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

February 7, 2019

#55E26816-BG16

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

SUBJECT: Remediation Closure Report for the Tom Mathews Tank Battery Release (2RP-4995), Malaga, Eddy County, New Mexico

Dear Mr. Hamlet:

On behalf of Matador Resources, Souder, Miller & Associates (SMA) has prepared this Remediation Closure Report that describes the remediation of a release of liquids related to oil and gas production activities at the Tom Mathews Tank Battery site. The site is in Unit L, Section 10, Township 24S, Range 28E, Eddy County, New Mexico, on private land. Figure 1 illustrates the vicinity and site location on an USGS 7.5-minute quadrangle map.

Table 1 summarizes release information and Closure Criteria.

Table 1: Release Information and Closure Criteria			
Name	TOM MATTHEWS TB	Company	Matador Resources Company
API Number	N/A	Location	32.229609° -104.083454°
Incident Number	2RP-4995		
Estimated Date of Release	9/19/18	Date Reported to NMOCD	9/19/18
Land Owner	VASQUEZ, MIKE M	Reported To	Jim Griswold, Mike Bratcher, Maria Pruett
Source of Release	Equipment Failure		
Released Volume	920	Released Material	Produced Water
Recovered Volume	280	Net Release	640
NMOCD Closure Criteria	<50 feet to groundwater		
SMA Response Dates	9/19/18		

1.0 Background

On September 19, 2018, a release was discovered at the Tom Mathews Tank Battery site due to equipment failure Initial response activities were conducted by operator, and included [source elimination and site security; containment; site stabilization] activities, which recovered approximately 280 barrels of fluid and approximately 40 cubic yards of contaminated soil, which were hauled to and disposed of at an NMOCD approved facility in NM. 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 Tom Mathews Tank Battery is located approximately 0.7 miles west of Malaga, New Mexico on privately-owned land at an elevation of approximately 3,020 feet above mean sea level (amsl).

Based upon (Appendix B), depth to groundwater in the area is estimated to be 25 feet below grade surface (bgs). There are 4 known water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed 1/11/2018). The nearest significant watercourse is Black River, located approximately 0.33 miles north of site. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it Choose an item. lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of less than 50 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC. Requesting a deferral per 19.15.29.12.B.(2), to allow the area labeled Deferment in Figure 3 to be deferred due to inaccessibility of soil from the placement of operational equipment. This soil will remain in place until site abonnement which at that point remediation of soils would occur.

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

3.0 Release Characterization Activities and Findings

On September 21, 2019 2018, SMA personnel arrived on site in response to the release associated with backhoe. SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly stained area. Soil samples were field-screened for chloride using an electrical conductivity (EC) meter and/or for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp.

A total of eight sample locations (L1-L6, BBG1 and BBG2) were investigated using excavated test pits, to depths up to six feet bgs. A minimum of two samples were collected at each sampling location and field-screened using the methods above. A total of 15 samples were collected for laboratory analysis for total chloride using EPA Method 300.0. Table 3 itemizes the samples and results as well as identifying any variances from the typical specification of two samples per boring. Locations for all samples are depicted on Figure 3.

Laboratory samples were collected in accordance with the sampling protocol. 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, results indicate that an area approximately 2,225 square yards by 1 foot deep and 131 square yards by 2 feet deep had been impacted.

4.0 Soil Remediation Summary

SMA returned to the site to oversee the excavation of contaminated soil. After approval from area utilities via 811, SMA guided the excavation activities by collecting soil samples for field screening. Samples were screened for chloride using an electrical conductivity (EC) meter. The walls and base were excavated until the NMOCD Closure Criteria would be met.

On December 20, 2019 SMA conducted confirmation sampling of the walls and base of the excavation, which measured approximately dimensions. feet. The area around sample locations L1-L5 and B2-B12 was excavated to a depth of 1.5 feet bgs, sample location L6 and Bh1 was excavated to a depth of 2.5 feet bgs. The confirmation samples were collected from within the excavation. Confirmation samples were comprised of five-point composites of the base (B1-B12) and walls (SW1, S2-S15).

An Area that is requested for deferment is shown in Figure 3. This area cannot be excavated due to the proximity of the operational equipment in the area. Contaminated soil in the deferment area will be addressed at the time of site abandonment. Sample Location S13 and S14 where taken within the deferment area along the pipelines.

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

Contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil was transported and disposed of at an NMOCD permitted disposal facility.

5.0 Scope and Limitations

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

If there are any questions regarding this report, please contact either Austin Weyant at 575-689-8801 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:

Lucas C. Middleton
Staff Scientist

Austin Weyant
Senior Scientist

ATTACHMENTS:

Figures:

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

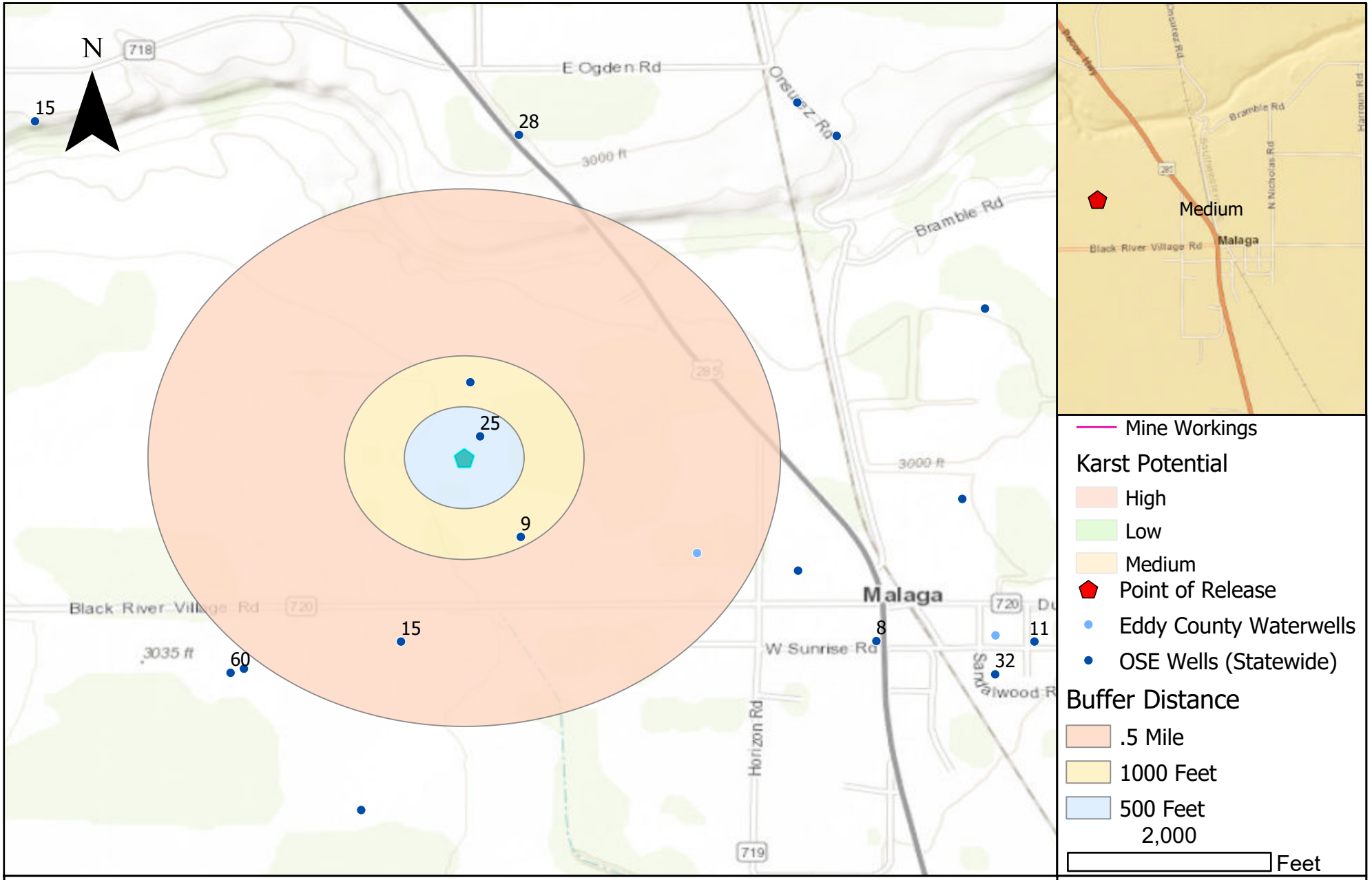
Tables:

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

Appendices:

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

FIGURES



Regional Vicinity & Wellhead Protection Map
TOM MATTHEWS TB - Matador Resources
Eddy County , NM UL: I S: 10 T24S R28E

Figure 1

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Date Saved: 1/9/2019

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

Drawn	LCM
Date	1/9/2019
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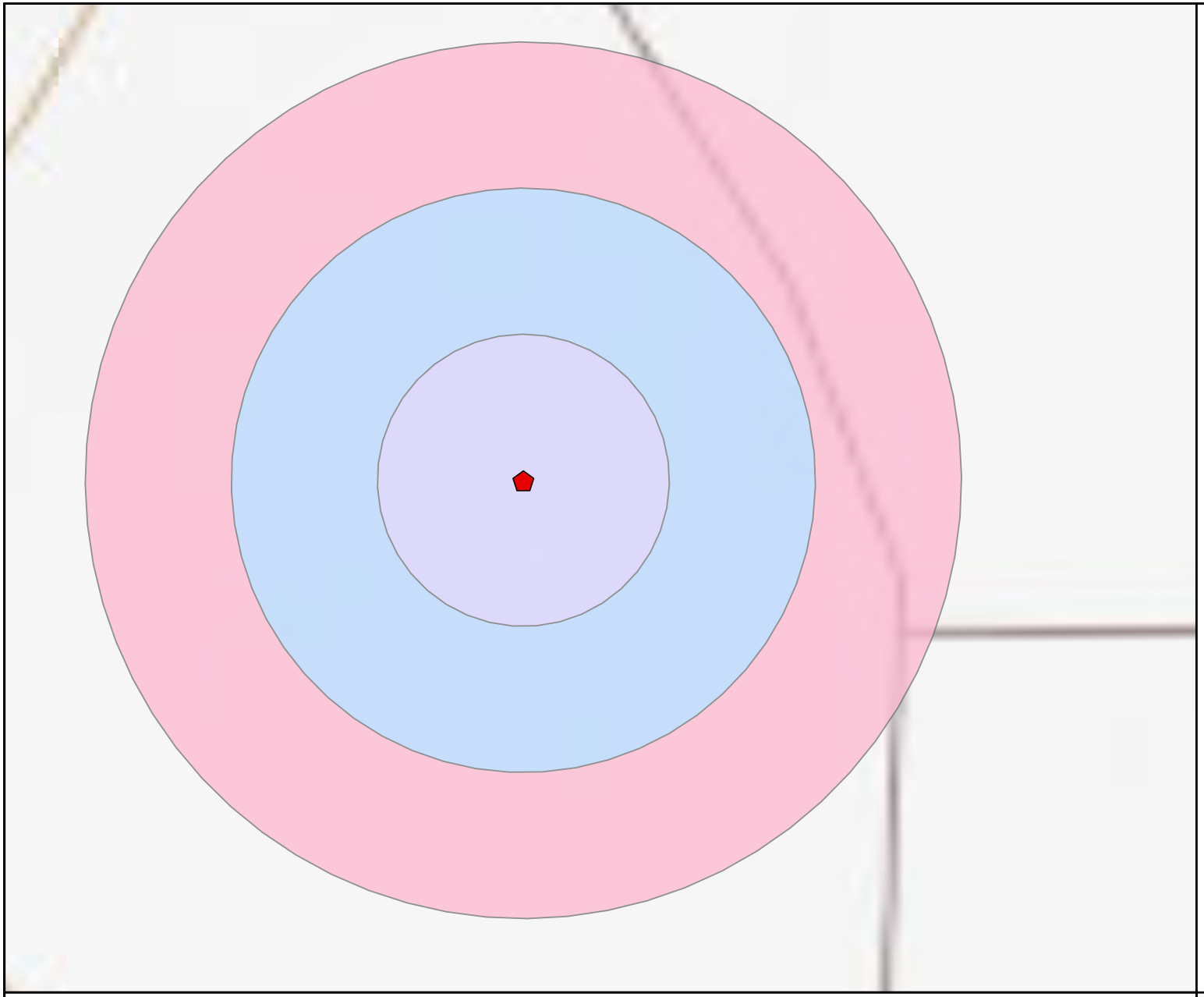
Approved	

SMA

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



Springs Seeps
Streams Canals
Rivers
NM Wetlands
Lakes Playas
FEMA Flood Zones 2011

Buffer Distance
100 Feet
200 Feet
300 Feet

N

150
Feet

Surface Water Protection Map
TOM MATTHEWS TB - Matador Resources
Eddy County , NM UL: I S: 10 T24S R28E

Figure 2

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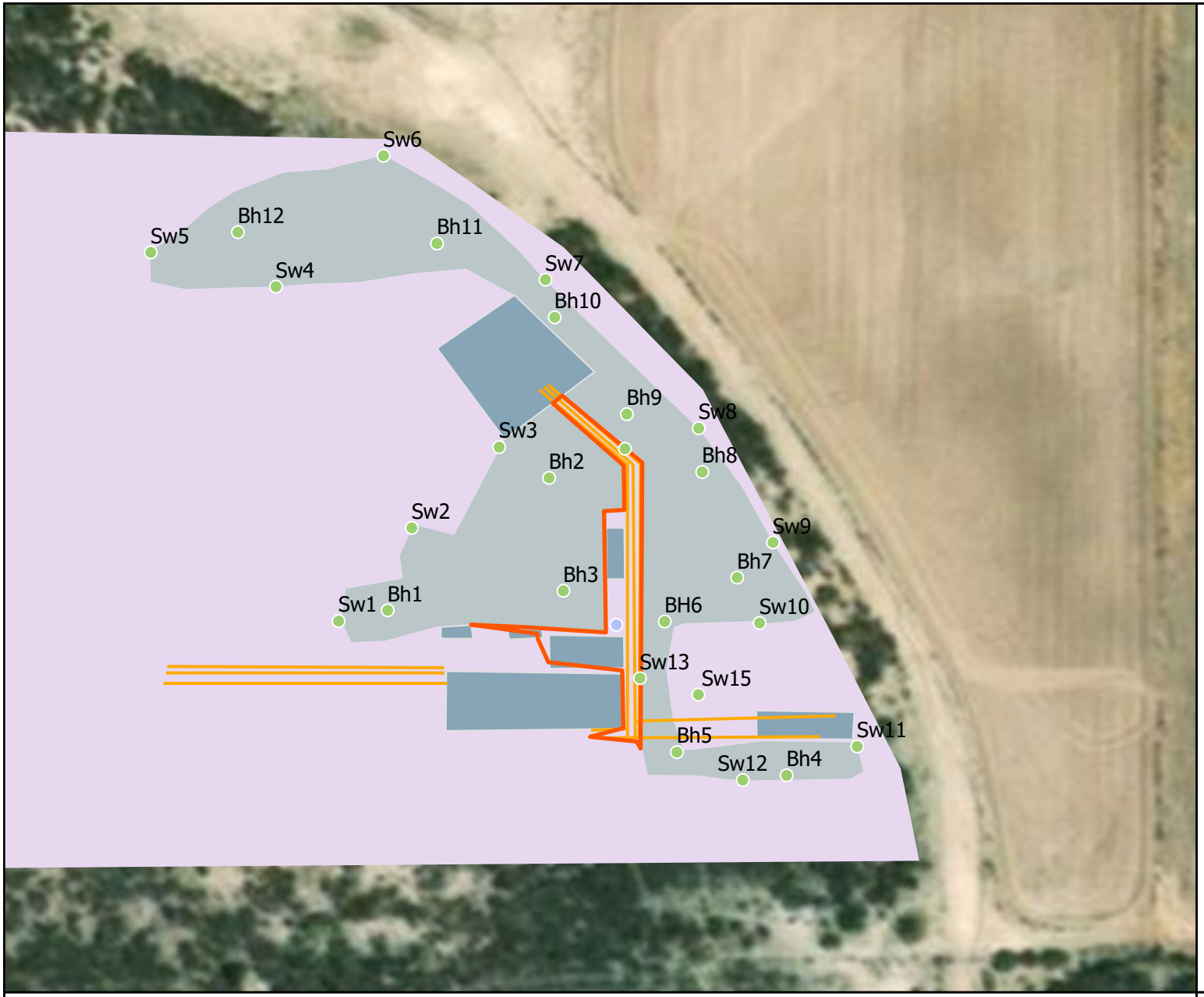

Site and Sample location Map
TOM MATTHEWS TB - Matador Resources
Eddy County , NM UL: I S: 10 T24S R28E

Figure 3

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Date Saved: 1/11/2019

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By:_____ Date:_____ Descr:_____

Drawn
Date 1/14/2019
Checked
Approved

SMA

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

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	~20-22	OSE, USGS
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	6	OSE, USGS ,USGS7.5 quad Topographic Map
Hortizontal Distance to Nearest Significant Watercourse (ft)	1659	USGS7.5 quad Topographic Map

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

Table 3:
Summary of Sample Results

Matador Resources
Tom Mathews Tank Battery

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action/ Action Taken	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	GRO + DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- laboratory mg/Kg
NMOCD Closure Criteria				50	10			1000		100	600
SW1	12/20/2018	1'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	480
S2	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	360
S3	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	230
S4	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	820
S5	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	370
S6	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	99
S7	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	62
S8	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	82
S9	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	41
S10	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	<30
S11	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	150
S12	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	47
S13	12/20/2018	0.5'	Sampled	<0.025	<0.025	<5.0	63	63	53	116	12000
S14	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	5700
S15	12/20/2018	0.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	180
B1	12/20/2018	2.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	<30
B2	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	64
B3	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	93
B4	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	400
B5	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	150
B6	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	72
B7	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	380
B8	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	100
B9	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	62
B10	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	79
B11	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	64
B12	12/20/2018	1.5'	Sampled	<0.225	<0.025	<5.0	<10	<15	<50	<65	57

"--" = Not Analyzed

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	NMAP1828226742
District RP	2RP-4995
Facility ID	fMAP1828226389
Application ID	pMAP1828226893

Release Notification

Responsible Party

Responsible Party Matador Resources Company	OGRID 228937
Contact Name John Hurt	Contact Telephone 972-371-5200
Contact email JHurt@matadorresources.com	Incident # (assigned by OCD) NMAP1828226742
Contact mailing address5400 LBJ Freeway, Suite 1500 Dallas,TX 75240	

Location of Release Source

Latitude 32.229609° Longitude -104.083454°
(NAD83 in decimal degrees to 5 decimal places)

Site Name TOM MATTHEWS TB (Tank Battery)	Site Type Tank Battery
Date Release Discovered 9/19/2018	API# fMAP1828226389

Unit Letter	Section	Township	Range	County
L	10	24S	28E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: VASQUEZ, MIKE M)

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) 920	Volume Recovered (bbls) 280
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Equipment Failure- Transfer Pump failed. Releasing fluids on location north, east and south of tank battery. No fluids left the location

State of New Mexico
Oil Conservation Division

Incident ID	NMAP1828226742
District RP	2RP-4995
Facility ID	fMAP1828226389
Application ID	pMAP1828226893

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? The vacuum truck recovered 280 bbls on 9/19/18
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? OCD, Jim Griswold, Mike Bratcher and Maria Pruett, from SMA -Lucas Middleton by email @2;48 pm on 9/19/18	

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: John Hurt Title: RES Specialist
Signature: Date: 10/2/18

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date: 10/09/2018

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Matador Resources Company	OGRID 228937
Contact Name John Hurt	Contact Telephone 972-371-5200
Contact email JHurt@matadorresources.com	Incident # *(assigned by OCD)*
Contact mailing address5400 LBJ Freeway, Suite 1500 Dallas,TX 75240	

Location of Release Source

Latitude 32.229609°_____ Longitude -104.083454°_____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name TOM MATTHEWS TB (Tank Battery)	Site Type Tank Battery
Date Release Discovered 9/19/1928	API# *(if applicable) n/a*

Unit Letter	Section	Township	Range	County
L	10	24S	28E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* VASQUEZ, MIKE M)_____)

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) 920	Volume Recovered (bbls) 280
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Equipment Failure- Transfer Pump failed. Releasing fluids on location north, east and south of tank battery. No fluids left the location

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	23 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☒ Yes ☐ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: John Hurt Title: RES Specialist
Signature: Date: 1/16/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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: John Hurt Title: RES Specialist
Signature: Date: 1/16/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

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

Signature: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: John Hurt Title: RES Specialist
Signature: Date: 1/16/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

APPENDIX B
NMOSE WELLS REPORT

New Mexico Office of the State Engineer

Water Right Summary

WR File Number: C 00764 **Subbasin:** - **Cross Reference:** -

Primary Purpose: IRR IRRIGATION

Primary Status: LIC LICENSED

Total Acres: 39.3 **Subfile:** 24 28 10 A

Total Diversion: 117.9 **Cause/Case:** -

Owner: MIKE M. VASQUEZ

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
245357	COWNP	2002-10-29	PMT	APR	C 00764 A	F	6.8	20.4	
228783	COWNF	2002-03-18	CHG	PRC	C 00764	T	0	0	
156621	LIC	1963-11-22	LIC	PRC	C-764	T	46.1	138.3	
156619	CLWPP	1958-08-11	PMT	APR	C-764	T	0	0	
156619	CLWPP	1958-08-11	PMT	APR	C-764	F	0	0	
156446	ALTD	1957-05-09	PMT	PBU	6 & C-764	T	57	171	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Source	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Other Location Desc
C 00764	Shallow	3	1	3	10	24S	28E	586399	3566292*	
SP 00006		4	1	3	12	21S	26E	570265	3595078	AVALON DAM GATE TO CID MAIN CA
SP 01927				4	12	24S	27E	581032	3566097*	BLACK RIVER

***An (*) after northing value indicates UTM location was derived from PLSS - see Help**

Priority Summary

Priority	Status	Acres	Diversion	Pod Number	Source
03/22/1957	LIC	39.3	117.9	C 00764	Shallow
				SP 00006	
				SP 01927	

Place of Use

Q 256	Q 64	Q 16	Q 4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
			3	10	24S	28E	16.4	19.2		IRR	03/22/1957	LIC	
	1	1	3	10	24S	28E	2.2	6.6		IRR	03/22/1957	LIC	
	1	4	3	10	24S	28E	4.4	13.2		IRR	03/22/1957	LIC	
	2	1	3	10	24S	28E	2.6	7.8		IRR	03/22/1957	LIC	
	2	4	3	10	24S	28E	6.6	19.8		IRR	03/22/1957	LIC	
	3	1	3	10	24S	28E	1.7	5.1		IRR	03/22/1957	LIC	
	4	1	3	10	24S	28E	9.8	29.4		IRR	03/22/1957	LIC	

Source

Acres	Diversion	CU	Use	Priority	Source Description

- -

24 28 10 A

-

Source

Acres	Diversion	CU	Use	Priority	Source	Description
46.1	138.3		IRR	03/22/1957	GW	
39.3	117.9		IRR	03/22/1957	GW	

APPENDIX C

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

January 04, 2019

Austin Weyant

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

RE: Tom Mathews TB OrderNo.: 1812E91

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 27 sample(s) on 12/29/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 1
Project: Tom Mathews TB
Collection Date: 12/20/2018 10:30:00 AM
Lab ID: 1812E91-001 **Matrix:** SOIL
Received Date: 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	480	30		mg/Kg	20	1/2/2019 3:19:22 PM	42398
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/3/2019 5:44:44 PM	42388
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/3/2019 5:44:44 PM	42388
Surr: DNOP	112	50.6-138		%Rec	1	1/3/2019 5:44:44 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2019 2:41:26 PM	42380
Surr: BFB	99.8	73.8-119		%Rec	1	1/2/2019 2:41:26 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 2:41:26 PM	42380
Toluene	ND	0.048		mg/Kg	1	1/2/2019 2:41:26 PM	42380
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2019 2:41:26 PM	42380
Xylenes, Total	ND	0.095		mg/Kg	1	1/2/2019 2:41:26 PM	42380
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	1/2/2019 2:41:26 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 2
Project: Tom Mathews TB
Collection Date: 12/20/2018 10:35:00 AM
Lab ID: 1812E91-002 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	360	30		mg/Kg	20	1/2/2019 3:31:46 PM	42398
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/3/2019 6:06:29 PM	42388
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/3/2019 6:06:29 PM	42388
Surr: DNOP	134	50.6-138		%Rec	1	1/3/2019 6:06:29 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/2/2019 3:49:36 PM	42380
Surr: BFB	88.8	73.8-119		%Rec	1	1/2/2019 3:49:36 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	1/2/2019 3:49:36 PM	42380
Toluene	ND	0.046		mg/Kg	1	1/2/2019 3:49:36 PM	42380
Ethylbenzene	ND	0.046		mg/Kg	1	1/2/2019 3:49:36 PM	42380
Xylenes, Total	ND	0.092		mg/Kg	1	1/2/2019 3:49:36 PM	42380
Surr: 4-Bromofluorobenzene	91.0	80-120		%Rec	1	1/2/2019 3:49:36 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 3
Project: Tom Mathews TB
Collection Date: 12/20/2018 10:40:00 AM
Lab ID: 1812E91-003 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	230	30		mg/Kg	20	1/2/2019 3:44:11 PM	42398
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/3/2019 6:28:19 PM	42388
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/3/2019 6:28:19 PM	42388
Surr: DNOP	115	50.6-138		%Rec	1	1/3/2019 6:28:19 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/2/2019 4:12:18 PM	42380
Surr: BFB	88.7	73.8-119		%Rec	1	1/2/2019 4:12:18 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 4:12:18 PM	42380
Toluene	ND	0.049		mg/Kg	1	1/2/2019 4:12:18 PM	42380
Ethylbenzene	ND	0.049		mg/Kg	1	1/2/2019 4:12:18 PM	42380
Xylenes, Total	ND	0.098		mg/Kg	1	1/2/2019 4:12:18 PM	42380
Surr: 4-Bromofluorobenzene	90.1	80-120		%Rec	1	1/2/2019 4:12:18 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 4
Project: Tom Mathews TB
Collection Date: 12/20/2018 10:45:00 AM
Lab ID: 1812E91-004 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	820	30		mg/Kg	20	1/2/2019 3:56:35 PM	42398
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/3/2019 6:49:58 PM	42388
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/3/2019 6:49:58 PM	42388
Surr: DNOP	111	50.6-138		%Rec	1	1/3/2019 6:49:58 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/2/2019 6:51:13 PM	42380
Surr: BFB	92.4	73.8-119		%Rec	1	1/2/2019 6:51:13 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	1/2/2019 6:51:13 PM	42380
Toluene	ND	0.047		mg/Kg	1	1/2/2019 6:51:13 PM	42380
Ethylbenzene	ND	0.047		mg/Kg	1	1/2/2019 6:51:13 PM	42380
Xylenes, Total	ND	0.093		mg/Kg	1	1/2/2019 6:51:13 PM	42380
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	1/2/2019 6:51:13 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 5
Project: Tom Mathews TB
Collection Date: 12/20/2018 10:50:00 AM
Lab ID: 1812E91-005 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	370	30		mg/Kg	20	1/2/2019 4:09:00 PM	42398
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/3/2019 7:11:54 PM	42388
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/3/2019 7:11:54 PM	42388
Surr: DNOP	117	50.6-138		%Rec	1	1/3/2019 7:11:54 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/2/2019 7:13:55 PM	42380
Surr: BFB	90.8	73.8-119		%Rec	1	1/2/2019 7:13:55 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 7:13:55 PM	42380
Toluene	ND	0.047		mg/Kg	1	1/2/2019 7:13:55 PM	42380
Ethylbenzene	ND	0.047		mg/Kg	1	1/2/2019 7:13:55 PM	42380
Xylenes, Total	ND	0.094		mg/Kg	1	1/2/2019 7:13:55 PM	42380
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	1/2/2019 7:13:55 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 6
Project: Tom Mathews TB
Collection Date: 12/20/2018 10:55:00 AM
Lab ID: 1812E91-006 **Matrix:** SOIL
Received Date: 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	99	30		mg/Kg	20	1/2/2019 4:21:25 PM	42398
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/3/2019 7:33:38 PM	42388
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/3/2019 7:33:38 PM	42388
Surr: DNOP	114	50.6-138		%Rec	1	1/3/2019 7:33:38 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/2/2019 7:36:32 PM	42380
Surr: BFB	92.0	73.8-119		%Rec	1	1/2/2019 7:36:32 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 7:36:32 PM	42380
Toluene	ND	0.047		mg/Kg	1	1/2/2019 7:36:32 PM	42380
Ethylbenzene	ND	0.047		mg/Kg	1	1/2/2019 7:36:32 PM	42380
Xylenes, Total	ND	0.094		mg/Kg	1	1/2/2019 7:36:32 PM	42380
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	1/2/2019 7:36:32 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 7
Project: Tom Mathews TB
Collection Date: 12/20/2018 10:57:00 AM
Lab ID: 1812E91-007 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	62	30		mg/Kg	20	1/2/2019 4:58:39 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/3/2019 7:55:38 PM	42388
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/3/2019 7:55:38 PM	42388
Surr: DNOP	103	50.6-138		%Rec	1	1/3/2019 7:55:38 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2019 7:59:11 PM	42380
Surr: BFB	93.5	73.8-119		%Rec	1	1/2/2019 7:59:11 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 7:59:11 PM	42380
Toluene	ND	0.048		mg/Kg	1	1/2/2019 7:59:11 PM	42380
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2019 7:59:11 PM	42380
Xylenes, Total	ND	0.096		mg/Kg	1	1/2/2019 7:59:11 PM	42380
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	1/2/2019 7:59:11 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 8
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:00:00 AM
Lab ID: 1812E91-008 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	82	30		mg/Kg	20	1/2/2019 6:00:42 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/3/2019 8:17:17 PM	42388
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/3/2019 8:17:17 PM	42388
Surr: DNOP	102	50.6-138		%Rec	1	1/3/2019 8:17:17 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/2/2019 8:21:47 PM	42380
Surr: BFB	91.8	73.8-119		%Rec	1	1/2/2019 8:21:47 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	1/2/2019 8:21:47 PM	42380
Toluene	ND	0.046		mg/Kg	1	1/2/2019 8:21:47 PM	42380
Ethylbenzene	ND	0.046		mg/Kg	1	1/2/2019 8:21:47 PM	42380
Xylenes, Total	ND	0.092		mg/Kg	1	1/2/2019 8:21:47 PM	42380
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	1/2/2019 8:21:47 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 9
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:03:00 AM
Lab ID: 1812E91-009 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	41	30		mg/Kg	20	1/2/2019 6:13:06 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/3/2019 8:39:20 PM	42388
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/3/2019 8:39:20 PM	42388
Surr: DNOP	83.2	50.6-138		%Rec	1	1/3/2019 8:39:20 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/2/2019 8:44:21 PM	42380
Surr: BFB	89.8	73.8-119		%Rec	1	1/2/2019 8:44:21 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	1/2/2019 8:44:21 PM	42380
Toluene	ND	0.046		mg/Kg	1	1/2/2019 8:44:21 PM	42380
Ethylbenzene	ND	0.046		mg/Kg	1	1/2/2019 8:44:21 PM	42380
Xylenes, Total	ND	0.092		mg/Kg	1	1/2/2019 8:44:21 PM	42380
Surr: 4-Bromofluorobenzene	90.7	80-120		%Rec	1	1/2/2019 8:44:21 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 10
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:06:00 AM
Lab ID: 1812E91-010 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	30		mg/Kg	20	1/2/2019 6:25:30 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/3/2019 9:01:01 PM	42388
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/3/2019 9:01:01 PM	42388
Surr: DNOP	81.1	50.6-138		%Rec	1	1/3/2019 9:01:01 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2019 9:06:58 PM	42380
Surr: BFB	93.3	73.8-119		%Rec	1	1/2/2019 9:06:58 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 9:06:58 PM	42380
Toluene	ND	0.048		mg/Kg	1	1/2/2019 9:06:58 PM	42380
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2019 9:06:58 PM	42380
Xylenes, Total	ND	0.097		mg/Kg	1	1/2/2019 9:06:58 PM	42380
Surr: 4-Bromofluorobenzene	94.3	80-120		%Rec	1	1/2/2019 9:06:58 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 11
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:10:00 AM
Lab ID: 1812E91-011 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	150	30		mg/Kg	20	1/2/2019 6:37:55 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/3/2019 9:22:53 PM	42388
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/3/2019 9:22:53 PM	42388
Surr: DNOP	77.0	50.6-138		%Rec	1	1/3/2019 9:22:53 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/2/2019 9:29:34 PM	42380
Surr: BFB	91.8	73.8-119		%Rec	1	1/2/2019 9:29:34 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 9:29:34 PM	42380
Toluene	ND	0.047		mg/Kg	1	1/2/2019 9:29:34 PM	42380
Ethylbenzene	ND	0.047		mg/Kg	1	1/2/2019 9:29:34 PM	42380
Xylenes, Total	ND	0.094		mg/Kg	1	1/2/2019 9:29:34 PM	42380
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	1/2/2019 9:29:34 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 12
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:15:00 AM
Lab ID: 1812E91-012 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	47	30		mg/Kg	20	1/2/2019 6:50:19 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/3/2019 9:44:36 PM	42388
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/3/2019 9:44:36 PM	42388
Surr: DNOP	82.7	50.6-138		%Rec	1	1/3/2019 9:44:36 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/2/2019 9:52:14 PM	42380
Surr: BFB	94.1	73.8-119		%Rec	1	1/2/2019 9:52:14 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 9:52:14 PM	42380
Toluene	ND	0.049		mg/Kg	1	1/2/2019 9:52:14 PM	42380
Ethylbenzene	ND	0.049		mg/Kg	1	1/2/2019 9:52:14 PM	42380
Xylenes, Total	ND	0.098		mg/Kg	1	1/2/2019 9:52:14 PM	42380
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	1/2/2019 9:52:14 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 13
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:20:00 AM
Lab ID: 1812E91-013 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	12000	750		mg/Kg	500	1/3/2019 4:02:54 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	63	9.9		mg/Kg	1	1/3/2019 10:06:30 PM	42388
Motor Oil Range Organics (MRO)	53	50		mg/Kg	1	1/3/2019 10:06:30 PM	42388
Surr: DNOP	87.1	50.6-138		%Rec	1	1/3/2019 10:06:30 PM	42388
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/2/2019 10:14:48 PM	42380
Surr: BFB	95.0	73.8-119		%Rec	1	1/2/2019 10:14:48 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 10:14:48 PM	42380
Toluene	ND	0.049		mg/Kg	1	1/2/2019 10:14:48 PM	42380
Ethylbenzene	ND	0.049		mg/Kg	1	1/2/2019 10:14:48 PM	42380
Xylenes, Total	ND	0.098		mg/Kg	1	1/2/2019 10:14:48 PM	42380
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	1/2/2019 10:14:48 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 14
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:25:00 AM
Lab ID: 1812E91-014 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	5700	300		mg/Kg	200	1/3/2019 4:15:19 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/2/2019 2:26:22 PM	42389
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/2/2019 2:26:22 PM	42389
Surr: DNOP	99.4	50.6-138		%Rec	1	1/2/2019 2:26:22 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2019 11:45:09 PM	42380
Surr: BFB	92.6	73.8-119		%Rec	1	1/2/2019 11:45:09 PM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 11:45:09 PM	42380
Toluene	ND	0.048		mg/Kg	1	1/2/2019 11:45:09 PM	42380
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2019 11:45:09 PM	42380
Xylenes, Total	ND	0.096		mg/Kg	1	1/2/2019 11:45:09 PM	42380
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	1/2/2019 11:45:09 PM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S 15
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:30:00 AM
Lab ID: 1812E91-015 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	180	30		mg/Kg	20	1/2/2019 7:27:32 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/2/2019 3:32:25 PM	42389
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/2/2019 3:32:25 PM	42389
Surr: DNOP	66.6	50.6-138		%Rec	1	1/2/2019 3:32:25 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/3/2019 12:07:54 AM	42380
Surr: BFB	92.3	73.8-119		%Rec	1	1/3/2019 12:07:54 AM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/3/2019 12:07:54 AM	42380
Toluene	ND	0.048		mg/Kg	1	1/3/2019 12:07:54 AM	42380
Ethylbenzene	ND	0.048		mg/Kg	1	1/3/2019 12:07:54 AM	42380
Xylenes, Total	ND	0.097		mg/Kg	1	1/3/2019 12:07:54 AM	42380
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	1/3/2019 12:07:54 AM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 1
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:35:00 AM
Lab ID: 1812E91-016 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	30		mg/Kg	20	1/2/2019 8:04:45 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/2/2019 3:54:27 PM	42389
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/2/2019 3:54:27 PM	42389
Surr: DNOP	71.6	50.6-138		%Rec	1	1/2/2019 3:54:27 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/3/2019 12:30:48 AM	42380
Surr: BFB	91.8	73.8-119		%Rec	1	1/3/2019 12:30:48 AM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/3/2019 12:30:48 AM	42380
Toluene	ND	0.048		mg/Kg	1	1/3/2019 12:30:48 AM	42380
Ethylbenzene	ND	0.048		mg/Kg	1	1/3/2019 12:30:48 AM	42380
Xylenes, Total	ND	0.096		mg/Kg	1	1/3/2019 12:30:48 AM	42380
Surr: 4-Bromofluorobenzene	93.6	80-120		%Rec	1	1/3/2019 12:30:48 AM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 2
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:37:00 AM
Lab ID: 1812E91-017
Matrix: SOIL
Received Date: 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	64	30		mg/Kg	20	1/2/2019 8:17:10 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/2/2019 4:16:30 PM	42389
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/2/2019 4:16:30 PM	42389
Surr: DNOP	67.3	50.6-138		%Rec	1	1/2/2019 4:16:30 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/3/2019 12:53:49 AM	42380
Surr: BFB	89.1	73.8-119		%Rec	1	1/3/2019 12:53:49 AM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/3/2019 12:53:49 AM	42380
Toluene	ND	0.048		mg/Kg	1	1/3/2019 12:53:49 AM	42380
Ethylbenzene	ND	0.048		mg/Kg	1	1/3/2019 12:53:49 AM	42380
Xylenes, Total	ND	0.096		mg/Kg	1	1/3/2019 12:53:49 AM	42380
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	1/3/2019 12:53:49 AM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 3
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:40:00 AM
Lab ID: 1812E91-018 **Matrix:** SOIL
Received Date: 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	93	30		mg/Kg	20	1/2/2019 8:54:23 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/2/2019 4:38:31 PM	42389
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/2/2019 4:38:31 PM	42389
Surr: DNOP	68.1	50.6-138		%Rec	1	1/2/2019 4:38:31 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/3/2019 1:16:52 AM	42380
Surr: BFB	87.9	73.8-119		%Rec	1	1/3/2019 1:16:52 AM	42380
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/3/2019 1:16:52 AM	42380
Toluene	ND	0.048		mg/Kg	1	1/3/2019 1:16:52 AM	42380
Ethylbenzene	ND	0.048		mg/Kg	1	1/3/2019 1:16:52 AM	42380
Xylenes, Total	ND	0.097		mg/Kg	1	1/3/2019 1:16:52 AM	42380
Surr: 4-Bromofluorobenzene	89.0	80-120		%Rec	1	1/3/2019 1:16:52 AM	42380

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 4
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:43:00 AM
Lab ID: 1812E91-019 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	400	30		mg/Kg	20	1/2/2019 9:06:47 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/2/2019 5:00:31 PM	42389
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/2/2019 5:00:31 PM	42389
Surr: DNOP	52.8	50.6-138		%Rec	1	1/2/2019 5:00:31 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/2/2019 7:41:43 PM	42381
Surr: BFB	89.0	73.8-119		%Rec	1	1/2/2019 7:41:43 PM	42381
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 7:41:43 PM	42381
Toluene	ND	0.047		mg/Kg	1	1/2/2019 7:41:43 PM	42381
Ethylbenzene	ND	0.047		mg/Kg	1	1/2/2019 7:41:43 PM	42381
Xylenes, Total	ND	0.095		mg/Kg	1	1/2/2019 7:41:43 PM	42381
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	1/2/2019 7:41:43 PM	42381

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 5
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:45:00 AM
Lab ID: 1812E91-020 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	150	30		mg/Kg	20	1/2/2019 9:19:12 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/2/2019 5:22:28 PM	42389
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/2/2019 5:22:28 PM	42389
Surr: DNOP	62.6	50.6-138		%Rec	1	1/2/2019 5:22:28 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/2/2019 8:05:36 PM	42381
Surr: BFB	87.4	73.8-119		%Rec	1	1/2/2019 8:05:36 PM	42381
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 8:05:36 PM	42381
Toluene	ND	0.047		mg/Kg	1	1/2/2019 8:05:36 PM	42381
Ethylbenzene	ND	0.047		mg/Kg	1	1/2/2019 8:05:36 PM	42381
Xylenes, Total	ND	0.095		mg/Kg	1	1/2/2019 8:05:36 PM	42381
Surr: 4-Bromofluorobenzene	90.3	80-120		%Rec	1	1/2/2019 8:05:36 PM	42381

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 6
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:50:00 AM
Lab ID: 1812E91-021 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	72	30		mg/Kg	20	1/2/2019 9:31:36 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/2/2019 5:44:11 PM	42389
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/2/2019 5:44:11 PM	42389
Surr: DNOP	58.2	50.6-138		%Rec	1	1/2/2019 5:44:11 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/2/2019 8:29:28 PM	42381
Surr: BFB	90.1	73.8-119		%Rec	1	1/2/2019 8:29:28 PM	42381
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/2/2019 8:29:28 PM	42381
Toluene	ND	0.049		mg/Kg	1	1/2/2019 8:29:28 PM	42381
Ethylbenzene	ND	0.049		mg/Kg	1	1/2/2019 8:29:28 PM	42381
Xylenes, Total	ND	0.099		mg/Kg	1	1/2/2019 8:29:28 PM	42381
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	1/2/2019 8:29:28 PM	42381

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 7
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:55:00 AM
Lab ID: 1812E91-022 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	380	30		mg/Kg	20	1/2/2019 9:44:00 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/2/2019 6:06:10 PM	42389
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/2/2019 6:06:10 PM	42389
Surr: DNOP	69.2	50.6-138		%Rec	1	1/2/2019 6:06:10 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2019 8:53:24 PM	42381
Surr: BFB	85.3	73.8-119		%Rec	1	1/2/2019 8:53:24 PM	42381
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 8:53:24 PM	42381
Toluene	ND	0.048		mg/Kg	1	1/2/2019 8:53:24 PM	42381
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2019 8:53:24 PM	42381
Xylenes, Total	ND	0.096		mg/Kg	1	1/2/2019 8:53:24 PM	42381
Surr: 4-Bromofluorobenzene	88.1	80-120		%Rec	1	1/2/2019 8:53:24 PM	42381

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 8
Project: Tom Mathews TB
Collection Date: 12/20/2018 11:57:00 AM
Lab ID: 1812E91-023 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	100	30		mg/Kg	20	1/2/2019 9:56:25 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/2/2019 6:27:55 PM	42389
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/2/2019 6:27:55 PM	42389
Surr: DNOP	61.1	50.6-138		%Rec	1	1/2/2019 6:27:55 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/2/2019 9:17:12 PM	42381
Surr: BFB	88.1	73.8-119		%Rec	1	1/2/2019 9:17:12 PM	42381
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 9:17:12 PM	42381
Toluene	ND	0.047		mg/Kg	1	1/2/2019 9:17:12 PM	42381
Ethylbenzene	ND	0.047		mg/Kg	1	1/2/2019 9:17:12 PM	42381
Xylenes, Total	ND	0.094		mg/Kg	1	1/2/2019 9:17:12 PM	42381
Surr: 4-Bromofluorobenzene	90.7	80-120		%Rec	1	1/2/2019 9:17:12 PM	42381

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 9
Project: Tom Mathews TB
Collection Date: 12/20/2018 12:01:00 PM
Lab ID: 1812E91-024 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	62	30		mg/Kg	20	1/2/2019 10:33:39 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/2/2019 6:49:39 PM	42389
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/2/2019 6:49:39 PM	42389
Surr: DNOP	66.9	50.6-138		%Rec	1	1/2/2019 6:49:39 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2019 9:40:57 PM	42381
Surr: BFB	89.3	73.8-119		%Rec	1	1/2/2019 9:40:57 PM	42381
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 9:40:57 PM	42381
Toluene	ND	0.048		mg/Kg	1	1/2/2019 9:40:57 PM	42381
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2019 9:40:57 PM	42381
Xylenes, Total	ND	0.096		mg/Kg	1	1/2/2019 9:40:57 PM	42381
Surr: 4-Bromofluorobenzene	92.1	80-120		%Rec	1	1/2/2019 9:40:57 PM	42381

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 10
Project: Tom Mathews TB
Collection Date: 12/20/2018 12:05:00 PM
Lab ID: 1812E91-025 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	79	30		mg/Kg	20	1/2/2019 10:46:03 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/2/2019 7:11:36 PM	42389
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/2/2019 7:11:36 PM	42389
Surr: DNOP	74.1	50.6-138		%Rec	1	1/2/2019 7:11:36 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2019 10:04:36 PM	42381
Surr: BFB	91.3	73.8-119		%Rec	1	1/2/2019 10:04:36 PM	42381
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 10:04:36 PM	42381
Toluene	ND	0.048		mg/Kg	1	1/2/2019 10:04:36 PM	42381
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2019 10:04:36 PM	42381
Xylenes, Total	ND	0.096		mg/Kg	1	1/2/2019 10:04:36 PM	42381
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	1/2/2019 10:04:36 PM	42381

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 11
Project: Tom Mathews TB
Collection Date: 12/20/2018 12:10:00 PM
Lab ID: 1812E91-026 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	64	30		mg/Kg	20	1/2/2019 10:58:28 PM	42408
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/2/2019 7:33:26 PM	42389
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/2/2019 7:33:26 PM	42389
Surr: DNOP	63.5	50.6-138		%Rec	1	1/2/2019 7:33:26 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/2/2019 10:28:09 PM	42381
Surr: BFB	88.8	73.8-119		%Rec	1	1/2/2019 10:28:09 PM	42381
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	1/2/2019 10:28:09 PM	42381
Toluene	ND	0.050		mg/Kg	1	1/2/2019 10:28:09 PM	42381
Ethylbenzene	ND	0.050		mg/Kg	1	1/2/2019 10:28:09 PM	42381
Xylenes, Total	ND	0.099		mg/Kg	1	1/2/2019 10:28:09 PM	42381
Surr: 4-Bromofluorobenzene	90.1	80-120		%Rec	1	1/2/2019 10:28:09 PM	42381

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: B 12
Project: Tom Mathews TB
Collection Date: 12/20/2018 12:15:00 PM
Lab ID: 1812E91-027 **Matrix:** SOIL **Received Date:** 12/29/2018 11:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	57	30		mg/Kg	20	1/3/2019 10:15:27 AM	42421
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/2/2019 7:55:17 PM	42389
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/2/2019 7:55:17 PM	42389
Surr: DNOP	55.8	50.6-138		%Rec	1	1/2/2019 7:55:17 PM	42389
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/2/2019 10:51:40 PM	42381
Surr: BFB	91.7	73.8-119		%Rec	1	1/2/2019 10:51:40 PM	42381
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	1/2/2019 10:51:40 PM	42381
Toluene	ND	0.048		mg/Kg	1	1/2/2019 10:51:40 PM	42381
Ethylbenzene	ND	0.048		mg/Kg	1	1/2/2019 10:51:40 PM	42381
Xylenes, Total	ND	0.097		mg/Kg	1	1/2/2019 10:51:40 PM	42381
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	1/2/2019 10:51:40 PM	42381

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E91**

04-Jan-19

Client: Souder, Miller & Associates

Project: Tom Mathews TB

Sample ID	**MB-42398**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**42398**		RunNo:	**56726**				
Prep Date:	**1/2/2019**	Analysis Date:	**1/2/2019**		SeqNo:	**1898555**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-42398**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**42398**		RunNo:	**56726**				
Prep Date:	**1/2/2019**	Analysis Date:	**1/2/2019**		SeqNo:	**1898556**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	90	110			

Sample ID	**MB-42408**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**42408**		RunNo:	**56726**				
Prep Date:	**1/2/2019**	Analysis Date:	**1/2/2019**		SeqNo:	**1898585**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-42408**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**42408**		RunNo:	**56726**				
Prep Date:	**1/2/2019**	Analysis Date:	**1/2/2019**		SeqNo:	**1898586**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

Sample ID	**MB-42421**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**42421**		RunNo:	**56759**				
Prep Date:	**1/3/2019**	Analysis Date:	**1/3/2019**		SeqNo:	**1899399**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-42421**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**42421**		RunNo:	**56759**				
Prep Date:	**1/3/2019**	Analysis Date:	**1/3/2019**		SeqNo:	**1899400**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E91**

04-Jan-19

Client: Souder, Miller & Associates

Project: Tom Mathews TB

Sample ID	**LCS-42389**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**42389**		RunNo:	**56697**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1898357**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.5	70	130			
Surr: DNOP	4.0		5.000		79.3	50.6	138			

Sample ID	**MB-42389**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**42389**		RunNo:	**56697**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1898358**	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	50.6	138			

Sample ID	**1812E91-014AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**S 14**	Batch ID:	**42389**		RunNo:	**56697**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1898360**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	9.7	48.69	0	119	53.5	126			
Surr: DNOP	2.6		4.869		53.3	50.6	138			

Sample ID	**1812E91-014AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**S 14**	Batch ID:	**42389**		RunNo:	**56697**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1898361**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	9.7	48.64	0	116	53.5	126	2.23	21.7	
Surr: DNOP	3.4		4.864		69.8	50.6	138	0	0	

Sample ID	**LCS-42388**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**42388**		RunNo:	**56732**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/3/2019**		SeqNo:	**1898879**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	114	70	130			
Surr: DNOP	5.1		5.000		102	50.6	138			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E91**

04-Jan-19

Client: Souder, Miller & Associates

Project: Tom Mathews TB

Sample ID **MB-42388**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **42388**	RunNo: **56732**
Prep Date: **12/31/2018**	Analysis Date: **1/3/2019**	SeqNo: **1898880** 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	9.6		10.00		95.6	50.6	138			

Sample ID **1812E91-013AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S 13**	Batch ID: **42388**	RunNo: **56732**
Prep Date: **12/31/2018**	Analysis Date: **1/3/2019**	SeqNo: **1899393** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	99	10	49.90	63.22	70.9	53.5	126			
Surr: DNOP	4.6		4.990		92.9	50.6	138			

Sample ID **1812E91-013AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S 13**	Batch ID: **42388**	RunNo: **56732**
Prep Date: **12/31/2018**	Analysis Date: **1/3/2019**	SeqNo: **1899394** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	100	9.9	49.55	63.22	82.3	53.5	126	5.34	21.7	
Surr: DNOP	4.8		4.955		97.0	50.6	138	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E91**

04-Jan-19

Client: Souder, Miller & Associates

Project: Tom Mathews TB

Sample ID	**MB-42379**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**42379**		RunNo:	**56715**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1897980**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		88.4	73.8	119			

Sample ID	**LCS-42379**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**42379**		RunNo:	**56715**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1897988**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		104	73.8	119			

Sample ID	**MB-42381**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**42381**		RunNo:	**56715**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1898027**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		88.3	73.8	119			

Sample ID	**LCS-42381**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**42381**		RunNo:	**56715**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1898028**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	80.1	123			
Surr: BFB	980		1000		98.3	73.8	119			

Sample ID	**1812E91-019AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**B 4**	Batch ID:	**42381**		RunNo:	**56715**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1898030**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.7	23.41	0	105	77.8	128			
Surr: BFB	960		936.3		103	73.8	119			

Sample ID	**1812E91-019AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**B 4**	Batch ID:	**42381**		RunNo:	**56715**				
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**		SeqNo:	**1898031**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.8	23.76	0	108	77.8	128	3.92	20	
Surr: BFB	970		950.6		102	73.8	119	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E91**

04-Jan-19

Client: Souder, Miller & Associates

Project: Tom Mathews TB

Sample ID	**MB-42380**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**42380**	RunNo:	**56716**					
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**	SeqNo:	**1898095**	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	870		1000		87.2	73.8	119			

Sample ID	**LCS-42380**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**42380**	RunNo:	**56716**					
Prep Date:	**12/31/2018**	Analysis Date:	**1/2/2019**	SeqNo:	**1898096**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.5	80.1	123			
Surr: BFB	990		1000		98.5	73.8	119			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E91**

04-Jan-19

Client: Souder, Miller & Associates

Project: Tom Mathews TB

Sample ID	**MB-42379**	SampType: **MBLK**			TestCode: **EPA Method 8021B: Volatiles**				
Client ID:	**PBS**	Batch ID: **42379**			RunNo: **56715**				
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898052**	Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		91.1	80	120			

Sample ID	**LCS-42379**	SampType: **LCS**			TestCode: **EPA Method 8021B: Volatiles**				
Client ID:	**LCSS**	Batch ID: **42379**			RunNo: **56715**				
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898053**	Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		97.4	80	120			

Sample ID	**MB-42381**	SampType: **MBLK**			TestCode: **EPA Method 8021B: Volatiles**				
Client ID:	**PBS**	Batch ID: **42381**			RunNo: **56715**				
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898065**	Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		89.9	80	120			

Sample ID	**LCS-42381**	SampType: **LCS**			TestCode: **EPA Method 8021B: Volatiles**				
Client ID:	**LCSS**	Batch ID: **42381**			RunNo: **56715**				
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898066**	Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.6	80	120			
Toluene	0.99	0.050	1.000	0	98.9	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.3	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.3	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		94.5	80	120			

Sample ID	**1812E91-020AMS**	SampType: **MS**			TestCode: **EPA Method 8021B: Volatiles**				
Client ID:	**B 5**	Batch ID: **42381**			RunNo: **56715**				
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898069**	Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	0.9843	0	84.5	63.9	127			
Toluene	0.91	0.049	0.9843	0.009280	91.6	69.9	131			
Ethylbenzene	0.92	0.049	0.9843	0	93.9	71	132			
Xylenes, Total	2.8	0.098	2.953	0.02633	94.3	71.8	131			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E91**

04-Jan-19

Client: Souder, Miller & Associates

Project: Tom Mathews TB

Sample ID	**1812E91-020AMS**	SampType: **MS**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**B 5**	Batch ID: **42381**			RunNo: **56715**					
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898069**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		0.9843		90.6	80	120			

Sample ID	**1812E91-020AMSD**	SampType: **MSD**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**B 5**	Batch ID: **42381**			RunNo: **56715**					
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898070**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.023	0.9251	0	87.9	63.9	127	2.23	20	
Toluene	0.85	0.046	0.9251	0.009280	91.1	69.9	131	6.75	20	
Ethylbenzene	0.85	0.046	0.9251	0	92.2	71	132	7.98	20	
Xylenes, Total	2.6	0.093	2.775	0.02633	92.5	71.8	131	8.04	20	
Surr: 4-Bromofluorobenzene	0.83		0.9251		89.3	80	120	0	0	

Sample ID	**MB-42380**	SampType: **MBLK**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID: **42380**			RunNo: **56716**					
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898133**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.2	80	120			

Sample ID	**LCS-42380**	SampType: **LCS**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID: **42380**			RunNo: **56716**					
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898134**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	1.000	0	81.3	80	120			
Toluene	0.86	0.050	1.000	0	85.8	80	120			
Ethylbenzene	0.90	0.050	1.000	0	90.1	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.9	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.3	80	120			

Sample ID	**1812E91-001AMS**	SampType: **MS**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**SW 1**	Batch ID: **42380**			RunNo: **56716**					
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**			SeqNo: **1898137**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812E91**

04-Jan-19

Client: Souder, Miller & Associates

Project: Tom Mathews TB

Sample ID	**1812E91-001AMS**	SampType: **MS**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**SW 1**	Batch ID: **42380**		RunNo: **56716**					
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**		SeqNo: **1898137**		Units: **mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	0.9862	0.009895	81.0	63.9	127			
Toluene	0.85	0.049	0.9862	0.008321	85.4	69.9	131			
Ethylbenzene	0.90	0.049	0.9862	0.008073	90.2	71	132			
Xylenes, Total	2.7	0.099	2.959	0.01650	90.9	71.8	131			
Surr: 4-Bromofluorobenzene	0.91		0.9862		92.4	80	120			

Sample ID	**1812E91-001AMSD**	SampType: **MSD**		TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**SW 1**	Batch ID: **42380**		RunNo: **56716**					
Prep Date:	**12/31/2018**	Analysis Date: **1/2/2019**		SeqNo: **1898139**		Units: **mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.023	0.9363	0.009895	83.9	63.9	127	1.60	20	
Toluene	0.88	0.047	0.9363	0.008321	93.3	69.9	131	3.62	20	
Ethylbenzene	0.91	0.047	0.9363	0.008073	96.8	71	132	1.87	20	
Xylenes, Total	2.7	0.094	2.809	0.01650	94.6	71.8	131	1.15	20	
Surr: 4-Bromofluorobenzene	0.90		0.9363		96.6	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **SMA-CARLSBAD** Work Order Number: **1812E91** RcptNo: **1**

Received By: **Andy Freeman** **12/29/2018 11:00:00 AM**

Completed By: **Erin Melendrez** **12/31/2018 8:43:32 AM**

Reviewed By: DAD 12/31/18

LB: JAB 12/31/18

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: JAB 12/31/18

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

Chain-of-Custody Record

Client: SMA - CBAP

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

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

Project Name: Tom Mathews TB

Project #:

Project Manager: A. Weyant

Sampler: LCM

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 1.7 C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1817E91	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12-20	10:30	Soil	SW 1	4oz		-001	X	X					X			
	10:35		S 2			-002	X	X					X			
	10:40		S 3			-003	X	X					X			
	10:45		S 4			-004	X	X					X			
	10:50		S 5			-005	X	X					X			
	10:55		S 6			-006	X	X					X			
	10:57		S 7			-007	X	X					X			
	11:00		S 8			-008	X	X					X			
	11:03		S 9			-009	X	X					X			
	11:06		S 10			-010	X	X					X			
	11:10		S 11			-011	X	X					X			
	11:15		S 12			-012	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12-26	12:00	Samantha Watson			12/27/18	1400
12/27/18	1900				12/29/18	1100

Remarks: Matador

1 of 3

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

Chain-of-Custody Record

Client: SMA - CBAD

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

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

Project Name: Tom Mathews TB

Project #:

Project Manager: A. Weyant

Sampler: LGM

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 1.7 C

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1812E91	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/20	11:20	soil	S 13	4oz		-013	X	X					X			
	11:25		S 14			-014	X	X					X			
	11:30		S 15			-015	X	X					X			
	11:35		B 1			-016	X	X					X			
	11:37		B 2			-017	X	X					X			
	11:40		B 3			-018	X	X					X			
	11:43		B 4			-019	X	X					X			
	11:45		B 5			-020	X	X					X			
	11:50		B 6			-021	X	X					X			
	11:55		B 7			-022	X	X					X			
	11:57		B 8			-023	X	X					X			
↓	12:01	↓	B 9	↓		-024	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/26	12:00	Samantha Watson				
12/28/18	1900				12/29/18	1100

Remarks: Matador

2 of 3

Chain-of-Custody Record

Client: SMA CBAP

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

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

Project Name: Tom Mathews TB

Project #:

Project Manager: A. Weyant

Sampler: LCM

On Ice: ☒ Yes ☐ No

# of Coolers: 1, 7°

Cooler Temp(including CF): 1 cooler

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Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1812E91	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/20	12:05	soil	B10	4oz		-025	X	X					X			
"	12:10	"	B11	"		-026	X	X					X			
"	12:15	"	B12	"		-027	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/26	12:00	Samantha Watson			12/27/18	1400
12/27/18	1900				12/29/18	1100

Remarks: Matador

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APPENDIX D
PHOTO LOG

Photo 1: Looking West

Photo 2: Looking North

Photo 3: Looking East

Photo 4: Looking South