



September 24, 2019

#5E27950-BG13

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

SUBJECT: Remediation Plan for the Madera 19 WB Federal Com 5H Release (1RP-5468), Lea County, New Mexico

To Whom it May Concern:

On behalf of Marathon Oil Permian LLC (Marathon), Souder, Miller & Associates (SMA) has prepared this Remediation Plan that describes the delineation and proposed remediation for a release of liquids related to oil and gas production activities at the Madera 19 WB Federal Com 5H site. The site is in Unit N Section 19, Township 26S, Range 35E, 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 information regarding the release.

Table 1: Release Information and Closure Criteria			
Name	Madera 19 WB Fed Com 5H	Company	Marathon Oil Company
API Number	30-025-44901	Location	32.02282908, -103.41060729
Incident Number	1RP-5468		
Estimated Date of Release	04/20/2019	Date Reported to NMOCD	
Land Owner	Federal (BLM)	Reported To	NMOCD District 1 & BLM
Source of Release	4" Frac fluid hose		
Released Volume	17.81 bbls	Released Material	Frac Fluid
Recovered Volume	12	Net Release	5.81
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	June 4, 2019 & September 10, 2019		

1.0 Background

On April 20, 2019, a release was discovered at the Madera 19 WB Fed Com 5H site due to a ruptured 4 inch transfer hose releasing frac fluid from the onsite Poseidon Tank. Initial response activities were conducted by operator, and included source elimination, site security, containment, and site stabilization activities, which recovered approximately 12 barrels of fluid that was hauled to and disposed of at an approved disposal facility. Figure 1 illustrates the vicinity and site location, Figures 2 and 3 illustrate the release location. The C-141 form is included in Appendix A.

2.0 Site Information and Closure Criteria

The Madera 19 WB Federal Com 5H is located approximately 13 miles west of Bennet, New Mexico on Federal (BLM) land at an elevation of approximately 3,180 feet above mean sea level (amsl).

Based upon NMOSE (Appendix B), depth to groundwater in the area is estimated to be 158 feet below grade surface (bgs). There are no known water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed 4/22/2019). The nearest significant watercourse is a playa, located approximately 1.33 miles to the southeast. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for groundwater depth of greater than 100 feet bgs.

3.0 Release Characterization Activities and Findings

On June 4, 2019, SMA personnel arrived on site in response to the release associated with Madera 19 WB Federal Com 5H. SMA collected discrete surface samples from the area surrounding the Poseidon tank in order to determine the area of impact. Due to the unknown nature of the released contents, NMOCD required additional laboratory analysis of samples, as described below.

A total of 16 sample locations (SP1-SP16) were investigated, and a total of seven (7) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; Ammonia as Nitrogen; mercury using EPA Method 7471; arsenic, barium, cadmium, chromium, lead, selenium, and silver using EPA Method 6010B; motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015M/D; volatiles using EPA 8260B; pH using EPA Method 9040C; methanol and ethanol using EPA Method 8315B; and glutaraldehyde using EPA method 8315A. The remaining samples were field screened for chloride using an electrical conductivity (EC) meter. All constituents except for TPH were below regulatory limits as defined in NMAC 19.15.29 Table 1 and NMED-Risk Assessment Guidance for Site Investigations and Remediation VOL I Mar 7,2019 Table A-1: Soil screening levels (Industrial/Occupational Soil, Noncancer). Tables 3 and 3a tabulate analytical results.

On September 10, 2019, SMA personnel returned to the site to determine the vertical extent as reasonably possible while flowback operations continued; however, the Poseidon tank had been removed from the site. Six samples (L1-L6) were collected to depths ranging from six inches to four (4) feet. A total of 10 samples were collected for laboratory analysis for total chloride using EPA Method 300.0 and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Table 3 itemizes the sample analysis, and sample locations are depicted on Figure 3.

Laboratory samples were collected in accordance with the sampling protocol included in Appendix C. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix D).

As summarized in Table 3 and shown in Figure 3, results indicate that an area approximately 255 feet by 205 feet by six (6) inches deep has been impacted.

4.0 Proposed Soil Remediation Work Plan

SMA proposes excavation and removal of contaminated soil. The impacted area will be excavated approximately six (6) inches bgs. The proposed area of excavation is depicted on Figure 3.

Confirmation samples will be comprised of representative wall and base 5-point composite samples.

Approximately 500 cubic yards of contaminated soil is projected to be removed and replaced with clean backfill material in order to return the surface to previous contours. The contaminated soil will be transported for disposal at R360, an NMOCD permitted disposal facility. Upon approval by NMOCD, the projected timeline for completion of remediation activities is approximately 90 days.

5.0 Scope and Limitations

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

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

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Ashley Maxwell
Project Manager



Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Surface Water Radius Map

Figure 3: Site and Sample Location Map

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Table 2: NMOCD Closure Criteria Justification

Table 3: Summary of NMOCD Sample Results

Table 3A Summary of Sample Results

Appendices:

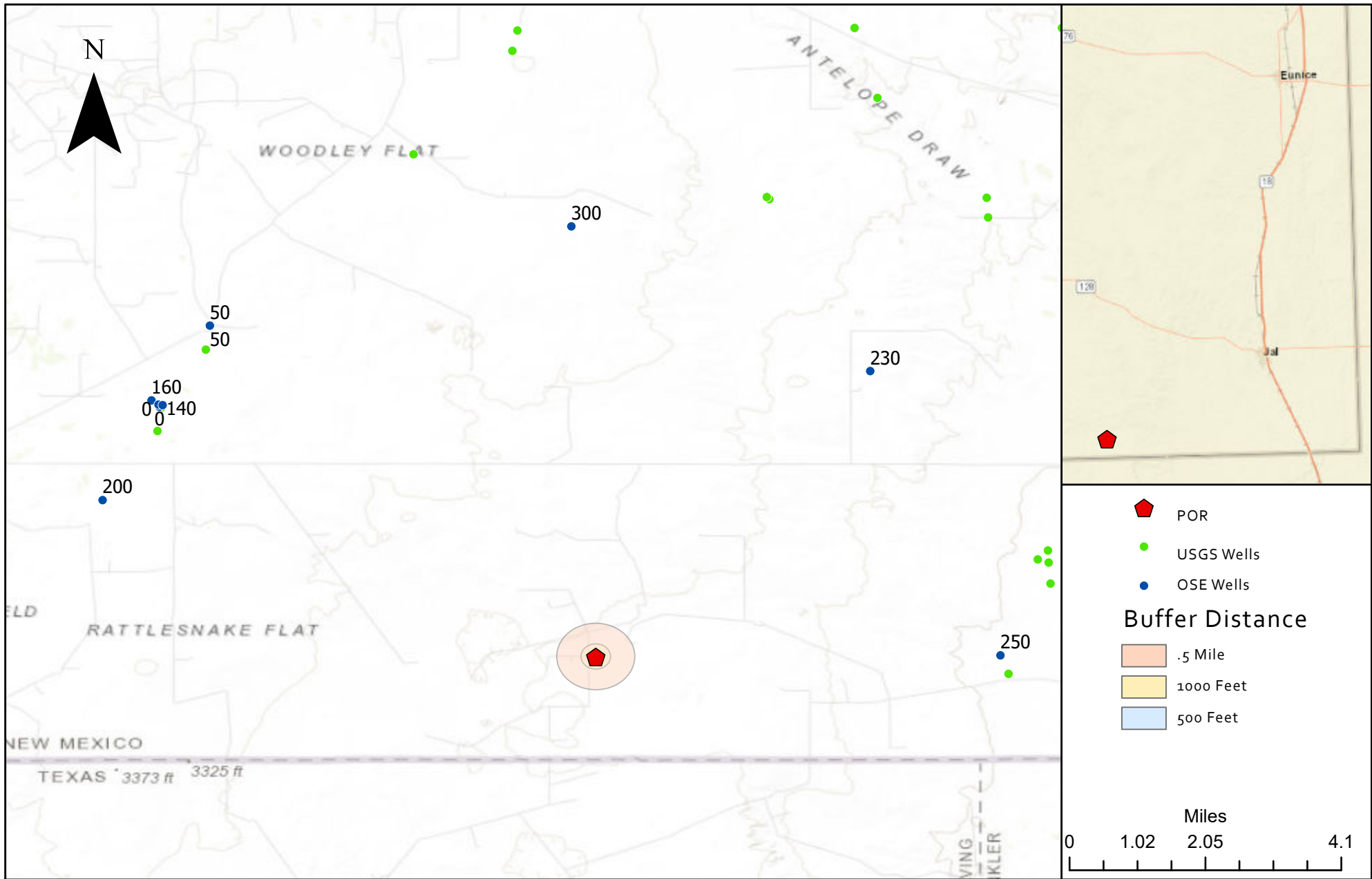
Appendix A: Form C141

Appendix B: NMOSE Wells Report

Appendix C: Field Notes

Appendix D: Laboratory Analytical Reports

FIGURES



Regional Vicinity & Wellhead Protection Map
Madera 19 WB Federal Com 5H-Marathon Oil
Sec. 19 T26S R35E, Lea County, New Mexico

Figure 1

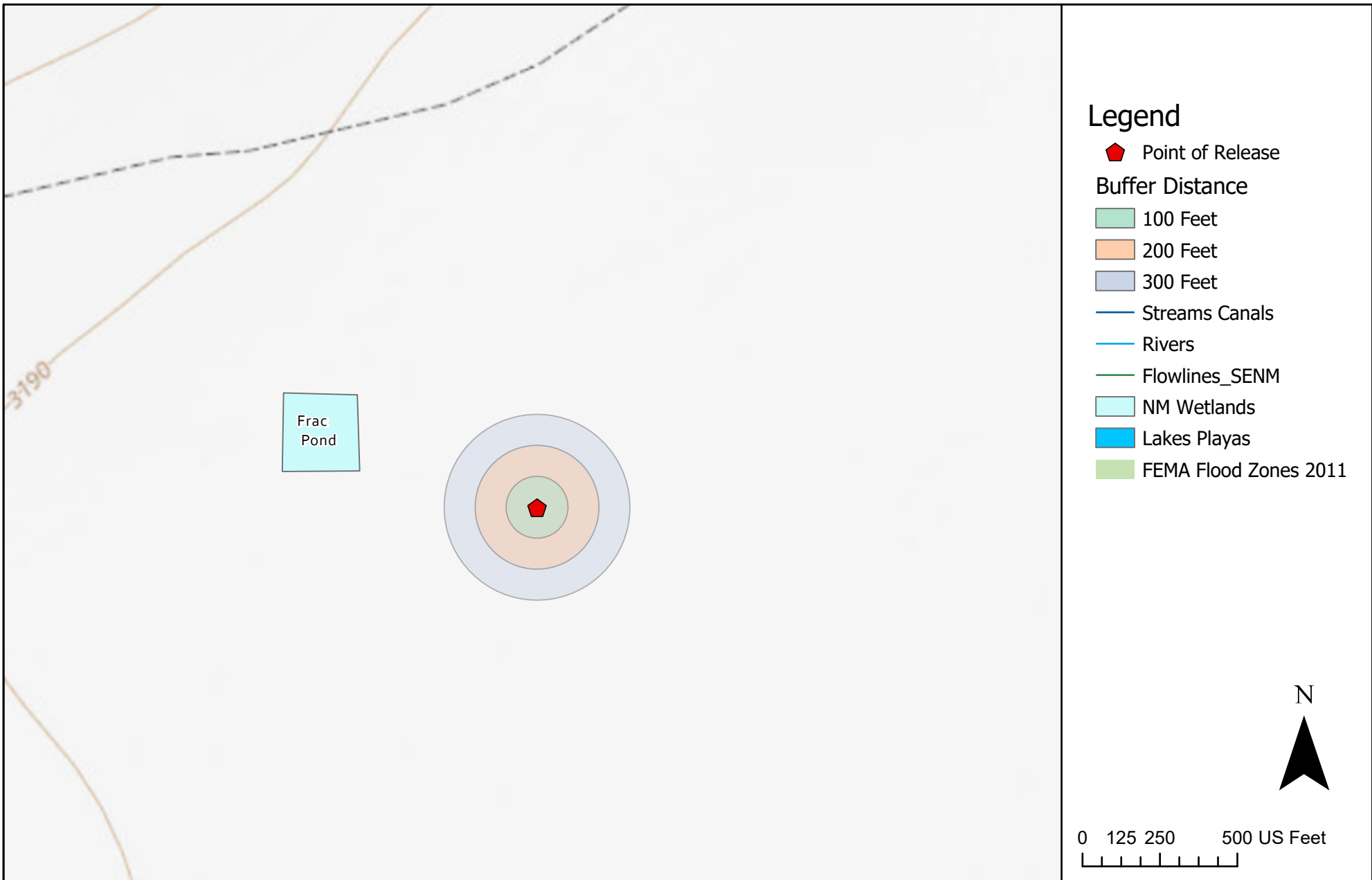
Revisions		
By: _____	Date: _____	Descr: _____
By: _____	Date: _____	Descr: _____

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Drawn	Henryetta Price
Date	6/21/2019
Checked	_____
Approved	_____



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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



0 125 250 500 US Feet

Surface Water Protection Map
Madera 19 WB Federal Com 5H-Marathon Oil
Sec. 19 T26S R35E, Lea County, New Mexico

Figure 2

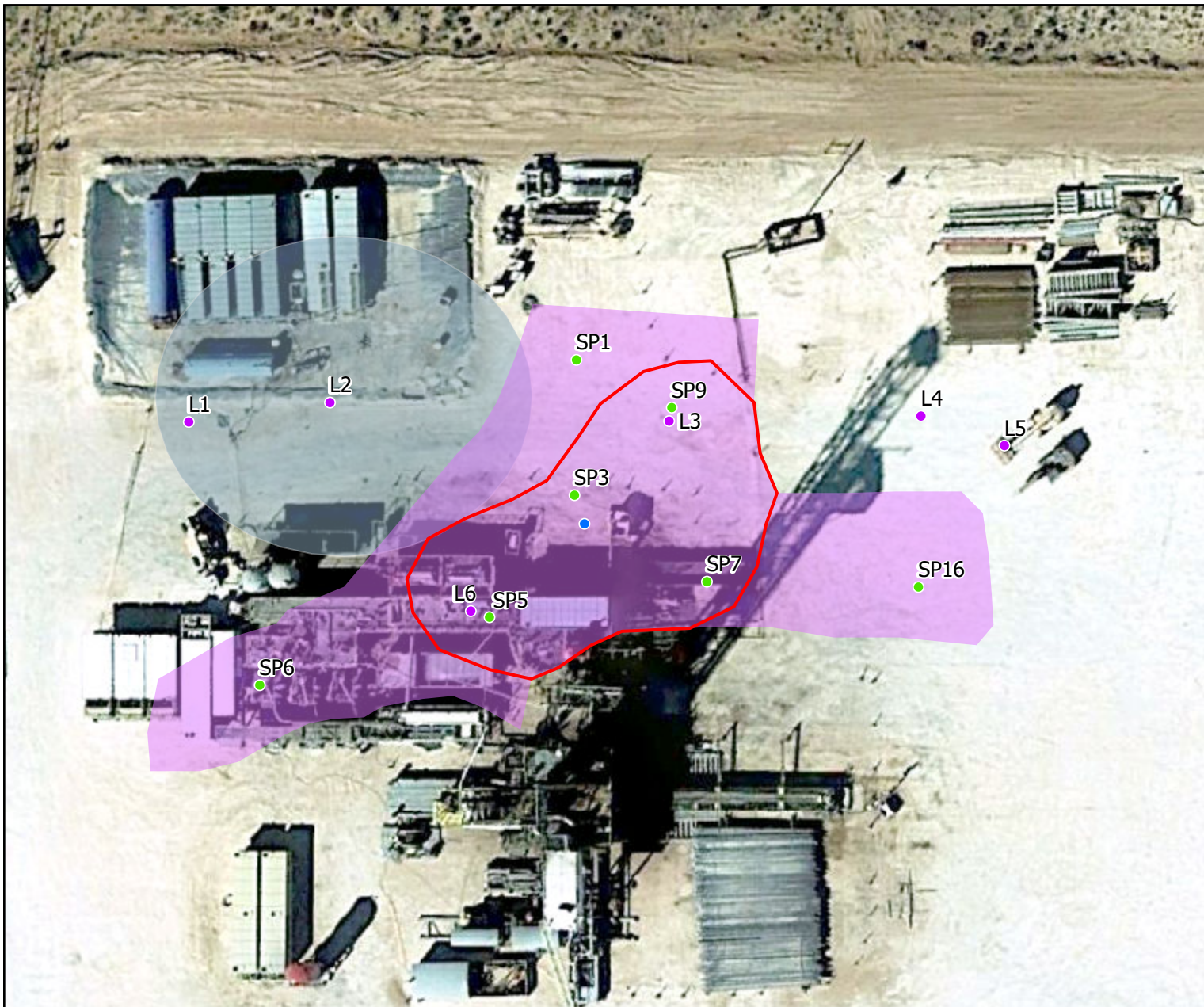
Revisions		
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By: _____	Date: _____	Descr: _____

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Drawn Henrvetta Price
Date 6/21/2019
Checked _____
Approved _____



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- Legend
- Point of Release
 - 6/4/2019 Sampling Event
 - 9/10/2019 Sampling Event
 - Proposed 0.5' Excavation
 - Estimated Release Area
 - Previously Located Poseidon Tank



0 25 50 100 Feet

Site and Sample Location Map
Madera 19 WB Federal Com 5H - Marathon Oil
Sec 19 T26S R35E, Lea County, New Mexico

Figure 3

Date Saved: 9/24/2019	Revisions			Drawn	<u>Henryetta Price</u>
	By: _____	Date: _____	Descr: _____	Date	<u>9/24/2019</u>
	By: _____	Date: _____	Descr: _____	Checked	_____
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TABLES

Table 2:
NMOCD Closure Criteria

Marathon Oil Permian LLC
Madera 19 WB Fed Com 005H(1RP-5468)

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	158	USGS Water Well Data/ OSE Well Report
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)	>1/2 mile	Figure 2
Horizontal Distance to Nearest Significant Watercourse (ft)	1,530	Figure 2

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	yes or no	if yes, then				
<300' from continuously flowing watercourse or other significant watercourse?	No	100	100	1000	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 NMOCD Sample Results

Marathon Oil Permian LLC
Madera 19 WB Fed Com 5H
API: 30-025- 44901

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria >100 ft				1000			2,500	20,000
SP1	6/4/2019	surface	in-situ	<4.9	210	150	360	900
SP3			in-situ	<5.0	720	270	990	2,400
SP5			excavate	<5.0	4000	560	4,560	9,500
SP6			in-situ	<5.0	510	140	650	7,200
SP7			excavate	<5.0	1400	1000	2,400	2,100
SP9			excavate	<5.0	2300	5100	7,400	1,800
SP16			in-situ	<5.0	330	290	620	7,000
L1	9/10/2019	0.5	in-situ	<5.0	<10	<48	<63	3,300
		4	in-situ	-	-	-	-	550
L2	9/10/2019	0.5	in-situ	<5.0	<10	<50	<65	64
L3	9/10/2019	0.5	in-situ	<5.0	48	81	<134	900
		1	in-situ	-	-	-	-	210
L4	9/10/2019	0.5	in-situ	<5.0	<10	<49	<64	520
		1	in-situ	-	-	-	-	98
L5	9/10/2019	0.5	in-situ	<5.0	8	<50	<63	<60
L6	9/10/2019	0.5	in-situ	<5.0	25	<46	<76	1,300
		1	in-situ	-	-	-	-	110

"--" = Not Analyzed

* = per Reclamation Standard (19.15.29.13.D(1) NMAC)



Table 3A
Summary of Sample Results

Analyses	Units	Date collected	SP1	SP3	SP5	SP6	SP7	SP9	SP16	40 CFR 261.24(b) Table 1. (mg/L)	NMED Soil Screening Levels Industrial/ Occupational (mg/kg)
AMMONIA AS N											
Nitrogen, Ammonia	(mg/Kg)	6/4/2019	< 100	< 50	< 50	< 50	< 50	< 50	< 50	-	-
EPA Method 7471: Mercury											
Mercury	(mg/Kg)	6/4/2019	< 0.032	< 0.032	< 0.032	< 0.033	< 0.032	< 0.032	< 0.031	0.2	1.60E+05
EPA Method 6010B: Soil Metals											
Arsenic	(mg/Kg)	6/4/2019	< 5.0	< 4.8	< 4.8	< 5.0	< 4.8	< 4.9	< 4.9	5	2.08E+02
Barium	(mg/Kg)	6/4/2019	< 100	< 100	< 100	< 100	< 100	< 100	< 100	100	2.55E+05
Cadmium	(mg/Kg)	6/4/2019	< 0.20	< 0.19	< 0.19	< 0.20	< 0.19	< 0.20	< 0.2	1	1.11E+03
Chromium	(mg/Kg)	6/4/2019	< 5.0	< 5.0	< 5.0	4.4	< 5.0	< 5.0	< 5.0	5	3.14E+05
Lead	(mg/Kg)	6/4/2019	2.2	0.77	2.0	1.4	< 1.0	< 5.0	0.78	5	-
Selenium	(mg/Kg)	6/4/2019	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	6.49E+03
Silver	(mg/Kg)	6/4/2019	< 0.50	0.60	0.90	1.1	0.54	< 0.49	1.0	5	6.49E+03
EPA Method 8260B: Volatiles											
Benzene	(mg/Kg)	6/4/2019	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.5	10 (NMOCD)
Toluene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	6.13E+04
Ethylbenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	2.90E+04
Methyl tert-butyl ether (MTBE)	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
1,2,4-Trimethylbenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
1,3,5-Trimethylbenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
1,2-Dichloroethane (EDC)	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.5	2.86E+02
1,2-Dibromoethane (EDB)	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	7.38E+02
Naphthalene	(mg/Kg)	6/4/2019	< 0.099	< 0.1	< 0.099	< 0.099	< 0.10	< 0.10	< 0.1	-	
1-Methylnaphthalene	(mg/Kg)	6/4/2019	< 0.20	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.2	-	
2-Methylnaphthalene	(mg/Kg)	6/4/2019	< 0.20	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.2	-	
Acetone	(mg/Kg)	6/4/2019	< 0.74	< 0.75	< 0.74	< 0.74	< 0.75	< 0.75	< 0.75	-	9.60E+05
Bromobenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
Bromodichloromethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	2.60E+04
Bromoform (Tribromomethane)	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	1.80E+04
Bromomethane	(mg/Kg)	6/4/2019	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	-	9.45E+01
2-Butanone	(mg/Kg)	6/4/2019	< 0.49	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	-	4.11E+05
Carbon disulfide	(mg/Kg)	6/4/2019	< 0.49	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	-	8.54E+03
Carbon tetrachloride	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.5	1.02E+03
Chlorobenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	100	2.16E+03
Chloroethane	(mg/Kg)	6/4/2019	< 0.099	< 0.1	< 0.099	< 0.099	< 0.10	< 0.10	< 0.1	-	
Chloroform	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	6	2.00E+03
Chloromethane	(mg/Kg)	6/4/2019	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	-	1.26E+03
2-Chlorotoluene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
4-Chlorotoluene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
cis-1,2-DCE	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	2.60E+03
cis-1,3-Dichloropropene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	6.95E+02
1,2-Dibromo-3-chloropropane	(mg/Kg)	6/4/2019	< 0.099	< 0.1	< 0.099	< 0.099	< 0.10	< 0.10	< 0.1	-	4.11E+01
Dibromochloromethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	1.83E+04
Dibromomethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
1,2-Dichlorobenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	1.30E+04

Summary of Sample Results
Marathon - Madera

Analyses	Units	Date collected	SP1	SP3	SP5	SP6	SP7	SP9	SP16	40 CFR 261.24(b) Table 1. (mg/L)	NMED Soil Screening Levels Industrial/ Occupational (mg/kg)
1,3-Dichlorobenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
1,4-Dichlorobenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	7.5	9.08E+04
Dichlorodifluoromethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	8.65E+02
1,1-Dichloroethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	2.60E+05
1,1-Dichloroethene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	2.60E+05
1,2-Dichloropropane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	1.37E+02
1,3-Dichloropropane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
2,2-Dichloropropane	(mg/Kg)	6/4/2019	< 0.099	< 0.10	< 0.099	< 0.099	< 0.10	< 0.10	< 0.10	-	
1,1-Dichloropropene	(mg/Kg)	6/4/2019	< 0.099	< 0.10	< 0.099	< 0.099	< 0.10	< 0.10	< 0.10	-	
Hexachlorobutadiene	(mg/Kg)	6/4/2019	< 0.099	< 0.10	< 0.099	< 0.099	< 0.10	< 0.10	< 0.10	0.5	9.16E+02
2-Hexanone	(mg/Kg)	6/4/2019	< 0.49	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	-	
Isopropylbenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
4-Isopropyltoluene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
4-Methyl-2-pentanone	(mg/Kg)	6/4/2019	< 0.49	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	-	
Methylene chloride	(mg/Kg)	6/4/2019	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	-	5.13E+03
n-Butylbenzene	(mg/Kg)	6/4/2019	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	-	
n-Propylbenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
sec-Butylbenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
Styrene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
tert-Butylbenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	
1,1,1,2-Tetrachloroethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	3.89E+04
1,1,2,2-Tetrachloroethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	2.60E+04
Tetrachloroethene (PCE)	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	6.29E+02
trans-1,2-DCE	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	1.61E+03
trans-1,3-Dichloropropene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	6.95E+02
1,2,3-Trichlorobenzene	(mg/Kg)	6/4/2019	< 0.099	< 0.10	< 0.099	< 0.099	< 0.10	< 0.10	< 0.10	-	
1,2,4-Trichlorobenzene	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	4.23E+02
1,1,1-Trichloroethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	7.25E+04
1,1,2-Trichloroethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	1.24E+01
Trichloroethene (TCE)	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	3.65E+01
Trichlorofluoromethane	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	6.03E+03
1,2,3-Trichloropropane	(mg/Kg)	6/4/2019	< 0.099	< 0.10	< 0.099	< 0.099	< 0.10	< 0.10	< 0.10	-	3.40E+01
Vinyl chloride	(mg/Kg)	6/4/2019	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.2	8.16E+02
Xylenes, Total	(mg/Kg)	6/4/2019	< 0.099	< 0.10	< 0.099	< 0.099	< 0.10	< 0.10	< 0.10	-	4.28E+03
EPA METHOD 9040C											
pH		6/4/2019	7.86	8.03	8.11	8.29	7.7	7.48	7.85		
Method 8015B											
Methanol	(mg/Kg)	6/4/2019	< 9.63	< 9.78	< 9.84	< 9.65	< 9.90	< 9.94	< 9.84	-	-
Ethanol	(mg/Kg)	6/4/2019	< 9.63	< 9.78	< 9.84	< 9.65	< 9.90	< 9.94	< 9.84	-	-
Method 8315A											
Glutaraldehyde	(mg/Kg)	6/4/2019	< 1.00	< 1.01	< 0.988	< 1.00	< 0.998	< 0.998	< 1.00	-	-

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	1RP-5468
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 88220	

Location of Release Source

Latitude 32.02282908 Longitude -103.41060729
(NAD 83 in decimal degrees to 5 decimal places)

Site Name MADERA 19 WB FEDERAL COM #005H	Site Type Oil and gas drilling facility
Date Release Discovered 4/20/19	API# (if applicable) 30-025-44901

Unit Letter	Section	Township	Range	County
N	19	26S	35E	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)	Volume Recovered (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) <u>17.81 bbls of frac fluid</u>	Volume/Weight Recovered (provide units) <u>12 bbls of frac fluid</u>

Cause of Release

During stage fracturing operations, a 4" transfer hose ruptured allowing approximately 17.81 bbls of frac fluid to be released to the well location. The release remained on location. Standing fluids are being recovered.

Incident ID	
District RP	1RP-5468
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? This was a major release as defined by NMAC 19.15.29.7(A) based on volume of material released.
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 <u>not</u> 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: <u>Isaac Castro</u>	Title: <u>Environmental Professional</u>
Signature: <u>Isaac Castro</u>	Date: <u>9/11/19</u>
email: <u>icastro@marathonoil.com</u>	Telephone: <u>575-988-0561</u>
<u>OCD Only</u> Received by: _____ Date: _____	

District I
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State of New Mexico
Energy Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
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Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	1RP-5468
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?	<u>158</u> (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

Incident ID	
District RP	1RP-5468
Facility ID	
Application ID	

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.

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: 9-27-19email: icastro@marathonoil.com

Telephone: 575-988-0561

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	1RP-5468
Facility ID	
Application ID	

Remediation Plan

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

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Isaac Castro

Title: Environmental Professional

Signature: Isaac Castro Date: 9-27-19email: icastro@marathonoil.com

Telephone: 575-988-0561

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

APPENDIX B

NMOSE WELLS REPORT



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02295	CUB	LE	2	2	4	12	26S	33E	639850	3547710*		9238	250	200	50
C 03442 POD1	C	LE	4	1	2	06	26S	34E	641056	3550028		9462	251		
C 02292 POD1	CUB	LE	4	1	2	06	26S	34E	640992	3549987		9485	200	140	60
C 03441 POD1	C	LE	4	1	2	06	26S	34E	640971	3550039		9535	250		
C 02291	CUB	LE	1	1	2	06	26S	34E	640825	3550140*		9711	220	160	60
C 03795 POD1	C	LE	4	4	3	24	26S	35E	658419	3544221		10158	496	250	246
C 02316	CUB	LE	3	4	3	29	25S	34E	642003	3551967*		10212	100	50	50
C 02317	CUB	LE	3	4	3	29	25S	34E	642003	3551967*		10212	100	50	50
CP 01305 POD1	CP	LE		1	4	31	25S	37E	655628	3551065		10273	420	230	190
C 02299	CUB	LE	4	4	2	24	25S	34E	649417	3554478*		10640	350	300	50

Average Depth to Water: **172 feet**

Minimum Depth: **50 feet**

Maximum Depth: **300 feet**

Record Count: 10

UTMNAD83 Radius Search (in meters):

Easting (X): 648266.2

Northing (Y): 3543900.2

Radius: 11000

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

APPENDIX C

SAMPLING PROTOCOL & FIELD NOTES



Field Screening

Location Name: Madera

Date: 9/10/19

Sample Name:

Collection Time:

EC (mS)

Temp (°C)

PID Reading /PF ppm

Soil Color

Primary Soil Type

Moisture Level

Other Remarks/Notes:

L1 - 0.5' *

09:00

2.4

24.7

23.3

Light Tan Gray Yellow Dark Brown Olive Red

Gravel Sand Clay Rock Silt

Dry Moist Wet

- 1'

1.24

28.0

20

Light Tan Gray Yellow Dark Brown Olive Red

Gravel Sand Clay Rock Silt

Dry Moist Wet

- 1.5'

2.05

27.5

23

Light Tan Gray Yellow Dark Brown Olive Red

Gravel Sand Clay Rock Silt

Dry Moist Wet

- 2'

1.76

28.1

13

Light Tan Gray Yellow Dark Brown Olive Red

Gravel Sand Clay Rock Silt

Dry Moist Wet

L2 - 0.5' *

09:07

0.13

27.2

50

Light Tan Gray Yellow Dark Brown Olive Red

Gravel Sand Clay Rock Silt

Dry Moist Wet

- 1'

0.07

27.5

7.9

Light Tan Gray Yellow Dark Brown Olive Red

Gravel Sand Clay Rock Silt

Dry Moist Wet

- 1.5'

0.09

27.4

33

Light Tan Gray Yellow Dark Brown Olive Red

Gravel Sand Clay Rock Silt

Dry Moist Wet

- 2'

0.05

28.1

7.6

Light Tan Gray Yellow Dark Brown Olive Red

Gravel Sand Clay Rock Silt

Dry Moist Wet

L3 - 0.5' *

09:22

0.94

27.1

3.2

Light Tan Gray Yellow Dark Brown Olive Red

Gravel Sand Clay Rock Silt

Dry Moist Wet



Field Screening

Location Name: Madern

Date: 9/10/19

Sample Name:	Collection Time:	EC (mS)	Temp (°C)	PID Reading /PF	Soil Color	Primary Soil Type	Moisture Level	Other Remarks/Notes:
L3-1' *	09:22 09:23	0.27	27.4	0.0	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet
- 1.5'		0.37	26.7	0.0	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet
- 2'		0.51	27.4	0.0	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet
L4-0.5' *	09:31	0.55	26.8		Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet
1' *	09:32	0.15	26.8	18	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet
1.5'		0.09	27.6		Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet
2'		0.08	27.7	4	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet
L5-0.5' *	09:40	0.13	27.3	6.6	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet
- 1'		0.07	26.7	9.3	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet



Field Screening

Location Name: Madera

Date: 9/10/19

Sample Name:	Collection Time:	EC (mS)	Temp (°C)	PID Reading /PF	Soil Color	Primary Soil Type	Moisture Level	Other Remarks/Notes:	
LS-1.5'		0.06	26.4	13	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet	
- 2'		0.06	27.4	10	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet	
LU-0.5' *	09:55	1.34	27.2	8.	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet	
- 1'	09:56	0.17	27.2	5.0	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet	
- 1.5'		0.12	27.1		Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet	
- 2'		0.13	27.2	1.5	Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet	
BL1-3'	11:47	1.37	28.9		Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet	
L1-4' *	11:55	0.93	27.5		Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet	
(west wall) SW1-6" *	12:00	0.13	27.3		Light Tan Gray Yellow	Dark Brown Olive Red	Gravel Sand Rock Silt Clay	Dry Moist Wet	

(west wall) W2-6" 12:05 0.13 27.3

APPENDIX D

LABORATORY ANALYTICAL REPORTS



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

June 27, 2019

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

RE: Madera

OrderNo.: 1906314

Dear Heather Patterson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 6/6/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP1

Project: Madera

Collection Date: 6/4/2019 3:18:00 PM

Lab ID: 1906314-001

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	900	60		mg/Kg	20	6/18/2019 10:44:57 PM	45665
AMMONIA AS N							Analyst: OG
Nitrogen, Ammonia	ND	100	D	mg/Kg	4	6/18/2019 5:00:00 PM	R60747
EPA METHOD 7471: MERCURY							Analyst: rde
Mercury	ND	0.032		mg/Kg	1	6/12/2019 1:37:58 PM	45533
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/11/2019 11:22:56 AM	45486
Barium	480	0.20		mg/Kg	2	6/11/2019 11:22:56 AM	45486
Cadmium	ND	0.20		mg/Kg	2	6/11/2019 11:22:56 AM	45486
Chromium	5.0	0.60		mg/Kg	2	6/11/2019 11:22:56 AM	45486
Lead	2.2	0.50		mg/Kg	2	6/11/2019 11:22:56 AM	45486
Selenium	ND	5.0		mg/Kg	2	6/11/2019 11:22:56 AM	45486
Silver	ND	0.50		mg/Kg	2	6/11/2019 11:22:56 AM	45486
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	210	10		mg/Kg	1	6/10/2019 6:09:41 PM	45450
Motor Oil Range Organics (MRO)	150	50		mg/Kg	1	6/10/2019 6:09:41 PM	45450
Surr: DNOP	123	70-130		%Rec	1	6/10/2019 6:09:41 PM	45450
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2019 8:30:57 PM	45436
Surr: BFB	98.6	73.8-119		%Rec	1	6/10/2019 8:30:57 PM	45436
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Toluene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Ethylbenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Naphthalene	ND	0.099		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 3:42:53 AM	45436
2-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Acetone	ND	0.74		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Bromobenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Bromodichloromethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Bromoform	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436

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 Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP1

Project: Madera

Collection Date: 6/4/2019 3:18:00 PM

Lab ID: 1906314-001

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromomethane	ND	0.15		mg/Kg	1	6/11/2019 3:42:53 AM	45436
2-Butanone	ND	0.49		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Carbon disulfide	ND	0.49		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Carbon tetrachloride	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Chlorobenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Chloroethane	ND	0.099		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Chloroform	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Chloromethane	ND	0.15		mg/Kg	1	6/11/2019 3:42:53 AM	45436
2-Chlorotoluene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
4-Chlorotoluene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
cis-1,2-DCE	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Dibromochloromethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Dibromomethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,1-Dichloroethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,1-Dichloroethene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,2-Dichloropropane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,3-Dichloropropane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
2,2-Dichloropropane	ND	0.099		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,1-Dichloropropene	ND	0.099		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Hexachlorobutadiene	ND	0.099		mg/Kg	1	6/11/2019 3:42:53 AM	45436
2-Hexanone	ND	0.49		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Isopropylbenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
4-Isopropyltoluene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Methylene chloride	ND	0.15		mg/Kg	1	6/11/2019 3:42:53 AM	45436
n-Butylbenzene	ND	0.15		mg/Kg	1	6/11/2019 3:42:53 AM	45436
n-Propylbenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
sec-Butylbenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Styrene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
tert-Butylbenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP1

Project: Madera

Collection Date: 6/4/2019 3:18:00 PM

Lab ID: 1906314-001

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
trans-1,2-DCE	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Trichlorofluoromethane	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Vinyl chloride	ND	0.049		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Xylenes, Total	ND	0.099		mg/Kg	1	6/11/2019 3:42:53 AM	45436
Surr: Dibromofluoromethane	82.6	70-130		%Rec	1	6/11/2019 3:42:53 AM	45436
Surr: 1,2-Dichloroethane-d4	95.2	70-130		%Rec	1	6/11/2019 3:42:53 AM	45436
Surr: Toluene-d8	96.4	70-130		%Rec	1	6/11/2019 3:42:53 AM	45436
Surr: 4-Bromofluorobenzene	93.0	70-130		%Rec	1	6/11/2019 3:42:53 AM	45436
EPA METHOD 9040C							Analyst: JRR
pH	7.86			pH Units	1	6/19/2019 11:47:00 AM	R60762

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP3

Project: Madera

Collection Date: 6/4/2019 3:37:00 PM

Lab ID: 1906314-002

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2400	60		mg/Kg	20	6/18/2019 11:22:10 PM	45665
AMMONIA AS N							Analyst: OG
Nitrogen, Ammonia	ND	50	D	mg/Kg	2	6/18/2019 5:00:00 PM	R60747
EPA METHOD 7471: MERCURY							Analyst: rde
Mercury	ND	0.032		mg/Kg	1	6/12/2019 1:40:20 PM	45533
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.8		mg/Kg	2	6/11/2019 11:24:42 AM	45486
Barium	1300	0.97		mg/Kg	10	6/11/2019 11:43:44 AM	45486
Cadmium	ND	0.19		mg/Kg	2	6/11/2019 11:24:42 AM	45486
Chromium	6.4	0.58		mg/Kg	2	6/11/2019 11:24:42 AM	45486
Lead	0.77	0.48		mg/Kg	2	6/11/2019 11:24:42 AM	45486
Selenium	ND	4.8		mg/Kg	2	6/11/2019 11:24:42 AM	45486
Silver	0.60	0.48		mg/Kg	2	6/11/2019 11:24:42 AM	45486
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	720	9.8		mg/Kg	1	6/10/2019 6:34:12 PM	45450
Motor Oil Range Organics (MRO)	270	49		mg/Kg	1	6/10/2019 6:34:12 PM	45450
Surr: DNOP	131	70-130	S	%Rec	1	6/10/2019 6:34:12 PM	45450
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/10/2019 8:53:31 PM	45436
Surr: BFB	99.4	73.8-119		%Rec	1	6/10/2019 8:53:31 PM	45436
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Toluene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Ethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Naphthalene	ND	0.10		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 4:12:58 AM	45436
2-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Acetone	ND	0.75		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Bromobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Bromodichloromethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Bromoform	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP3

Project: Madera

Collection Date: 6/4/2019 3:37:00 PM

Lab ID: 1906314-002

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromomethane	ND	0.15		mg/Kg	1	6/11/2019 4:12:58 AM	45436
2-Butanone	ND	0.50		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Carbon disulfide	ND	0.50		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Carbon tetrachloride	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Chlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Chloroethane	ND	0.10		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Chloroform	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Chloromethane	ND	0.15		mg/Kg	1	6/11/2019 4:12:58 AM	45436
2-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
4-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
cis-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Dibromochloromethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Dibromomethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,1-Dichloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,1-Dichloroethene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,2-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,3-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
2,2-Dichloropropane	ND	0.10		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,1-Dichloropropene	ND	0.10		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Hexachlorobutadiene	ND	0.10		mg/Kg	1	6/11/2019 4:12:58 AM	45436
2-Hexanone	ND	0.50		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Isopropylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
4-Isopropyltoluene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Methylene chloride	ND	0.15		mg/Kg	1	6/11/2019 4:12:58 AM	45436
n-Butylbenzene	ND	0.15		mg/Kg	1	6/11/2019 4:12:58 AM	45436
n-Propylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
sec-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Styrene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
tert-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP3

Project: Madera

Collection Date: 6/4/2019 3:37:00 PM

Lab ID: 1906314-002

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
trans-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Trichlorofluoromethane	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Vinyl chloride	ND	0.050		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Xylenes, Total	ND	0.10		mg/Kg	1	6/11/2019 4:12:58 AM	45436
Surr: Dibromofluoromethane	81.9	70-130		%Rec	1	6/11/2019 4:12:58 AM	45436
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%Rec	1	6/11/2019 4:12:58 AM	45436
Surr: Toluene-d8	95.2	70-130		%Rec	1	6/11/2019 4:12:58 AM	45436
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	6/11/2019 4:12:58 AM	45436
EPA METHOD 9040C							Analyst: JRR
pH	8.03			pH Units	1	6/19/2019 11:47:00 AM	R60762

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP5

Project: Madera

Collection Date: 6/4/2019 4:06:00 PM

Lab ID: 1906314-003

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	9500	600		mg/Kg	200	6/19/2019 2:51:00 PM	45665
AMMONIA AS N							Analyst: OG
Nitrogen, Ammonia	ND	50	D	mg/Kg	2	6/18/2019 5:00:00 PM	R60747
EPA METHOD 7471: MERCURY							Analyst: rde
Mercury	ND	0.032		mg/Kg	1	6/12/2019 1:42:39 PM	45533
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.8		mg/Kg	2	6/11/2019 11:26:21 AM	45486
Barium	4100	4.8		mg/Kg	50	6/11/2019 11:45:22 AM	45486
Cadmium	ND	0.19		mg/Kg	2	6/11/2019 11:26:21 AM	45486
Chromium	5.6	0.57		mg/Kg	2	6/11/2019 11:26:21 AM	45486
Lead	2.0	0.48		mg/Kg	2	6/11/2019 11:26:21 AM	45486
Selenium	ND	4.8		mg/Kg	2	6/11/2019 11:26:21 AM	45486
Silver	0.90	0.48		mg/Kg	2	6/11/2019 11:26:21 AM	45486
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	4000	48		mg/Kg	5	6/13/2019 3:55:44 PM	45450
Motor Oil Range Organics (MRO)	560	240		mg/Kg	5	6/13/2019 3:55:44 PM	45450
Surr: DNOP	127	70-130		%Rec	5	6/13/2019 3:55:44 PM	45450
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/10/2019 9:16:08 PM	45436
Surr: BFB	99.3	73.8-119		%Rec	1	6/10/2019 9:16:08 PM	45436
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Toluene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Ethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Naphthalene	ND	0.099		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 4:43:06 AM	45436
2-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Acetone	ND	0.74		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Bromobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Bromodichloromethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Bromoform	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP5

Project: Madera

Collection Date: 6/4/2019 4:06:00 PM

Lab ID: 1906314-003

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromomethane	ND	0.15		mg/Kg	1	6/11/2019 4:43:06 AM	45436
2-Butanone	ND	0.50		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Carbon disulfide	ND	0.50		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Carbon tetrachloride	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Chlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Chloroethane	ND	0.099		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Chloroform	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Chloromethane	ND	0.15		mg/Kg	1	6/11/2019 4:43:06 AM	45436
2-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
4-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
cis-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Dibromochloromethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Dibromomethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,1-Dichloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,1-Dichloroethene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,2-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,3-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
2,2-Dichloropropane	ND	0.099		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,1-Dichloropropene	ND	0.099		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Hexachlorobutadiene	ND	0.099		mg/Kg	1	6/11/2019 4:43:06 AM	45436
2-Hexanone	ND	0.50		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Isopropylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
4-Isopropyltoluene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Methylene chloride	ND	0.15		mg/Kg	1	6/11/2019 4:43:06 AM	45436
n-Butylbenzene	ND	0.15		mg/Kg	1	6/11/2019 4:43:06 AM	45436
n-Propylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
sec-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Styrene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
tert-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP5

Project: Madera

Collection Date: 6/4/2019 4:06:00 PM

Lab ID: 1906314-003

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
trans-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Trichlorofluoromethane	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Vinyl chloride	ND	0.050		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Xylenes, Total	ND	0.099		mg/Kg	1	6/11/2019 4:43:06 AM	45436
Surr: Dibromofluoromethane	85.1	70-130		%Rec	1	6/11/2019 4:43:06 AM	45436
Surr: 1,2-Dichloroethane-d4	97.1	70-130		%Rec	1	6/11/2019 4:43:06 AM	45436
Surr: Toluene-d8	96.8	70-130		%Rec	1	6/11/2019 4:43:06 AM	45436
Surr: 4-Bromofluorobenzene	95.0	70-130		%Rec	1	6/11/2019 4:43:06 AM	45436
EPA METHOD 9040C							Analyst: JRR
pH	8.11			pH Units	1	6/19/2019 11:47:00 AM	R60762

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP6

Project: Madera

Collection Date: 6/4/2019 4:16:00 PM

Lab ID: 1906314-004

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	7200	300		mg/Kg	100	6/19/2019 3:03:25 PM	45665
AMMONIA AS N							Analyst: OG
Nitrogen, Ammonia	ND	50	D	mg/Kg	2	6/18/2019 5:00:00 PM	R60747
EPA METHOD 7471: MERCURY							Analyst: rde
Mercury	ND	0.033		mg/Kg	1	6/12/2019 1:44:42 PM	45533
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/11/2019 11:28:00 AM	45486
Barium	2400	2.0		mg/Kg	20	6/11/2019 11:47:02 AM	45486
Cadmium	ND	0.20		mg/Kg	2	6/11/2019 11:28:00 AM	45486
Chromium	4.4	0.60		mg/Kg	2	6/11/2019 11:28:00 AM	45486
Lead	1.4	0.50		mg/Kg	2	6/11/2019 11:28:00 AM	45486
Selenium	ND	5.0		mg/Kg	2	6/11/2019 11:28:00 AM	45486
Silver	1.1	0.50		mg/Kg	2	6/11/2019 11:28:00 AM	45486
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	510	9.6		mg/Kg	1	6/10/2019 7:48:47 PM	45450
Motor Oil Range Organics (MRO)	140	48		mg/Kg	1	6/10/2019 7:48:47 PM	45450
Surr: DNOP	137	70-130	S	%Rec	1	6/10/2019 7:48:47 PM	45450
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/10/2019 10:01:21 PM	45436
Surr: BFB	96.3	73.8-119		%Rec	1	6/10/2019 10:01:21 PM	45436
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Toluene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Ethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Naphthalene	ND	0.099		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 5:12:22 AM	45436
2-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Acetone	ND	0.74		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Bromobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Bromodichloromethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Bromoform	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436

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 Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP6

Project: Madera

Collection Date: 6/4/2019 4:16:00 PM

Lab ID: 1906314-004

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromomethane	ND	0.15		mg/Kg	1	6/11/2019 5:12:22 AM	45436
2-Butanone	ND	0.50		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Carbon disulfide	ND	0.50		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Carbon tetrachloride	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Chlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Chloroethane	ND	0.099		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Chloroform	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Chloromethane	ND	0.15		mg/Kg	1	6/11/2019 5:12:22 AM	45436
2-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
4-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
cis-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Dibromochloromethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Dibromomethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,1-Dichloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,1-Dichloroethene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,2-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,3-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
2,2-Dichloropropane	ND	0.099		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,1-Dichloropropene	ND	0.099		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Hexachlorobutadiene	ND	0.099		mg/Kg	1	6/11/2019 5:12:22 AM	45436
2-Hexanone	ND	0.50		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Isopropylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
4-Isopropyltoluene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Methylene chloride	ND	0.15		mg/Kg	1	6/11/2019 5:12:22 AM	45436
n-Butylbenzene	ND	0.15		mg/Kg	1	6/11/2019 5:12:22 AM	45436
n-Propylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
sec-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Styrene	0.055	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
tert-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906314**Date Reported: **6/27/2019****CLIENT:** Souder, Miller & Associates**Client Sample ID:** SP6**Project:** Madera**Collection Date:** 6/4/2019 4:16:00 PM**Lab ID:** 1906314-004**Matrix:** SOIL**Received Date:** 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
trans-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Trichlorofluoromethane	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Vinyl chloride	ND	0.050		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Xylenes, Total	ND	0.099		mg/Kg	1	6/11/2019 5:12:22 AM	45436
Surr: Dibromofluoromethane	84.6	70-130		%Rec	1	6/11/2019 5:12:22 AM	45436
Surr: 1,2-Dichloroethane-d4	92.2	70-130		%Rec	1	6/11/2019 5:12:22 AM	45436
Surr: Toluene-d8	93.2	70-130		%Rec	1	6/11/2019 5:12:22 AM	45436
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	6/11/2019 5:12:22 AM	45436
EPA METHOD 9040C							Analyst: JRR
pH	8.29			pH Units	1	6/19/2019 11:47:00 AM	R60762

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP7

Project: Madera

Collection Date: 6/4/2019 4:22:00 PM

Lab ID: 1906314-005

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	2100	60		mg/Kg	20	6/18/2019 11:59:23 PM	45665
AMMONIA AS N							Analyst: OG
Nitrogen, Ammonia	ND	50	D	mg/Kg	2	6/18/2019 5:00:00 PM	R60747
EPA METHOD 7471: MERCURY							Analyst: rde
Mercury	ND	0.032		mg/Kg	1	6/12/2019 1:46:55 PM	45533
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.8		mg/Kg	2	6/11/2019 11:35:28 AM	45486
Barium	1300	0.96		mg/Kg	10	6/11/2019 11:48:41 AM	45486
Cadmium	ND	0.19		mg/Kg	2	6/11/2019 11:35:28 AM	45486
Chromium	5.2	0.57		mg/Kg	2	6/11/2019 11:35:28 AM	45486
Lead	1.0	0.48		mg/Kg	2	6/11/2019 11:35:28 AM	45486
Selenium	ND	4.8		mg/Kg	2	6/11/2019 11:35:28 AM	45486
Silver	0.54	0.48		mg/Kg	2	6/11/2019 11:35:28 AM	45486
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	1400	94		mg/Kg	10	6/12/2019 9:23:26 AM	45450
Motor Oil Range Organics (MRO)	1000	470		mg/Kg	10	6/12/2019 9:23:26 AM	45450
Surr: DNOP	0	70-130	S	%Rec	10	6/12/2019 9:23:26 AM	45450
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/10/2019 10:24:17 PM	45436
Surr: BFB	107	73.8-119		%Rec	1	6/10/2019 10:24:17 PM	45436
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Toluene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Ethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Naphthalene	ND	0.10		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 5:41:21 AM	45436
2-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Acetone	ND	0.75		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Bromobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Bromodichloromethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Bromoform	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436

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 Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP7

Project: Madera

Collection Date: 6/4/2019 4:22:00 PM

Lab ID: 1906314-005

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromomethane	ND	0.15		mg/Kg	1	6/11/2019 5:41:21 AM	45436
2-Butanone	ND	0.50		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Carbon disulfide	ND	0.50		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Carbon tetrachloride	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Chlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Chloroethane	ND	0.10		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Chloroform	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Chloromethane	ND	0.15		mg/Kg	1	6/11/2019 5:41:21 AM	45436
2-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
4-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
cis-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Dibromochloromethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Dibromomethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,1-Dichloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,1-Dichloroethene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,2-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,3-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
2,2-Dichloropropane	ND	0.10		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,1-Dichloropropene	ND	0.10		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Hexachlorobutadiene	ND	0.10		mg/Kg	1	6/11/2019 5:41:21 AM	45436
2-Hexanone	ND	0.50		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Isopropylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
4-Isopropyltoluene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Methylene chloride	ND	0.15		mg/Kg	1	6/11/2019 5:41:21 AM	45436
n-Butylbenzene	ND	0.15		mg/Kg	1	6/11/2019 5:41:21 AM	45436
n-Propylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
sec-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Styrene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
tert-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP7

Project: Madera

Collection Date: 6/4/2019 4:22:00 PM

Lab ID: 1906314-005

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
trans-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Trichlorofluoromethane	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Vinyl chloride	ND	0.050		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Xylenes, Total	ND	0.10		mg/Kg	1	6/11/2019 5:41:21 AM	45436
Surr: Dibromofluoromethane	89.1	70-130		%Rec	1	6/11/2019 5:41:21 AM	45436
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	6/11/2019 5:41:21 AM	45436
Surr: Toluene-d8	98.3	70-130		%Rec	1	6/11/2019 5:41:21 AM	45436
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	6/11/2019 5:41:21 AM	45436
EPA METHOD 9040C							Analyst: JRR
pH	7.70			pH Units	1	6/19/2019 11:47:00 AM	R60762

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP9

Project: Madera

Collection Date: 6/4/2019 4:32:00 PM

Lab ID: 1906314-006

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1800	60		mg/Kg	20	6/19/2019 12:11:47 AM	45665
AMMONIA AS N							Analyst: OG
Nitrogen, Ammonia	ND	50	D	mg/Kg	2	6/18/2019 5:00:00 PM	R60747
EPA METHOD 7471: MERCURY							Analyst: rde
Mercury	ND	0.032		mg/Kg	1	6/12/2019 1:49:00 PM	45533
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.9		mg/Kg	2	6/11/2019 11:37:08 AM	45486
Barium	790	0.49		mg/Kg	5	6/11/2019 11:50:19 AM	45486
Cadmium	ND	0.20		mg/Kg	2	6/11/2019 11:37:08 AM	45486
Chromium	5.1	0.59		mg/Kg	2	6/11/2019 11:37:08 AM	45486
Lead	5.0	0.49		mg/Kg	2	6/11/2019 11:37:08 AM	45486
Selenium	ND	4.9		mg/Kg	2	6/11/2019 11:37:08 AM	45486
Silver	ND	0.49		mg/Kg	2	6/11/2019 11:37:08 AM	45486
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	2300	99		mg/Kg	10	6/12/2019 9:47:22 AM	45450
Motor Oil Range Organics (MRO)	5100	490		mg/Kg	10	6/12/2019 9:47:22 AM	45450
Surr: DNOP	0	70-130	S	%Rec	10	6/12/2019 9:47:22 AM	45450
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/10/2019 11:09:45 PM	45436
Surr: BFB	114	73.8-119		%Rec	1	6/10/2019 11:09:45 PM	45436
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Toluene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Ethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Naphthalene	ND	0.10		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 6:10:18 AM	45436
2-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Acetone	ND	0.75		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Bromobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Bromodichloromethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Bromoform	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436

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 Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP9

Project: Madera

Collection Date: 6/4/2019 4:32:00 PM

Lab ID: 1906314-006

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromomethane	ND	0.15		mg/Kg	1	6/11/2019 6:10:18 AM	45436
2-Butanone	ND	0.50		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Carbon disulfide	ND	0.50		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Carbon tetrachloride	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Chlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Chloroethane	ND	0.10		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Chloroform	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Chloromethane	ND	0.15		mg/Kg	1	6/11/2019 6:10:18 AM	45436
2-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
4-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
cis-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Dibromochloromethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Dibromomethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,1-Dichloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,1-Dichloroethene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,2-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,3-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
2,2-Dichloropropane	ND	0.10		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,1-Dichloropropene	ND	0.10		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Hexachlorobutadiene	ND	0.10		mg/Kg	1	6/11/2019 6:10:18 AM	45436
2-Hexanone	ND	0.50		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Isopropylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
4-Isopropyltoluene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Methylene chloride	ND	0.15		mg/Kg	1	6/11/2019 6:10:18 AM	45436
n-Butylbenzene	ND	0.15		mg/Kg	1	6/11/2019 6:10:18 AM	45436
n-Propylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
sec-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Styrene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
tert-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906314**Date Reported: **6/27/2019****CLIENT:** Souder, Miller & Associates**Client Sample ID:** SP9**Project:** Madera**Collection Date:** 6/4/2019 4:32:00 PM**Lab ID:** 1906314-006**Matrix:** SOIL**Received Date:** 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
trans-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Trichlorofluoromethane	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Vinyl chloride	ND	0.050		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Xylenes, Total	ND	0.10		mg/Kg	1	6/11/2019 6:10:18 AM	45436
Surr: Dibromofluoromethane	80.8	70-130		%Rec	1	6/11/2019 6:10:18 AM	45436
Surr: 1,2-Dichloroethane-d4	86.8	70-130		%Rec	1	6/11/2019 6:10:18 AM	45436
Surr: Toluene-d8	102	70-130		%Rec	1	6/11/2019 6:10:18 AM	45436
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	6/11/2019 6:10:18 AM	45436
EPA METHOD 9040C							Analyst: JRR
pH	7.48			pH Units	1	6/19/2019 11:47:00 AM	R60762

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP16

Project: Madera

Collection Date: 6/4/2019 5:00:00 PM

Lab ID: 1906314-007

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	7000	300		mg/Kg	100	6/19/2019 3:15:49 PM	45665
AMMONIA AS N							Analyst: OG
Nitrogen, Ammonia	ND	50	D	mg/Kg	2	6/18/2019 5:00:00 PM	R60747
EPA METHOD 7471: MERCURY							Analyst: rde
Mercury	ND	0.031		mg/Kg	1	6/12/2019 1:50:58 PM	45533
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.9		mg/Kg	2	6/11/2019 11:38:48 AM	45486
Barium	740	0.49		mg/Kg	5	6/11/2019 11:51:58 AM	45486
Cadmium	ND	0.20		mg/Kg	2	6/11/2019 11:38:48 AM	45486
Chromium	5.4	0.59		mg/Kg	2	6/11/2019 11:38:48 AM	45486
Lead	0.78	0.49		mg/Kg	2	6/11/2019 11:38:48 AM	45486
Selenium	ND	4.9		mg/Kg	2	6/11/2019 11:38:48 AM	45486
Silver	1.0	0.49		mg/Kg	2	6/11/2019 11:38:48 AM	45486
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	330	9.6		mg/Kg	1	6/10/2019 9:52:27 PM	45450
Motor Oil Range Organics (MRO)	290	48		mg/Kg	1	6/10/2019 9:52:27 PM	45450
Surr: DNOP	134	70-130	S	%Rec	1	6/10/2019 9:52:27 PM	45450
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/10/2019 11:55:11 PM	45436
Surr: BFB	107	73.8-119		%Rec	1	6/10/2019 11:55:11 PM	45436
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Toluene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Ethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Naphthalene	ND	0.10		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 6:39:27 AM	45436
2-Methylnaphthalene	ND	0.20		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Acetone	ND	0.75		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Bromobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Bromodichloromethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Bromoform	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436

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 Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906314

Date Reported: 6/27/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SP16

Project: Madera

Collection Date: 6/4/2019 5:00:00 PM

Lab ID: 1906314-007

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromomethane	ND	0.15		mg/Kg	1	6/11/2019 6:39:27 AM	45436
2-Butanone	ND	0.50		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Carbon disulfide	ND	0.50		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Carbon tetrachloride	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Chlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Chloroethane	ND	0.10		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Chloroform	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Chloromethane	ND	0.15		mg/Kg	1	6/11/2019 6:39:27 AM	45436
2-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
4-Chlorotoluene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
cis-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Dibromochloromethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Dibromomethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,1-Dichloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,1-Dichloroethene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,2-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,3-Dichloropropane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
2,2-Dichloropropane	ND	0.10		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,1-Dichloropropene	ND	0.10		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Hexachlorobutadiene	ND	0.10		mg/Kg	1	6/11/2019 6:39:27 AM	45436
2-Hexanone	ND	0.50		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Isopropylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
4-Isopropyltoluene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Methylene chloride	ND	0.15		mg/Kg	1	6/11/2019 6:39:27 AM	45436
n-Butylbenzene	ND	0.15		mg/Kg	1	6/11/2019 6:39:27 AM	45436
n-Propylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
sec-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Styrene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
tert-Butylbenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906314**

Date Reported: **6/27/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: SP16

Project: Madera

Collection Date: 6/4/2019 5:00:00 PM

Lab ID: 1906314-007

Matrix: SOIL

Received Date: 6/6/2019 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
trans-1,2-DCE	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Trichlorofluoromethane	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Vinyl chloride	ND	0.050		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Xylenes, Total	ND	0.10		mg/Kg	1	6/11/2019 6:39:27 AM	45436
Surr: Dibromofluoromethane	83.0	70-130		%Rec	1	6/11/2019 6:39:27 AM	45436
Surr: 1,2-Dichloroethane-d4	95.9	70-130		%Rec	1	6/11/2019 6:39:27 AM	45436
Surr: Toluene-d8	96.6	70-130		%Rec	1	6/11/2019 6:39:27 AM	45436
Surr: 4-Bromofluorobenzene	92.3	70-130		%Rec	1	6/11/2019 6:39:27 AM	45436
EPA METHOD 9040C							Analyst: JRR
pH	7.85			pH Units	1	6/19/2019 11:47:00 AM	R60762

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

ANALYTICAL REPORT

Eurofins TestAmerica, Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

Laboratory Job ID: 490-175825-1
Client Project/Site: Hall Environmental

For:
Hall Environmental Analysis Laboratory
4901 Hawkins NE
Suite D
Albuquerque, New Mexico 87109

Attn: Mr. Andy Freeman



Authorized for release by:
6/24/2019 5:56:05 PM

Cathy Gartner, Project Manager II
(615)301-5041
cathy.gartner@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
490-175825-1	SP1	Solid	06/04/19 15:18	06/12/19 08:55	
490-175825-2	SP3	Solid	06/04/19 15:37	06/12/19 08:55	
490-175825-3	SP5	Solid	06/04/19 16:06	06/12/19 08:55	
490-175825-4	SP6	Solid	06/04/19 16:16	06/12/19 08:55	
490-175825-5	SP7	Solid	06/04/19 16:22	06/12/19 08:55	
490-175825-6	SP9	Solid	06/04/19 16:32	06/12/19 08:55	
490-175825-7	SP16	Solid	06/04/19 17:00	06/12/19 08:55	

Case Narrative

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Job ID: 490-175825-1

Laboratory: Eurofins TestAmerica, Nashville

Narrative

Job Narrative 490-175825-1

Comments

No additional comments.

Receipt

The samples were received on 6/12/2019 8:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5° C.

HPLC/IC

Method(s) 8315A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 490-602117.

Method(s) 8315A: The initial calibration verification (ICV) associated with batch 490-602487 recovered above the upper control limit for Glutaraldehyde. The samples associated with this ICV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SP1 (490-175825-1), SP3 (490-175825-2), SP5 (490-175825-3), SP6 (490-175825-4), SP7 (490-175825-5), SP9 (490-175825-6) and SP16 (490-175825-7).

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

GC Semi VOA

Method(s) 8015B, 8015C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-602179 and analytical batch 490-602126.

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

Organic Prep

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

Definitions/Glossary

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Glossary

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

Client Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Client Sample ID: SP1

Lab Sample ID: 490-175825-1

Date Collected: 06/04/19 15:18

Matrix: Solid

Date Received: 06/12/19 08:55

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	ND		9.63		mg/Kg			06/18/19 14:36	1
Ethanol	ND		9.63		mg/Kg			06/18/19 14:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Isopropyl acetate (Surr)	76		40 - 120					06/18/19 14:36	1

Method: 8315A - Carbonyl Compounds by HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Glutaraldehyde	ND		1.00		mg/Kg		06/18/19 11:14	06/19/19 18:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Butyraldehyde	85		39 - 134				06/18/19 11:14	06/19/19 18:04	1

Client Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Client Sample ID: SP3

Lab Sample ID: 490-175825-2

Date Collected: 06/04/19 15:37

Matrix: Solid

Date Received: 06/12/19 08:55

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	ND		9.78		mg/Kg			06/18/19 14:43	1
Ethanol	ND		9.78		mg/Kg			06/18/19 14:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Isopropyl acetate (Surr)	82		40 - 120					06/18/19 14:43	1

Method: 8315A - Carbonyl Compounds by HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Glutaraldehyde	ND		1.01		mg/Kg		06/18/19 11:14	06/19/19 18:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Butyraldehyde	83		39 - 134				06/18/19 11:14	06/19/19 18:15	1

Client Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Client Sample ID: SP5

Lab Sample ID: 490-175825-3

Date Collected: 06/04/19 16:06

Matrix: Solid

Date Received: 06/12/19 08:55

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	ND		9.84		mg/Kg			06/18/19 14:49	1
Ethanol	ND		9.84		mg/Kg			06/18/19 14:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Isopropyl acetate (Surr)	78		40 - 120					06/18/19 14:49	1

Method: 8315A - Carbonyl Compounds by HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Glutaraldehyde	ND		0.988		mg/Kg		06/18/19 11:14	06/19/19 18:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Butyraldehyde	73		39 - 134				06/18/19 11:14	06/19/19 18:26	1

Client Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Client Sample ID: SP6

Lab Sample ID: 490-175825-4

Date Collected: 06/04/19 16:16

Matrix: Solid

Date Received: 06/12/19 08:55

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	ND		9.65		mg/Kg			06/18/19 14:55	1
Ethanol	ND		9.65		mg/Kg			06/18/19 14:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Isopropyl acetate (Surr)	88		40 - 120					06/18/19 14:55	1

Method: 8315A - Carbonyl Compounds by HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Glutaraldehyde	ND		1.00		mg/Kg		06/18/19 11:14	06/19/19 18:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Butyraldehyde	82		39 - 134				06/18/19 11:14	06/19/19 18:36	1

Client Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Client Sample ID: SP7

Lab Sample ID: 490-175825-5

Date Collected: 06/04/19 16:22

Matrix: Solid

Date Received: 06/12/19 08:55

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	ND		9.90		mg/Kg			06/18/19 15:01	1
Ethanol	ND		9.90		mg/Kg			06/18/19 15:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Isopropyl acetate (Surr)	88		40 - 120					06/18/19 15:01	1

Method: 8315A - Carbonyl Compounds by HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Glutaraldehyde	ND		0.998		mg/Kg		06/18/19 11:14	06/19/19 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Butyraldehyde	82		39 - 134				06/18/19 11:14	06/19/19 18:47	1

Client Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Client Sample ID: SP9

Lab Sample ID: 490-175825-6

Date Collected: 06/04/19 16:32

Matrix: Solid

Date Received: 06/12/19 08:55

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	ND		9.94		mg/Kg			06/18/19 15:07	1
Ethanol	ND		9.94		mg/Kg			06/18/19 15:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Isopropyl acetate (Surr)	92		40 - 120					06/18/19 15:07	1

Method: 8315A - Carbonyl Compounds by HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Glutaraldehyde	ND		0.998		mg/Kg		06/18/19 11:14	06/19/19 18:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Butyraldehyde	84		39 - 134				06/18/19 11:14	06/19/19 18:58	1

Client Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Client Sample ID: SP16

Date Collected: 06/04/19 17:00

Date Received: 06/12/19 08:55

Lab Sample ID: 490-175825-7

Matrix: Solid

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	ND		9.84		mg/Kg			06/18/19 15:13	1
Ethanol	ND		9.84		mg/Kg			06/18/19 15:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Isopropyl acetate (Surr)	91		40 - 120					06/18/19 15:13	1

Method: 8315A - Carbonyl Compounds by HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Glutaraldehyde	ND		1.00		mg/Kg		06/18/19 11:14	06/19/19 19:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Butyraldehyde	82		39 - 134				06/18/19 11:14	06/19/19 19:29	1

QC Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 490-602179/1-A

Matrix: Solid

Analysis Batch: 602126

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	ND		9.94		mg/Kg			06/18/19 14:12	1
Ethanol	ND		9.94		mg/Kg			06/18/19 14:12	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Isopropyl acetate (Surr)	65		40 - 120					06/18/19 14:12	1

Lab Sample ID: LCS 490-602179/2-A

Matrix: Solid

Analysis Batch: 602126

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methanol	39.9	41.81		mg/Kg		105	70 - 130
Ethanol	39.9	41.11		mg/Kg		103	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Isopropyl acetate (Surr)	84		40 - 120				

Lab Sample ID: LCSD 490-602179/3-A

Matrix: Solid

Analysis Batch: 602126

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methanol	39.6	40.03		mg/Kg		101	70 - 130	4	21
Ethanol	39.6	39.22		mg/Kg		99	70 - 130	5	18
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
Isopropyl acetate (Surr)	76		40 - 120						

Method: 8315A - Carbonyl Compounds by HPLC

Lab Sample ID: MB 490-602117/1-A

Matrix: Solid

Analysis Batch: 602487

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 602117

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Glutaraldehyde	ND		1.00		mg/Kg		06/18/19 11:13	06/19/19 17:22	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Butyraldehyde	79		39 - 134				06/18/19 11:13	06/19/19 17:22	1

Lab Sample ID: LCS 490-602117/2-A

Matrix: Solid

Analysis Batch: 602487

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 602117

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Glutaraldehyde	2.00	2.100		mg/Kg		105	10 - 150

Eurofins TestAmerica, Nashville

QC Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Method: 8315A - Carbonyl Compounds by HPLC (Continued)

Lab Sample ID: LCS 490-602117/2-A

Matrix: Solid

Analysis Batch: 602487

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 602117

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Butyraldehyde	79		39 - 134

Lab Sample ID: LCSD 490-602117/3-A

Matrix: Solid

Analysis Batch: 602487

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 602117

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Glutaraldehyde			2.00	2.108		mg/Kg	-	105	10 - 150	0	40	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Butyraldehyde	77		39 - 134

QC Association Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

GC VOA

Analysis Batch: 602126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-175825-1	SP1	Soluble	Solid	8015B	602179
490-175825-2	SP3	Soluble	Solid	8015B	602179
490-175825-3	SP5	Soluble	Solid	8015B	602179
490-175825-4	SP6	Soluble	Solid	8015B	602179
490-175825-5	SP7	Soluble	Solid	8015B	602179
490-175825-6	SP9	Soluble	Solid	8015B	602179
490-175825-7	SP16	Soluble	Solid	8015B	602179
MB 490-602179/1-A	Method Blank	Soluble	Solid	8015B	602179
LCS 490-602179/2-A	Lab Control Sample	Soluble	Solid	8015B	602179
LCSD 490-602179/3-A	Lab Control Sample Dup	Soluble	Solid	8015B	602179

Leach Batch: 602179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-175825-1	SP1	Soluble	Solid	DI Leach	
490-175825-2	SP3	Soluble	Solid	DI Leach	
490-175825-3	SP5	Soluble	Solid	DI Leach	
490-175825-4	SP6	Soluble	Solid	DI Leach	
490-175825-5	SP7	Soluble	Solid	DI Leach	
490-175825-6	SP9	Soluble	Solid	DI Leach	
490-175825-7	SP16	Soluble	Solid	DI Leach	
MB 490-602179/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 490-602179/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 490-602179/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

HPLC/IC

Prep Batch: 602117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-175825-1	SP1	Total/NA	Solid	8315A Prep	
490-175825-2	SP3	Total/NA	Solid	8315A Prep	
490-175825-3	SP5	Total/NA	Solid	8315A Prep	
490-175825-4	SP6	Total/NA	Solid	8315A Prep	
490-175825-5	SP7	Total/NA	Solid	8315A Prep	
490-175825-6	SP9	Total/NA	Solid	8315A Prep	
490-175825-7	SP16	Total/NA	Solid	8315A Prep	
MB 490-602117/1-A	Method Blank	Total/NA	Solid	8315A Prep	
LCS 490-602117/2-A	Lab Control Sample	Total/NA	Solid	8315A Prep	
LCSD 490-602117/3-A	Lab Control Sample Dup	Total/NA	Solid	8315A Prep	

Analysis Batch: 602487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-175825-1	SP1	Total/NA	Solid	8315A	602117
490-175825-2	SP3	Total/NA	Solid	8315A	602117
490-175825-3	SP5	Total/NA	Solid	8315A	602117
490-175825-4	SP6	Total/NA	Solid	8315A	602117
490-175825-5	SP7	Total/NA	Solid	8315A	602117
490-175825-6	SP9	Total/NA	Solid	8315A	602117
490-175825-7	SP16	Total/NA	Solid	8315A	602117
MB 490-602117/1-A	Method Blank	Total/NA	Solid	8315A	602117
LCS 490-602117/2-A	Lab Control Sample	Total/NA	Solid	8315A	602117
LCSD 490-602117/3-A	Lab Control Sample Dup	Total/NA	Solid	8315A	602117

Eurofins TestAmerica, Nashville

Lab Chronicle

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Client Sample ID: SP1

Date Collected: 06/04/19 15:18

Date Received: 06/12/19 08:55

Lab Sample ID: 490-175825-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.19 g	5 mL	602179	06/18/19 13:46	AAB	TAL NSH
Soluble	Analysis	8015B		1			602126	06/18/19 14:36	AAB	TAL NSH
Total/NA	Prep	8315A Prep			5.00 g	1 mL	602117	06/18/19 11:14	MCO	TAL NSH
Total/NA	Analysis	8315A		1			602487	06/19/19 18:04	GMH	TAL NSH

Client Sample ID: SP3

Date Collected: 06/04/19 15:37

Date Received: 06/12/19 08:55

Lab Sample ID: 490-175825-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.11 g	5 mL	602179	06/18/19 13:46	AAB	TAL NSH
Soluble	Analysis	8015B		1			602126	06/18/19 14:43	AAB	TAL NSH
Total/NA	Prep	8315A Prep			4.97 g	1 mL	602117	06/18/19 11:14	MCO	TAL NSH
Total/NA	Analysis	8315A		1			602487	06/19/19 18:15	GMH	TAL NSH

Client Sample ID: SP5

Date Collected: 06/04/19 16:06

Date Received: 06/12/19 08:55

Lab Sample ID: 490-175825-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.08 g	5 mL	602179	06/18/19 13:46	AAB	TAL NSH
Soluble	Analysis	8015B		1			602126	06/18/19 14:49	AAB	TAL NSH
Total/NA	Prep	8315A Prep			5.06 g	1 mL	602117	06/18/19 11:14	MCO	TAL NSH
Total/NA	Analysis	8315A		1			602487	06/19/19 18:26	GMH	TAL NSH

Client Sample ID: SP6

Date Collected: 06/04/19 16:16

Date Received: 06/12/19 08:55

Lab Sample ID: 490-175825-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.18 g	5 mL	602179	06/18/19 13:46	AAB	TAL NSH
Soluble	Analysis	8015B		1			602126	06/18/19 14:55	AAB	TAL NSH
Total/NA	Prep	8315A Prep			4.98 g	1 mL	602117	06/18/19 11:14	MCO	TAL NSH
Total/NA	Analysis	8315A		1			602487	06/19/19 18:36	GMH	TAL NSH

Client Sample ID: SP7

Date Collected: 06/04/19 16:22

Date Received: 06/12/19 08:55

Lab Sample ID: 490-175825-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	5 mL	602179	06/18/19 13:46	AAB	TAL NSH
Soluble	Analysis	8015B		1			602126	06/18/19 15:01	AAB	TAL NSH
Total/NA	Prep	8315A Prep			5.01 g	1 mL	602117	06/18/19 11:14	MCO	TAL NSH
Total/NA	Analysis	8315A		1			602487	06/19/19 18:47	GMH	TAL NSH

Eurofins TestAmerica, Nashville

Lab Chronicle

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Client Sample ID: SP9

Date Collected: 06/04/19 16:32

Date Received: 06/12/19 08:55

Lab Sample ID: 490-175825-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	5 mL	602179	06/18/19 13:46	AAB	TAL NSH
Soluble	Analysis	8015B		1			602126	06/18/19 15:07	AAB	TAL NSH
Total/NA	Prep	8315A Prep			5.01 g	1 mL	602117	06/18/19 11:14	MCO	TAL NSH
Total/NA	Analysis	8315A		1			602487	06/19/19 18:58	GMH	TAL NSH

Client Sample ID: SP16

Date Collected: 06/04/19 17:00

Date Received: 06/12/19 08:55

Lab Sample ID: 490-175825-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.08 g	5 mL	602179	06/18/19 13:46	AAB	TAL NSH
Soluble	Analysis	8015B		1			602126	06/18/19 15:13	AAB	TAL NSH
Total/NA	Prep	8315A Prep			4.99 g	1 mL	602117	06/18/19 11:14	MCO	TAL NSH
Total/NA	Analysis	8315A		1			602487	06/19/19 19:29	GMH	TAL NSH

Laboratory References:

TAL NSH = Eurofins TestAmerica, Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Method	Method Description	Protocol	Laboratory
8015B	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	TAL NSH
8315A	Carbonyl Compounds by HPLC	SW846	TAL NSH
8315A Prep	Extraction (Carbonyl Compounds)	SW846	TAL NSH
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL NSH

Protocol References:

ASTM = ASTM International

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

Laboratory References:

TAL NSH = Eurofins TestAmerica, Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: Hall Environmental

Job ID: 490-175825-1

Laboratory: Eurofins TestAmerica, Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-19
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	09-30-19
Arizona	State Program	9	AZ0473	05-05-20
Arkansas DEQ	State Program	6	88-0737	04-25-20
California	State Program	9	2938	06-30-19
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-19
Georgia	State Program	4	NA: NELAP & A2LA	12-31-19
Illinois	NELAP	5	200010	12-09-19
Iowa	State Program	7	131	04-01-20
Kansas	NELAP	7	E-10229	10-31-19
Kentucky (UST)	State Program	4	19	06-30-19
Kentucky (WW)	State Program	4	90038	12-31-19
Louisiana	NELAP	6	30613	06-30-20
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-20
Massachusetts	State Program	1	M-TN032	06-30-20
Minnesota	NELAP	5	047-999-345	12-31-19
Mississippi	State Program	4	N/A	06-30-19
Nevada	State Program	9	TN00032	07-31-19
New Hampshire	NELAP	1	2963	10-09-19
New Jersey	NELAP	2	TN965	06-30-20
New York	NELAP	2	11342	03-31-20
North Carolina (WW/SW)	State Program	4	387	12-31-19
North Dakota	State Program	8	R-146	06-30-19
Oklahoma	State Program	6	9412	08-31-19
Oregon	NELAP	10	TN200001	04-26-20
Pennsylvania	NELAP	3	68-00585	07-31-19
Rhode Island	State Program	1	LAO00268	12-30-19
South Carolina	State Program	4	84009 (001)	02-28-19 *
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-19
USDA	Federal		P330-13-00306	04-10-20
Utah	NELAP	8	TN00032	07-31-19
Virginia	NELAP	3	460152	06-14-20
Washington	State Program	10	C789	07-19-19
West Virginia DEP	State Program	3	219	02-28-20
Wisconsin	State Program	5	998020430	08-31-19
Wyoming (UST)	A2LA	8	453.07	12-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Nashville

COOLER RECEIPT FORM



490-175825 Chain of Custody

Cooler Received/Opened On 6/12/2019 @ 8:55

Time Samples Removed From Cooler 14:44 Time Samples Placed In Storage 14:47 (2 Hour Window)

1. Tracking # 2727 (last 4 digits, FedEx) Courier: FedEx
IR Gun ID 17960358 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 1.5 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) _____

7. Were custody seals on containers: YES NO and intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA



Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) _____

I certify that I attached a label with the unique LIMS number to each container (initial) _____

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...# _____



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

SUB CONTRACTOR: TEST AMERICA TN		COMPANY: TEST AMERICA		PHONE: (615) 726-0177	FAX: Loc: 490		
ADDRESS: 2960 FOSTER CREIGHTON		ACCOUNT #:		EMAIL: 175825			
CITY, STATE, ZIP: NASHVILLE, TN 37204							
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	1906314-001B	SP1	4OZGU	Soil	6/4/2019 3:18:00 PM	1	Gluteraldehyde, Ethanol/Methanol
2	1906314-002B	SP3	4OZGU	Soil	6/4/2019 3:37:00 PM	1	Gluteraldehyde, Ethanol/Methanol
3	1906314-003B	SP5	4OZGU	Soil	6/4/2019 4:06:00 PM	1	Gluteraldehyde, Ethanol/Methanol
4	1906314-004B	SP6	4OZGU	Soil	6/4/2019 4:16:00 PM	1	Gluteraldehyde, Ethanol/Methanol
5	1906314-005B	SP7	4OZGU	Soil	6/4/2019 4:22:00 PM	1	Gluteraldehyde, Ethanol/Methanol
6	1906314-006B	SP9	4OZGU	Soil	6/4/2019 4:32:00 PM	1	Gluteraldehyde, Ethanol/Methanol
7	1906314-007B	SP16	4OZGU	Soil	6/4/2019 5:00:00 PM	1	Gluteraldehyde, Ethanol/Methanol

SPECIAL INSTRUCTIONS/ COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: yue	Date: 6/6/2019	Time: 4:28 PM	Received By: [Signature]	Date: 6/12/19	Time: 8:55
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
TAT: Standard y	RUSH	Next BD	2nd BD	3rd BD	
REPORT TRANSMITTAL DESIRED: ☐ HARD COPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE					
FOR LAB USE ONLY Temp of samples 1.5 °C Attempt to Cool? Y Comments:					

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: MB-45665	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45665	RunNo: 60725								
Prep Date: 6/18/2019	Analysis Date: 6/18/2019	SeqNo: 2056391	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45665	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45665	RunNo: 60725								
Prep Date: 6/18/2019	Analysis Date: 6/18/2019	SeqNo: 2056392	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

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 Quantitative 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#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: MB-45450	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 45450		RunNo: 60512							
Prep Date: 6/7/2019	Analysis Date: 6/10/2019		SeqNo: 2047733		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		100	70	130			

Sample ID: LCS-45450	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 45450		RunNo: 60512							
Prep Date: 6/7/2019	Analysis Date: 6/10/2019		SeqNo: 2047735		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	63.9	124			
Surr: DNOP	3.9		5.000		77.6	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 Quantitative 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#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: MB-45436	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45436	RunNo: 60518								
Prep Date: 6/7/2019	Analysis Date: 6/10/2019	SeqNo: 2047779	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		95.6	73.8	119			

Sample ID: LCS-45436	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45436	RunNo: 60518								
Prep Date: 6/7/2019	Analysis Date: 6/10/2019	SeqNo: 2047780	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.1	80.1	123			
Surr: BFB	1100		1000		112	73.8	119			

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 Quantitative 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#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: mb-45436	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles								
Client ID: PBS	Batch ID: 45436	RunNo: 60516								
Prep Date: 6/7/2019	Analysis Date: 6/10/2019	SeqNo: 2047917	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								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

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 Quantitative 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#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: mb-45436	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles								
Client ID: PBS	Batch ID: 45436	RunNo: 60516								
Prep Date: 6/7/2019	Analysis Date: 6/10/2019	SeqNo: 2047917	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.46		0.5000		91.5	70	130			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		98.1	70	130			
Surr: Toluene-d8	0.48		0.5000		96.5	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.2	70	130			

Sample ID: lcs-45436	SampType: LCS	TestCode: EPA Method 8260B: Volatiles								
Client ID: LCSS	Batch ID: 45436	RunNo: 60516								
Prep Date: 6/7/2019	Analysis Date: 6/10/2019	SeqNo: 2047918	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	105	70	130			
Toluene	0.97	0.050	1.000	0	97.5	70	130			
Chlorobenzene	0.96	0.050	1.000	0	95.8	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 Quantitative 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#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: Ics-45436	SampType: LCS		TestCode: EPA Method 8260B: Volatiles							
Client ID: LCSS	Batch ID: 45436		RunNo: 60516							
Prep Date: 6/7/2019	Analysis Date: 6/10/2019		SeqNo: 2047918		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.0	0.050	1.000	0	102	50.8	164			
Trichloroethene (TCE)	0.90	0.050	1.000	0	89.6	70	130			
Surr: Dibromofluoromethane	0.44		0.5000		87.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		99.3	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.4	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 Quantitative 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#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: MB-45533	SampType: MBLK	TestCode: EPA Method 7471: Mercury
Client ID: PBS	Batch ID: 45533	RunNo: 60586
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050008 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Mercury	ND	0.033

Sample ID: LCS-45533	SampType: LCS	TestCode: EPA Method 7471: Mercury
Client ID: LCSS	Batch ID: 45533	RunNo: 60586
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050009 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Mercury	0.17	0.033 0.1667 0 103 80 120

Sample ID: LLLCS-45533	SampType: LCSLL	TestCode: EPA Method 7471: Mercury
Client ID: BatchQC	Batch ID: 45533	RunNo: 60586
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050010 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Mercury	ND	0.033 0.006660 0 84.4 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 Quantitative 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#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: MB-45486	SampType: MBLK	TestCode: EPA Method 6010B: Soil Metals								
Client ID: PBS	Batch ID: 45486	RunNo: 60545								
Prep Date: 6/10/2019	Analysis Date: 6/11/2019	SeqNo: 2048497	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Lead	ND	0.25								
Selenium	ND	2.5								
Silver	ND	0.25								

Sample ID: LCS-45486	SampType: LCS	TestCode: EPA Method 6010B: Soil Metals								
Client ID: LCSS	Batch ID: 45486	RunNo: 60545								
Prep Date: 6/10/2019	Analysis Date: 6/11/2019	SeqNo: 2048498	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.3	80	120			
Barium	25	0.10	25.00	0	98.1	80	120			
Cadmium	25	0.10	25.00	0	100	80	120			
Chromium	25	0.30	25.00	0	99.2	80	120			
Lead	25	0.25	25.00	0	100	80	120			
Selenium	24	2.5	25.00	0	95.0	80	120			
Silver	5.0	0.25	5.000	0	99.3	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 Quantitative 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#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: MB	SampType: MBLK	TestCode: Ammonia as N								
Client ID: PBS	Batch ID: R60747	RunNo: 60747								
Prep Date:	Analysis Date: 6/18/2019	SeqNo: 2055816	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	25								

Sample ID: LCS	SampType: LCS	TestCode: Ammonia as N								
Client ID: LCSS	Batch ID: R60747	RunNo: 60747								
Prep Date:	Analysis Date: 6/18/2019	SeqNo: 2055817	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	500	25	500.0	0	101	80	120			

Sample ID: 1906314-001AMS	SampType: MS	TestCode: Ammonia as N								
Client ID: SP1	Batch ID: R60747	RunNo: 60747								
Prep Date:	Analysis Date: 6/18/2019	SeqNo: 2055823	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	2000	100	2000	56.00	98.0	75	125			

Sample ID: 1906314-001AMSD	SampType: MSD	TestCode: Ammonia as N								
Client ID: SP1	Batch ID: R60747	RunNo: 60747								
Prep Date:	Analysis Date: 6/18/2019	SeqNo: 2055824	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	2000	100	2000	56.00	98.0	75	125	0	20	D

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 Quantitative 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#: 1906314

27-Jun-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: 1906314-001ADUP		SampType: DUP		TestCode: EPA Method 9040C						
Client ID: SP1		Batch ID: R60762		RunNo: 60762						
Prep Date:		Analysis Date: 6/19/2019		SeqNo: 2056603		Units: pH Units				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.90									

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 Quantitative 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

Sample Log-In Check List

Client Name: **SMA-CARLSBAD**

Work Order Number: **1906314**

RcptNo: 1

Received By: **Isaiah Ortiz** 6/6/2019 8:40:00 AM

Completed By: **Yazmine Garduno** 6/6/2019 3:25:33 PM

Reviewed By: **YG 6/7/19**

I-Ox

Yazmine Garduno

Chain of Custody

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

Log In

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

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

Adjusted?

Checked by: **DAD 6/7/19**

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

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



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

September 19, 2019

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

RE: Madera

OrderNo.: 1909710

Dear Hernryetta Price:

Hall Environmental Analysis Laboratory received 10 sample(s) on 9/13/2019 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L1 @ 0.5'

Project: Madera

Collection Date: 9/10/2019 9:00:00 AM

Lab ID: 1909710-001

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3300	150		mg/Kg	50	9/19/2019 1:16:46 AM	47518
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/17/2019 5:45:00 PM	47506
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/17/2019 5:45:00 PM	47506
Surr: DNOP	97.7	70-130		%Rec	1	9/17/2019 5:45:00 PM	47506
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/17/2019 10:01:19 AM	47505
Surr: BFB	98.1	77.4-118		%Rec	1	9/17/2019 10:01:19 AM	47505

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L1 @ 4'

Project: Madera

Collection Date: 9/10/2019 11:55:00 AM

Lab ID: 1909710-002

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	550	60		mg/Kg	20	9/17/2019 10:14:42 PM	47518

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L2 @ 0.5'

Project: Madera

Collection Date: 9/10/2019 9:07:00 AM

Lab ID: 1909710-003

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	64	60		mg/Kg	20	9/17/2019 10:27:06 PM	47518
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/17/2019 6:51:36 PM	47506
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/17/2019 6:51:36 PM	47506
Surr: DNOP	91.3	70-130		%Rec	1	9/17/2019 6:51:36 PM	47506
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/17/2019 11:09:50 AM	47505
Surr: BFB	96.7	77.4-118		%Rec	1	9/17/2019 11:09:50 AM	47505

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L3 @ 0.5'

Project: Madera

Collection Date: 9/10/2019 9:22:00 AM

Lab ID: 1909710-004

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	900	60		mg/Kg	20	9/17/2019 10:39:31 PM	47518
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	48	9.4		mg/Kg	1	9/17/2019 7:13:44 PM	47506
Motor Oil Range Organics (MRO)	81	47		mg/Kg	1	9/17/2019 7:13:44 PM	47506
Surr: DNOP	99.9	70-130		%Rec	1	9/17/2019 7:13:44 PM	47506
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/17/2019 11:32:41 AM	47505
Surr: BFB	98.3	77.4-118		%Rec	1	9/17/2019 11:32:41 AM	47505

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L3 @ 1'

Project: Madera

Collection Date: 9/10/2019 9:23:00 AM

Lab ID: 1909710-005

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	210	60		mg/Kg	20	9/17/2019 10:51:55 PM	47518

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L4 @ 0.5'

Project: Madera

Collection Date: 9/10/2019 9:31:00 AM

Lab ID: 1909710-006

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	520	60		mg/Kg	20	9/18/2019 6:43:31 AM	47522
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/17/2019 7:36:07 PM	47506
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/17/2019 7:36:07 PM	47506
Surr: DNOP	75.0	70-130		%Rec	1	9/17/2019 7:36:07 PM	47506
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/17/2019 11:55:31 AM	47505
Surr: BFB	101	77.4-118		%Rec	1	9/17/2019 11:55:31 AM	47505

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L4 @ 1'

Project: Madera

Collection Date: 9/10/2019 9:32:00 AM

Lab ID: 1909710-007

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	98	60		mg/Kg	20	9/18/2019 7:20:45 AM	47522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L5 @ 0.5'

Project: Madera

Collection Date: 9/10/2019 9:40:00 AM

Lab ID: 1909710-008

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	9/18/2019 7:33:09 AM	47522
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/17/2019 7:58:19 PM	47506
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/17/2019 7:58:19 PM	47506
Surr: DNOP	81.2	70-130		%Rec	1	9/17/2019 7:58:19 PM	47506
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/17/2019 12:18:19 PM	47505
Surr: BFB	97.1	77.4-118		%Rec	1	9/17/2019 12:18:19 PM	47505

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L6 @ 0.5'

Project: Madera

Collection Date: 9/10/2019 9:55:00 AM

Lab ID: 1909710-009

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1300	60		mg/Kg	20	9/18/2019 8:10:22 AM	47522
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	25	9.2		mg/Kg	1	9/17/2019 8:20:38 PM	47506
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/17/2019 8:20:38 PM	47506
Surr: DNOP	84.0	70-130		%Rec	1	9/17/2019 8:20:38 PM	47506
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/17/2019 12:41:06 PM	47505
Surr: BFB	98.0	77.4-118		%Rec	1	9/17/2019 12:41:06 PM	47505

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1909710**

Date Reported: **9/19/2019**

CLIENT: Souder, Miller & Associates

Client Sample ID: L6 @ 1'

Project: Madera

Collection Date: 9/10/2019 9:56:00 AM

Lab ID: 1909710-010

Matrix: SOIL

Received Date: 9/13/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	110	60		mg/Kg	20	9/18/2019 8:22:47 AM	47522

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1909710

19-Sep-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: MB-47518	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 47518	RunNo: 62982								
Prep Date: 9/17/2019	Analysis Date: 9/17/2019	SeqNo: 2148419			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-47518	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 47518	RunNo: 62982								
Prep Date: 9/17/2019	Analysis Date: 9/17/2019	SeqNo: 2148420			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.6	90	110			

Sample ID: MB-47522	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 47522	RunNo: 62982								
Prep Date: 9/17/2019	Analysis Date: 9/17/2019	SeqNo: 2148437			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-47522	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 47522	RunNo: 62982								
Prep Date: 9/17/2019	Analysis Date: 9/17/2019	SeqNo: 2148438			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.5	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative 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#: 1909710

19-Sep-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: 1909710-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: L1 @ 0.5'	Batch ID: 47506	RunNo: 62977
Prep Date: 9/16/2019	Analysis Date: 9/17/2019	SeqNo: 2147609 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	49	9.8 49.21 0 100 57 142
Surr: DNOP	4.1	4.921 83.0 70 130

Sample ID: 1909710-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: L1 @ 0.5'	Batch ID: 47506	RunNo: 62977
Prep Date: 9/16/2019	Analysis Date: 9/17/2019	SeqNo: 2147610 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	50	9.7 48.36 0 102 57 142 0.347 20
Surr: DNOP	4.1	4.836 85.2 70 130 0 0

Sample ID: LCS-47506	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 47506	RunNo: 62977
Prep Date: 9/16/2019	Analysis Date: 9/17/2019	SeqNo: 2147630 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	53	10 50.00 0 105 63.9 124
Surr: DNOP	4.2	5.000 83.9 70 130

Sample ID: MB-47506	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 47506	RunNo: 62977
Prep Date: 9/16/2019	Analysis Date: 9/17/2019	SeqNo: 2147631 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	9.0	10.00 90.0 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 Quantitative 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#: 1909710

19-Sep-19

Client: Souder, Miller & Associates

Project: Madera

Sample ID: MB-47505	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range
Client ID: PBS	Batch ID: 47505	RunNo: 62993
Prep Date: 9/16/2019	Analysis Date: 9/17/2019	SeqNo: 2147519 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	ND	5.0
Surr: BFB	970	1000 96.9 77.4 118

Sample ID: LCS-47505	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: 47505	RunNo: 62993
Prep Date: 9/16/2019	Analysis Date: 9/17/2019	SeqNo: 2147520 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	21	5.0 25.00 0 83.8 80 120
Surr: BFB	1100	1000 111 77.4 118

Sample ID: 1909710-001AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range
Client ID: L1 @ 0.5'	Batch ID: 47505	RunNo: 62993
Prep Date: 9/16/2019	Analysis Date: 9/17/2019	SeqNo: 2147522 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	24	4.9 24.53 0 96.5 69.1 142
Surr: BFB	1200	981.4 120 77.4 118 S

Sample ID: 1909710-001AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range
Client ID: L1 @ 0.5'	Batch ID: 47505	RunNo: 62993
Prep Date: 9/16/2019	Analysis Date: 9/17/2019	SeqNo: 2147523 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	21	4.8 23.92 0 89.1 69.1 142 10.5 20
Surr: BFB	1100	956.9 116 77.4 118 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 Quantitative 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

Sample Log-In Check List

Client Name: **SMA-CARLSBAD**

Work Order Number: **1909710**

RcptNo: **1**

Received By: **Yazmine Garduno** 9/13/2019 9:30:00 AM

Completed By: **Erin Melendrez** 9/13/2019 2:42:45 PM

Reviewed By: *DM* 9/13/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels? Yes ☒ No ☐
(Note discrepancies on chain of custody)
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? Yes ☒ No ☐
(If no, notify customer for authorization.)

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

Adjusted? _____

Checked by: *LB 9/13/19*

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	1.3	Good	Yes			
2	1.4	Good	Yes			
3	6.0	Good	Yes			
4	0.5	Good	Yes			

Sample Log-In Check List

Client Name: **SMA-CARLSBAD**

Work Order Number: **1909710**

RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
5	5.8	Good	Yes			
6	5.4	Good	Yes			
7	5.6	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client:	SMH	☐ Standard ☒ Rush 5 day
Mailing Address:	Carlsbad	Project Name: Maderna

Turn-Around Time:

☐ Standard
Project Name

☒ Rush 5 day

Mailing Address:

Madem

Project #:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Date	Time
------	------

Sample Name

1101002	1000
---------	------

1104 521

7960 120051

1-30051

2003

	0921
115002	

2022	1401
------	------

1500	1500
------	------

2	20
3	20
4	20
5	20
6	20
7	20
8	20
9	20
10	20
11	20
12	20
13	20
14	20
15	20
16	20
17	20
18	20
19	20
20	20

110	22
-----	----

Date:	Time:
-------	-------

Walter Price

Date:	Time:	Relinquished by:
-------	-------	------------------

Relinquished by: 

Received by: Via:

Date _____ Time _____

Received by: Via:

Date _____
Time _____

Mr. Con

11/13/19

Remarks:

Marathon

$$5.5 + 0.3 = 5.8$$
$$5.1 + 0.3 = 5.4$$
$$5.3 + 0.3 = 5.6$$

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