Prep Date: **1/14/2020** Analysis Date: **1/15/2020** SeqNo: **2260377** 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	94.7	80	120			
Surr: BFB	950		1000		95.3	66.6	105			

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: **2001490** RcptNo: **1**

Received By: **Desiree Dominguez** **1/14/2020 9:00:00 AM** DD

Completed By: **Isaiah Ortiz** **1/14/2020 9:55:12 AM** I-OX

Reviewed By: YG 1/14/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: ENM 1/14/20

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	3.7	Good	Yes			

Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

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

Project Name: Pearsall # 6

Project #:

Project Manager: Ashley Maxwell

Sampler: LAA

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.7 - 0.0 = 3.7(°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2001490	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)
1/13/20	8:30	Soil	CSW4	4oz		-001		X								

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
1/13/20	1300				1/13/20	1300
1/13/20	1900			Courier	1/14/20	9:00

Remarks: Direct Bill: Marathon Oil

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.