State of New Mexico
Oil Conservation Division

Incident ID	NAB1922152263
District RP	2RP-5570
Facility ID	Fab1922151794
Application ID	pAB1922151892

SC18Y-191016-C-1410

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?	262 (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	NAB1922152263
District RP	2RP-5570
Facility ID	Fab1922151794
Application ID	pAB1922151892

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: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E. Fields Date: 10/14/19

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1922152263
District RP	2RP-5570
Facility ID	Fab1922151794
Application ID	pAB1922151892

Closure

SC18Y-191016-C-1410

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: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E. Fields Date: 10/14/19

email: jefields@eprod.com Telephone: 713-381-6684

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: _____

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

October 4, 2019

#55E27957-BG16

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

SUBJECT: Remediation Closure Report for the 1009 Pipeline Release (2RP-5570), Eddy County, New Mexico

To Whom It May Concern:

On behalf of Enterprise Field Services LLC (Enterprise), 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 1009 pipeline release site. Contaminated soil has been removed and remaining soil meets NMOCD Closure Criteria set forth by 19.15.29.13(D)(1). On behalf of Enterprise, SMA requests closure for release 2RP-5570.

Table 1 summarizes release information and Closure Criteria.

Table 1: Release Information and Closure Criteria			
Name	1009 Pipeline	Company	Enterprise Field Services LLC
API Number	Not Applicable	Location	32.366430, -103.873558
Incident Number	2RP-5570		
Estimated Date of Release	7/22/2019	Date Reported to NMOCD	7/23/2019
Land Owner	Federal Land	Reported To	NMOCD, BLM
Source of Release	Pipeline Leak		
Released Volume	10 bbl, 1.35 MMCF	Released Material	Natural Gas, Pipeline fluids
Recovered Volume	0	Net Release	10 bbl
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	7/29, 8/14, 9/6/2019		

SC18Y-191016-C-1410

1.0 Background

On July 22, 2019, a release was discovered at the 1009 pipeline (2RP-5570) site due to a pipeline leak caused by internal corrosion. Initial response activities were conducted by Enterprise, and included excavation to repair the pipeline, site security, containment and site stabilization activities. No fluid was recovered, but approximately 104 cubic yards of contaminated soil, was hauled to and disposed of at Lea Land Landfill near Hobbs, NM. Figure 1 illustrates the vicinity and site location, Figure 2 illustrates the release location. The C-141 form is included in Appendix A.

2.0 Site Information and Closure Criteria

The 1009 pipeline (2RP-5570) release is located approximately 21 miles east of Carlsbad, New Mexico on BLM land at an elevation of approximately 3285 feet above mean sea level (amsl).

Based upon OSE and USGS monitoring well information (Appendix B), depth to groundwater in the area is estimated to be >100 feet below grade surface (bgs). There is one known water source within ½-mile of the location. The nearest significant watercourse is an unnamed intermittent stream, located approximately 3,000 feet to the north. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of greater than 100 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC, and 19.15.29.13(D)(1).

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

3.0 Release Characterization and Remediation Activities

On July 29, 2019, upon completion of pipeline repair SMA personnel arrived on site in response to the release associated with the 1009 pipeline (2RP-5570) release. SMA collected soil samples from the open excavation. Soil samples were field-screened for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp.

A total of five sample locations (L1, SW 1 - 4) were collected from the base and walls of the excavation, and submitted for laboratory analysis of total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D.

As summarized in Table 3, results impacted soil remained, and further excavation was necessary. On August 14, 2019, SMA returned to determine the western extent of contamination (SW2). SMA guided the excavation activities by collecting soil samples for field screening. Upon determination of the extent of SW2, SMA also collected another sample from the base of the excavation sample location L2. Samples were screened for chloride using an electrical conductivity (EC) meter and for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp. Analytical laboratory results indicated that sample location (L2) exceeded NMOCD Closure Criteria.

On September 6, 2019, SMA returned to the site to guide the excavation to the west to the extent determined by the August 14 sampling event and to the north and south as determined by field screening. SMA guided the excavation activities by collecting soil samples for field screening. The walls and base

were excavated until field screening indicated that NMOCD Closure Criteria would be met. NMOCD was notified on September 4, 2019 that closure samples would be collected in the next two (2) business days.

On September 6, 2019, SMA conducted confirmation sampling of the walls and base of the excavation, which measured approximately 50 x 25 feet. The area around sample location (L2) was excavated to a depth of ten (10) feet bgs, while the area around L1 remained at five (5) feet bgs.

Confirmation samples were comprised of five-point composites of the base (L2) and walls (SW1, SW3).

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

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

Contaminated soil has been removed, and remaining soil meets NMOCD Closure Criteria as well as the reclamation requirement set forth by 19.15.29.13(D)(1) NMAC. On behalf of Enterprise, SMA requests closure for release 2RP-5570.

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 Ashley Maxwell or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:

Ashley Maxwell
Project Scientist

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

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

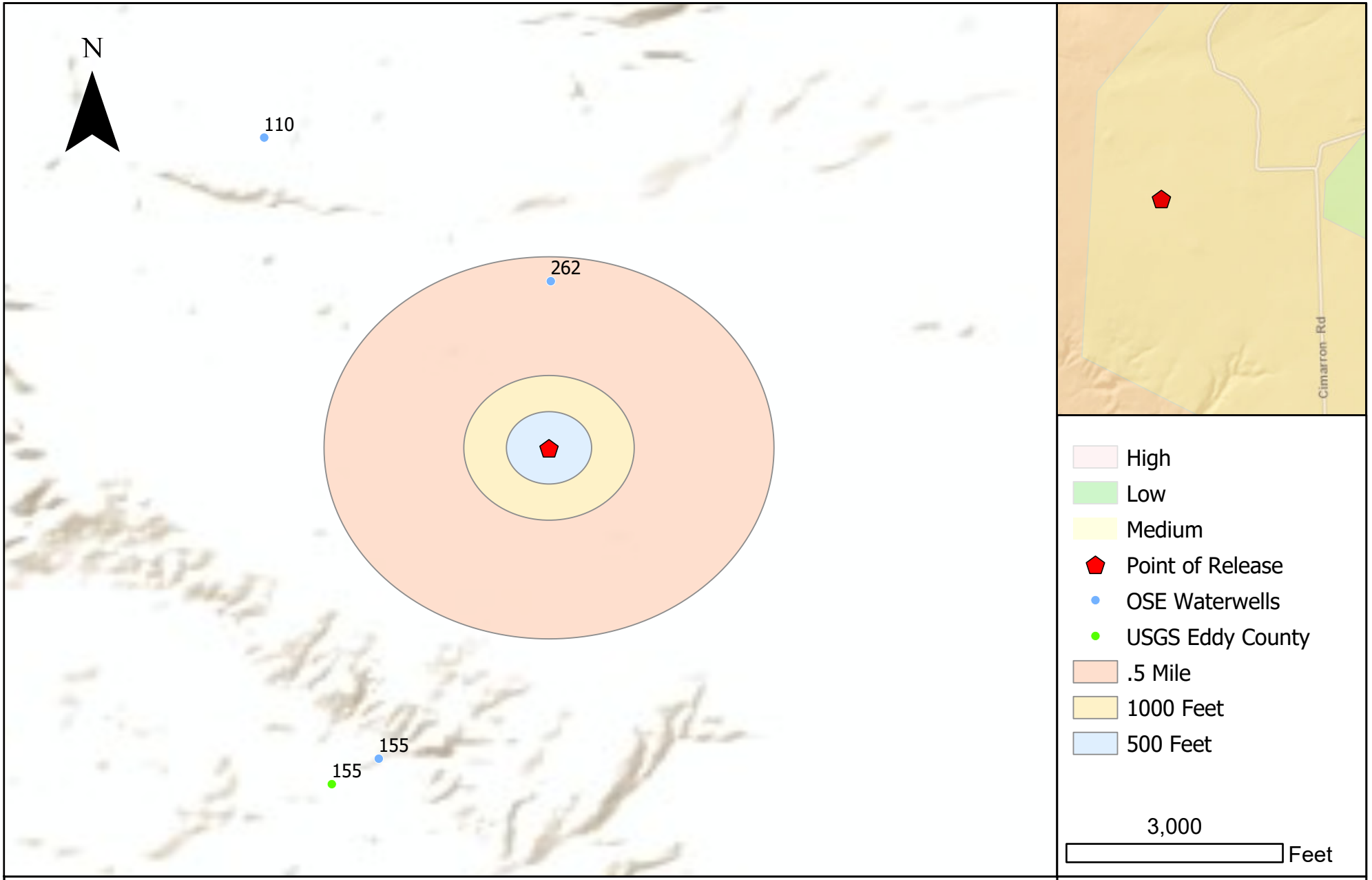
Tables:

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

Appendices:

Appendix A: Form C141
Appendix B: NMOSE Wells Report
Appendix C: Field Notes & Site Photography
Appendix D: Laboratory Analytical Reports

FIGURES



Regional Vicinity & Wellhead Protection Map
1009 Pipeline Release - Enterprise Products
UL: B S: 27 T: 22S R: 30E, Eddy County, New Mexico

Figure 1

\\192.168.22.10\Projects\5-Enterprise 2019 MSA On Call Services (5E27957)\GIS\ARCGIS\ENTERPRISE_MIT.aprx

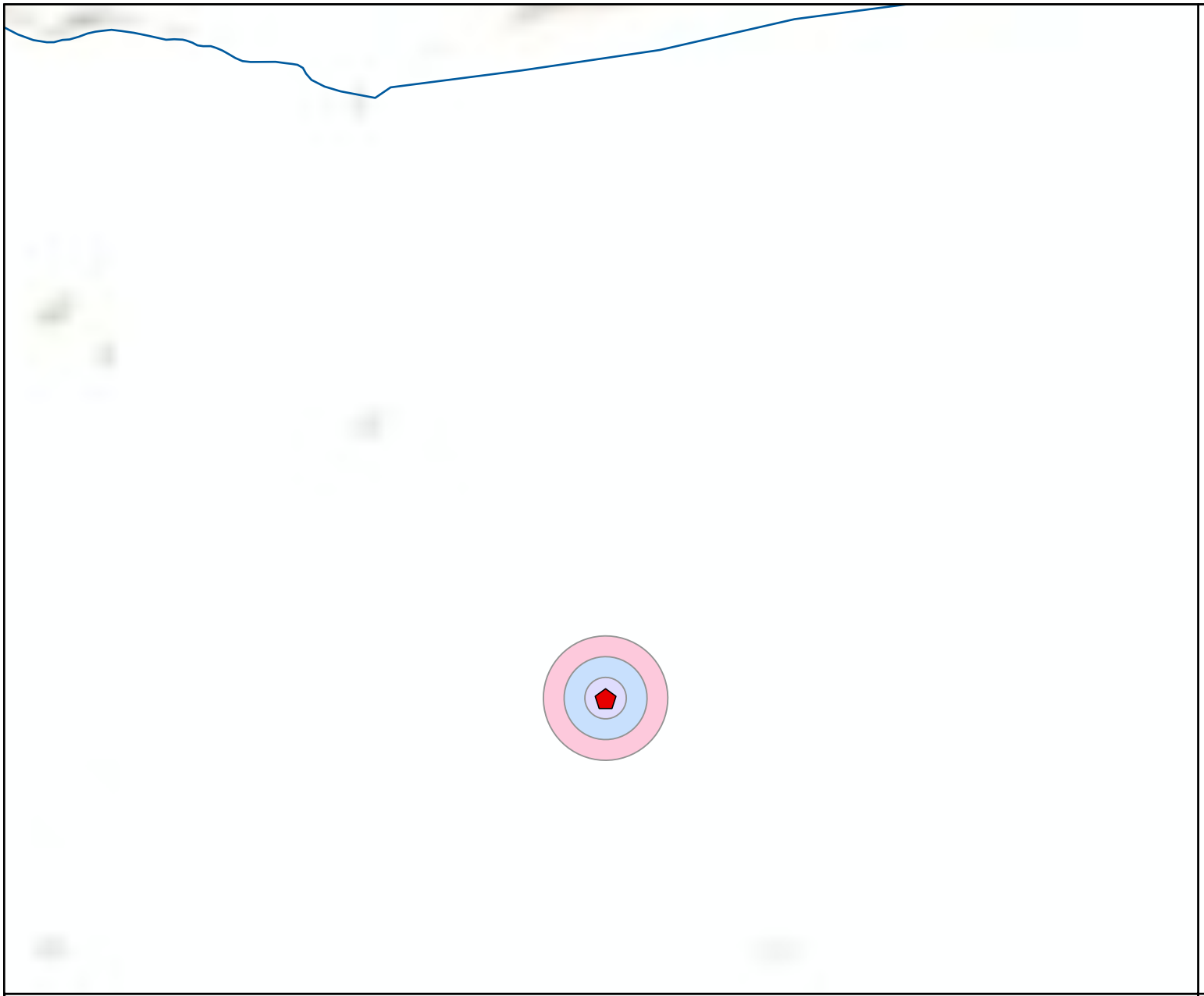
Date Saved: 8/5/2019

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

Drawn Lynn A. Acosta
Date 8/8/2019
Checked
Approved

SMA

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



Point of Release
Springs Seeps
Streams Canals
Rivers
NM Wetlands
Lakes Playas
FEMA Flood Zones 2011
Buffer Distance
100 Feet
200 Feet
300 Feet

N

1,000 Feet

Surface Water Protection Map
1009 Pipeline Release - Enterprise Products
UL: B S: 27 T: 22S R: 30E, Eddy County, New Mexico

Figure 2

\\192.168.22.10\Projects\5-Enterprise 2019 MSA On Call Services (5E27957)\GIS\ARCGIS\ENTERPRISE_MIT.aprx

Date Saved: 8/5/2019

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

Drawn Lynn A. Acosta
Date 8/8/2019
Checked
Approved

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Carlsbad, New Mexico 88221
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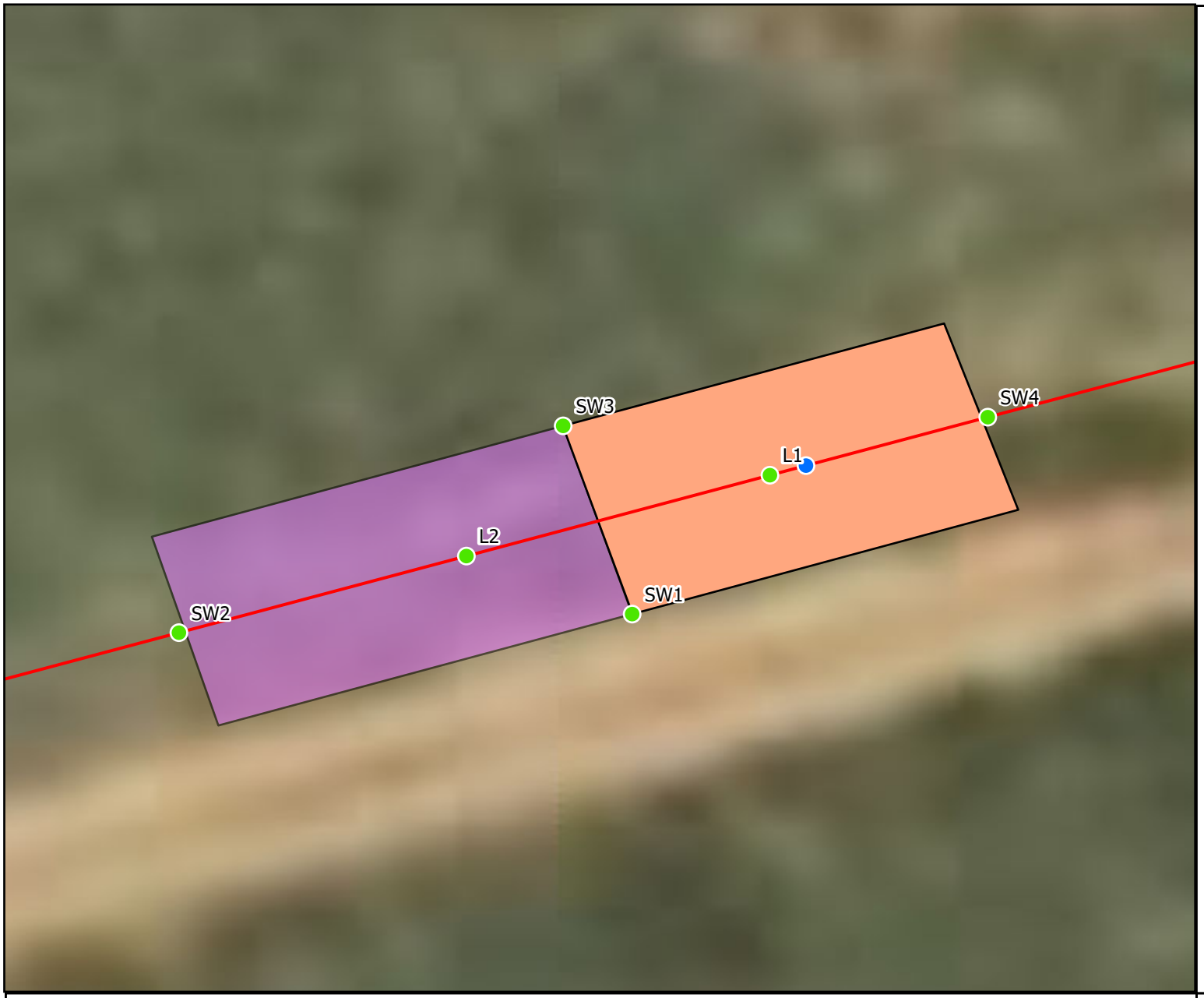


Legend

- Sample Locations
- Point of Release
- Pipeline
- 5' Excavation
- 10' Excavation

N

0 5 10 20 Feet

Site and Sample Location Map
1009 Pipeline - Enterprise
UL: E S: 27 T: 22S R: 30E Eddy County, New Mexico

Figure 3

\\192.168.22.10\Projects\5-Enterprise 2019 MSA On Call Services (5E27957)\GIS\ARCGIS\ENTERPRISE_MIT.aprx

Date Saved: 9/30/2019

Revisions

By:_____ Date:_____ Descr:_____

By:_____ Date:_____ Descr:_____

Drawn Lynn A. Acosta
Date 10/4/2019
Checked
Approved

SMA

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

TABLES

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	155	NMOSE
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	2300	United States Geological Survey
Hortizontal Distance to Nearest Significant Watercourse (ft)	3000	United States Geological Survey

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

Table 3:
Summary of Sample Results

Enterprise Products
1009 Pipeline Release (2RP-5570)

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action/ Action Taken	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria				50	10	1000			2500	600*/20000
L1	7/29/2019	5'	In-situ	3.142	0.062	180	160	<47	340	280
L2	8/14/2019	5'	In-situ	762	120	9500	640	<470	10140	<60
	9/6/2019	10'	In-situ	<0.225	<0.025	<5.0	<10	<51	<66	-
SW1	7/29/2019	0-5'	In-situ	0.1	<0.024	12	140	280	432	1800
	9/6/2019	0-5'	In-situ	-	-	-	-	-	-	<60
SW2	7/29/2019	0-5'	Excavate	436	52	9800	540	79	10419	870
	8/14/2019	0-10'	In-situ	<0.225	<0.025	<5.0	<9.8	<49	<63.8	200
SW3	7/29/2019	0-5'	In-situ	0.479	0.026	5.5	180	110	295.5	3000
	9/6/2019	0-5'	In-situ	-	-	-	-	-	-	<60
SW4	7/29/2019	0-5'	In-situ	<0.217	<0.024	<4.8	9.5	<47	9.5	110

"--" = Not Analyzed

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

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	NAB1922152263
District RP	2RP-5570
Facility ID	fAB1922151794
Application ID	pAB1922151892

Release Notification

FA2DN-190729-C-1410

Responsible Party

Responsible Party	Enterprise Field Services LLC	OGRID	241602
Contact Name	Alena Miro	Contact Telephone	575-628-6802
Contact email	ammiro@eprod.com	Incident # *(assigned by OCD)*	NAB1922152263
Contact mailing address	PO Box 4324, Houston, TX 77210		

Location of Release Source

Latitude N32.366430 Longitude W -103.873558
(NAD 83 in decimal degrees to 5 decimal places)

Site Name 1009 Pipeline	Site Type Pipeline ROW
Date Release Discovered 7/17/2019	API# *(if applicable)* N/A

Unit Letter	Section	Township	Range	County
E	27	22S	30E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private : N/A

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☒ Natural Gas	Volume Released (Mcf) 1.35 MMCF	Volume Recovered (Mcf) 0 MCF
☒ Other (describe)	Volume/Weight Released (provide units) 10 bbl pipeline liquids	Volume/Weight Recovered (provide units) 0 bbl

Cause of release internal corrosion. Approximately 0.11 MSCF of gas and 10 bbls of pipeline liquids were released due to a pipeline leak and 1.35 MMscf of gas was release due to a controlled blowdown to facilitate repair of the pipeline.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1922152263
District RP	2RP-5570
Facility ID	fAB1922151794
Application ID	pAB1922151892

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 release is considered a major release as the estimated volume of gas released exceeded the major release thresholds as defined in 19.15.29.7(A).

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes;
Jim Griswold and Mike Bratcher were notified via email of all information contained in the initial notification C-141 form on 7/22/2019 at 10:15 am

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:

N/A

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: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E. Fields Date: 7-23-19

email: jefields@eprod.com Telephone: 713-381-6684

OCD Only

Received by: Amalia Bustamante Date: 8/9/2019

APPENDIX B
NMOSE WELLS REPORT

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

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y		Distance	Depth Well	Depth Water	Water Column
C 03015		CUB	ED	1	4	3	22	22S	30E	606099	3582353*		705	1316	262	1054
C 02111		CUB	ED	2	2	2	33	22S	30E	605505	3580336*		1436	248	155	93
C 02724		CUB	ED	4	4	2	29	22S	30E	603860	3581329*		2252	503		
C 03679 POD1		C	ED	1	4	2	14	24S	33E	603567	3581547		2524	700	575	125
C 02723		CUB	ED	2	2	3	15	22S	30E	606282	3584363*		2721	651		
C 03220 EXPLORE		CUB	ED	1	3	4	33	22S	30E	604911	3579127*		2783	224		
C 02950 EXPL		CUB	ED	4	2	4	23	22S	30E	608740	3582576*		2807	845		
C 02637		CUB	ED	1	3	3	24	22S	30E	608950	3582377*		2951	759		

Average Depth to Water: **330 feet**

Minimum Depth: **155 feet**

Maximum Depth: **575 feet**

Record Count: 8

UTMNAD83 Radius Search (in meters):

Easting (X): 606090 **Northing (Y):** 3581648 **Radius:** 3000

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

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater ▼ Geographic Area: United States ▼ GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 322114103524801

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

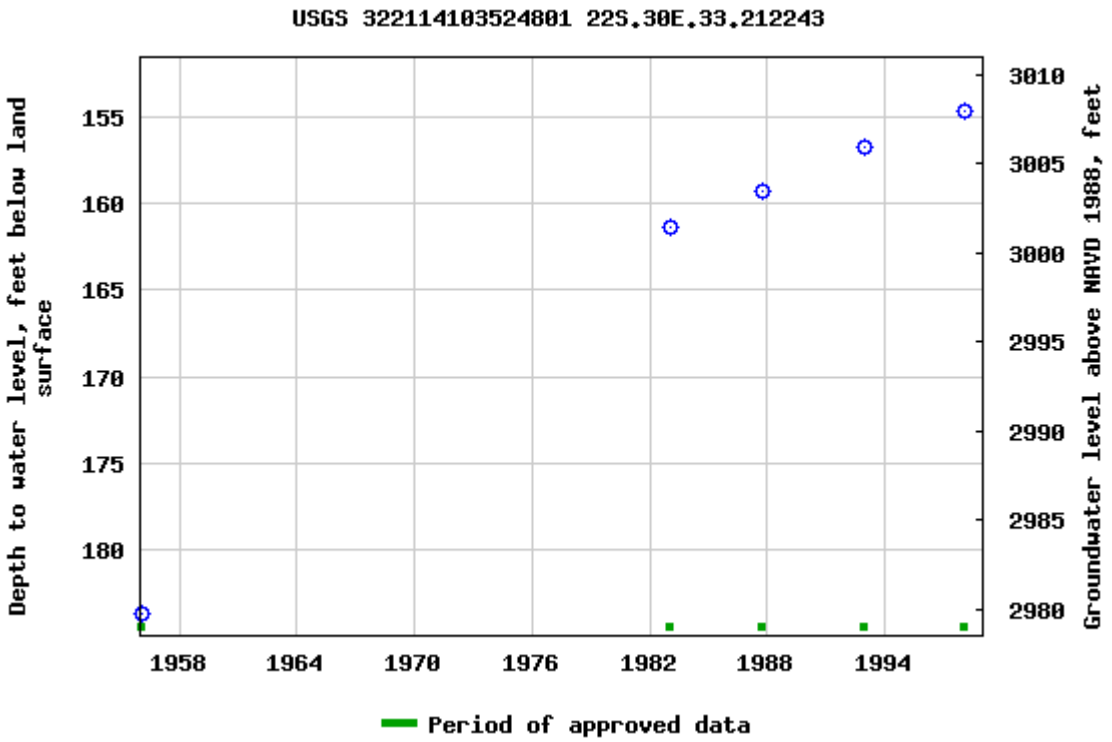
USGS 322114103524801 22S.30E.33.212243

Available data for this site Groundwater: Field measurements ▼ GO

Eddy County, New Mexico
Hydrologic Unit Code --
Latitude 32°21'14", Longitude 103°52'48" NAD27
Land-surface elevation 3,163 feet above NAVD88
The depth of the well is 248 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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



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

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

APPENDIX C
FIELD NOTES
&
SITE PHOTOGRAPHY

SMA

Field Screening

Location Name:	Date:
1009	7/29/2019

Sample Name:	Soil Type:	Depth (BGS)	Collection Time:	EC (ppm)	Temp (°C)	PID Reading	PF
L1 - 5'	Sand	5'	1225			668	
SW 1	Sand	0-5'	1226			169	
SW 3	Sand	0-5'	1230			57.5	
SW 2	Sand	0-5'	1240			305	
SW 4	Sand	0-5'	1234			128	

SMA Field Screening

Location Name: 1009 Pipeline

Date: 8/14/19

Sample Name:	Soil Type:	Depth (BGS)	Collection Time:	EC (ppm)	Temp (°C)	PID Reading	PF
SW 2.1	Sand Caliche nodules		840			690	
SW 2.2	sand		0845			349	
SW 2.3	" "		0855			462	
L2.1	caliche		0947			62	
*L2.2	" "		0953	0.11	28.7	51	
SW 2.4	sand		0942			660	
SW 2.5	Caliche sand		1008			390	
*SW 2.6			1015	0.23	28.0	189	

SMA Field Screening

Location Name: 1009 Pipeline

Date: 9.6.19

Sample Name:	Soil Type:	Depth (BGS)	Collection Time:	EC (ppm)	Temp (°C)	PID Reading	PF
Sw 1	Sand	0-5 10	925	0.64	28.8	—	—
* Sw 1.3	Sand	0-5	928	0.07	28.3	—	—
L2	Sand/ Caliche	8'	930	0.09	28.5	164	—
Sw 1.1	Sand	0-5 10	948	0.68	28.5	—	—
L 2.1	Sand/ caliche	9	950	0.14	28.6	77	—
Sw 1.2	Sand	0-10	1000	0.31	29.2	—	—
* Sw 1.3	Sand	0-10	1012	0.07	30.3	—	—
* L2.2	Sand	10	1018	0.07	30.3	5.5	—


300LC-9A

APPENDIX D

LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 07, 2019

Heather Patterson

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

RE: Enterprise 1009 OrderNo.: 1908047

Dear Heather Patterson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/1/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1
Project: Enterprise 1009
Collection Date: 7/29/2019 12:25:00 PM
Lab ID: 1908047-001
Matrix: SOIL
Received Date: 8/1/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	280	60		mg/Kg	20	8/6/2019 1:40:47 AM	46597
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	160	9.5		mg/Kg	1	8/5/2019 4:40:38 PM	46571
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/5/2019 4:40:38 PM	46571
Surr: DNOP	86.8	70-130		%Rec	1	8/5/2019 4:40:38 PM	46571
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	180	9.8		mg/Kg	2	8/5/2019 5:32:32 PM	46565
Surr: BFB	699	73.8-119	S	%Rec	2	8/5/2019 5:32:32 PM	46565
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.062	0.049		mg/Kg	2	8/5/2019 5:32:32 PM	46565
Toluene	0.18	0.098		mg/Kg	2	8/5/2019 5:32:32 PM	46565
Ethylbenzene	1.0	0.098		mg/Kg	2	8/5/2019 5:32:32 PM	46565
Xylenes, Total	1.9	0.20		mg/Kg	2	8/5/2019 5:32:32 PM	46565
Surr: 4-Bromofluorobenzene	125	80-120	S	%Rec	2	8/5/2019 5:32:32 PM	46565

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Enterprise 1009
Collection Date: 7/29/2019 12:25:00 PM
Lab ID: 1908047-002
Matrix: SOIL
Received Date: 8/1/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	1800	60		mg/Kg	20	8/6/2019 1:53:12 AM	46597
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	140	9.2		mg/Kg	1	8/5/2019 5:03:14 PM	46571
Motor Oil Range Organics (MRO)	280	46		mg/Kg	1	8/5/2019 5:03:14 PM	46571
Surr: DNOP	93.3	70-130		%Rec	1	8/5/2019 5:03:14 PM	46571
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	12	4.9		mg/Kg	1	8/5/2019 5:56:13 PM	46565
Surr: BFB	185	73.8-119	S	%Rec	1	8/5/2019 5:56:13 PM	46565
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	8/5/2019 5:56:13 PM	46565
Toluene	ND	0.049		mg/Kg	1	8/5/2019 5:56:13 PM	46565
Ethylbenzene	ND	0.049		mg/Kg	1	8/5/2019 5:56:13 PM	46565
Xylenes, Total	0.10	0.097		mg/Kg	1	8/5/2019 5:56:13 PM	46565
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	8/5/2019 5:56:13 PM	46565

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW3
Project: Enterprise 1009
Collection Date: 7/29/2019 12:30:00 PM
Lab ID: 1908047-003 **Matrix:** SOIL **Received Date:** 8/1/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	3000	150		mg/Kg	50	8/6/2019 4:47:47 PM	46597
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	180	9.8		mg/Kg	1	8/6/2019 3:26:34 PM	46571
Motor Oil Range Organics (MRO)	110	49		mg/Kg	1	8/6/2019 3:26:34 PM	46571
Surr: DNOP	94.3	70-130		%Rec	1	8/6/2019 3:26:34 PM	46571
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	5.5	4.8		mg/Kg	1	8/5/2019 6:19:54 PM	46565
Surr: BFB	125	73.8-119	S	%Rec	1	8/5/2019 6:19:54 PM	46565
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.026	0.024		mg/Kg	1	8/5/2019 6:19:54 PM	46565
Toluene	0.11	0.048		mg/Kg	1	8/5/2019 6:19:54 PM	46565
Ethylbenzene	0.053	0.048		mg/Kg	1	8/5/2019 6:19:54 PM	46565
Xylenes, Total	0.29	0.096		mg/Kg	1	8/5/2019 6:19:54 PM	46565
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	8/5/2019 6:19:54 PM	46565

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW4
Project: Enterprise 1009
Collection Date: 7/29/2019 12:34:00 PM
Lab ID: 1908047-004 **Matrix:** SOIL **Received Date:** 8/1/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	110	60		mg/Kg	20	8/6/2019 2:18:01 AM	46597
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	9.5	9.5		mg/Kg	1	8/6/2019 4:15:05 PM	46571
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/6/2019 4:15:05 PM	46571
Surr: DNOP	98.7	70-130		%Rec	1	8/6/2019 4:15:05 PM	46571
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/5/2019 8:18:08 PM	46565
Surr: BFB	108	73.8-119		%Rec	1	8/5/2019 8:18:08 PM	46565
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	8/5/2019 8:18:08 PM	46565
Toluene	ND	0.048		mg/Kg	1	8/5/2019 8:18:08 PM	46565
Ethylbenzene	ND	0.048		mg/Kg	1	8/5/2019 8:18:08 PM	46565
Xylenes, Total	ND	0.097		mg/Kg	1	8/5/2019 8:18:08 PM	46565
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	8/5/2019 8:18:08 PM	46565

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: Enterprise 1009
Collection Date: 7/29/2019 12:40:00 PM
Lab ID: 1908047-005 **Matrix:** SOIL **Received Date:** 8/1/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	870	60		mg/Kg	20	8/6/2019 1:04:27 PM	46606
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	540	9.5		mg/Kg	1	8/5/2019 6:10:42 PM	46571
Motor Oil Range Organics (MRO)	79	47		mg/Kg	1	8/5/2019 6:10:42 PM	46571
Surr: DNOP	90.4	70-130		%Rec	1	8/5/2019 6:10:42 PM	46571
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	9800	990		mg/Kg	200	8/6/2019 2:14:41 PM	46565
Surr: BFB	153	73.8-119	S	%Rec	200	8/6/2019 2:14:41 PM	46565
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	52	4.9		mg/Kg	200	8/6/2019 2:14:41 PM	46565
Toluene	230	9.9		mg/Kg	200	8/6/2019 2:14:41 PM	46565
Ethylbenzene	24	9.9		mg/Kg	200	8/6/2019 2:14:41 PM	46565
Xylenes, Total	130	20		mg/Kg	200	8/6/2019 2:14:41 PM	46565
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	200	8/6/2019 2:14:41 PM	46565

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908047**

07-Aug-19

Client: Souder, Miller & Associates

Project: Enterprise 1009

Sample ID: **MB-46597**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **46597**	RunNo: **61924**
Prep Date: **8/5/2019**	Analysis Date: **8/5/2019**	SeqNo: **2100044** Units: **mg/Kg**

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

Sample ID: **LCS-46597**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **46597**	RunNo: **61924**
Prep Date: **8/5/2019**	Analysis Date: **8/5/2019**	SeqNo: **2100046** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.8	90	110			

Sample ID: **MB-46606**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **46606**	RunNo: **61950**
Prep Date: **8/6/2019**	Analysis Date: **8/6/2019**	SeqNo: **2101140** Units: **mg/Kg**

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

Sample ID: **LCS-46606**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **46606**	RunNo: **61950**
Prep Date: **8/6/2019**	Analysis Date: **8/6/2019**	SeqNo: **2101141** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908047**

07-Aug-19

Client: Souder, Miller & Associates

Project: Enterprise 1009

Sample ID: **LCS-46571**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **46571**	RunNo: **61865**
Prep Date: **8/2/2019**	Analysis Date: **8/5/2019**	SeqNo: **2098678** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	63.9	124			
Surr: DNOP	4.5		5.000		89.1	70	130			

Sample ID: **MB-46571**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **46571**	RunNo: **61865**
Prep Date: **8/2/2019**	Analysis Date: **8/5/2019**	SeqNo: **2098679** 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	9.4		10.00		94.3	70	130			

Sample ID: **LCS-46595**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **46595**	RunNo: **61925**
Prep Date: **8/5/2019**	Analysis Date: **8/6/2019**	SeqNo: **2100152** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		102	70	130			

Sample ID: **MB-46595**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **46595**	RunNo: **61925**
Prep Date: **8/5/2019**	Analysis Date: **8/6/2019**	SeqNo: **2100153** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		108	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908047**

07-Aug-19

Client: Souder, Miller & Associates

Project: Enterprise 1009

Sample ID: **LCS-46565**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **46565**	RunNo: **61895**
Prep Date: **8/2/2019**	Analysis Date: **8/5/2019**	SeqNo: **2099101** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.0	80.1	123			
Surr: BFB	1100		1000		106	73.8	119			

Sample ID: **MB-46565**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **46565**	RunNo: **61895**
Prep Date: **8/2/2019**	Analysis Date: **8/5/2019**	SeqNo: **2099102** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		94.9	73.8	119			

Sample ID: **MB-46580**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **46580**	RunNo: **61943**
Prep Date: **8/5/2019**	Analysis Date: **8/7/2019**	SeqNo: **2100730** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.1	73.8	119			

Sample ID: **LCS-46580**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **46580**	RunNo: **61943**
Prep Date: **8/5/2019**	Analysis Date: **8/7/2019**	SeqNo: **2100749** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		108	73.8	119			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908047**

07-Aug-19

Client: Souder, Miller & Associates

Project: Enterprise 1009

Sample ID: **LCS-46565**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **46565**	RunNo: **61895**
Prep Date: **8/2/2019**	Analysis Date: **8/5/2019**	SeqNo: **2099106** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	110	80	120			
Xylenes, Total	3.3	0.10	3.000	0	110	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID: **MB-46565**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **46565**	RunNo: **61895**
Prep Date: **8/2/2019**	Analysis Date: **8/5/2019**	SeqNo: **2099107** 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	0.96		1.000		96.0	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **SMA-CARLSBAD** Work Order Number: **1908047** RcptNo: 1

Received By: **Leah Baca** **8/1/2019 9:05:00 AM** Leah SBaca

Completed By: **Yazmine Garduno** **8/1/2019 1:28:02 PM** Yazmine Garduno

Reviewed By: ENM 8/1/19

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: DAD 8/1/19

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Not Present			

Chain-of-Custody Record

Client: SMA – CARLSBAD

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5 DAY TURN

Project Name: Enterprise 1009

Project #:

Project Manager: Heather Patterson

Sampler: LA / JI

On Ice: ☒ Yes ☐ No

# of Coolers: (1)

Cooler Temp(including CF): 0.8 - 0.2 = 0.6C

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. 1905047	(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)
7/29/19	1225	SOIL	L1	4oz		-001	X	X					X			
"	1225	"	SW1	"	"	-002	X	X					X			
"	1230	"	SW3	"	"	-003	X	X					X			
"	1234	"	SW4	"	"	-004	X	X					X			
"	1240	"	SW2	"	"	-005	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					7/31/19	1330
7/31/19	1900			Courier	8.1.19	0905

Remarks: Enterprise

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 26, 2019

Heather Patterson

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

RE: 7/22 1009 Pipeline OrderNo.: 1908967

Dear Heather Patterson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/17/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2
Project: 7/22 1009 Pipeline
Collection Date: 8/14/2019 9:53:00 AM
Lab ID: 1908967-001
Matrix: SOIL
Received Date: 8/17/2019 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	8/24/2019 4:10:25 AM	47025
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	640	94		mg/Kg	10	8/23/2019 8:28:38 AM	46940
Motor Oil Range Organics (MRO)	ND	470		mg/Kg	10	8/23/2019 8:28:38 AM	46940
Surr: DNOP	0	70-130	S	%Rec	10	8/23/2019 8:28:38 AM	46940
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	9500	980		mg/Kg	200	8/21/2019 7:23:57 PM	46923
Surr: BFB	136	77.4-118	S	%Rec	200	8/21/2019 7:23:57 PM	46923
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	120	4.9		mg/Kg	200	8/22/2019 10:42:10 PM	46923
Toluene	350	9.8		mg/Kg	200	8/22/2019 10:42:10 PM	46923
Ethylbenzene	42	9.8		mg/Kg	200	8/22/2019 10:42:10 PM	46923
Xylenes, Total	250	20		mg/Kg	200	8/22/2019 10:42:10 PM	46923
Surr: 4-Bromofluorobenzene	98.5	80-120		%Rec	200	8/22/2019 10:42:10 PM	46923

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: 7/22 1009 Pipeline
Collection Date: 8/14/2019 10:15:00 AM
Lab ID: 1908967-002 **Matrix:** SOIL
Received Date: 8/17/2019 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	200	60		mg/Kg	20	8/24/2019 4:22:49 AM	47025
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/22/2019 2:12:15 PM	46940
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/22/2019 2:12:15 PM	46940
Surr: DNOP	103	70-130		%Rec	1	8/22/2019 2:12:15 PM	46940
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/21/2019 7:46:45 PM	46923
Surr: BFB	113	77.4-118		%Rec	1	8/21/2019 7:46:45 PM	46923
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	8/21/2019 7:46:45 PM	46923
Toluene	ND	0.050		mg/Kg	1	8/21/2019 7:46:45 PM	46923
Ethylbenzene	ND	0.050		mg/Kg	1	8/21/2019 7:46:45 PM	46923
Xylenes, Total	ND	0.10		mg/Kg	1	8/21/2019 7:46:45 PM	46923
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	8/21/2019 7:46:45 PM	46923

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908967**
26-Aug-19

Client: Souder, Miller & Associates
Project: 7/22 1009 Pipeline

Sample ID: **MB-47025**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **47025**	RunNo: **62388**							
Prep Date: **8/23/2019**	Analysis Date: **8/24/2019**	SeqNo: **2121577**	Units: **mg/Kg**						

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

Sample ID: **LCS-47025**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **47025**	RunNo: **62388**							
Prep Date: **8/23/2019**	Analysis Date: **8/24/2019**	SeqNo: **2121579**	Units: **mg/Kg**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908967**

26-Aug-19

Client: Souder, Miller & Associates

Project: 7/22 1009 Pipeline

Sample ID: **MB-46940**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **46940**	RunNo: **62330**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2118181** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		105	70	130			

Sample ID: **LCS-46940**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **46940**	RunNo: **62330**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2118182** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.5	63.9	124			
Surr: DNOP	4.4		5.000		88.6	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908967**

26-Aug-19

Client: Souder, Miller & Associates

Project: 7/22 1009 Pipeline

Sample ID: **MB-46923**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **46923**	RunNo: **62310**
Prep Date: **8/20/2019**	Analysis Date: **8/21/2019**	SeqNo: **2117223** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		101	77.4	118			

Sample ID: **LCS-46923**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **46923**	RunNo: **62310**
Prep Date: **8/20/2019**	Analysis Date: **8/21/2019**	SeqNo: **2117224** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.6	80	120			
Surr: BFB	1200		1000		116	77.4	118			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908967**

26-Aug-19

Client: Souder, Miller & Associates

Project: 7/22 1009 Pipeline

Sample ID: **MB-46923** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **46923** RunNo: **62310**

Prep Date: **8/20/2019** Analysis Date: **8/21/2019** SeqNo: **2117256** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		94.9	80	120			

Sample ID: **LCS-46923** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **46923** RunNo: **62310**

Prep Date: **8/20/2019** Analysis Date: **8/21/2019** SeqNo: **2117257** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.3	80	120			
Toluene	0.96	0.050	1.000	0	96.5	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.6	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.9	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Qualifiers:

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

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: **1908967** RcptNo: **1**

Received By: **Erin Melendrez** **8/17/2019 2:25:00 PM**

Completed By: **Erin Melendrez** **8/17/2019 3:29:42 PM**

Reviewed By: IO 8/19/19

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: ENM 8/17/19

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.2	Good	Yes			

Chain-of-Custody Record

Client: SMA - CARLSBAD

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5 DAY TURN

Project Name: 7/22 1009 Pipeline

Project #:

Project Manager: Heather Patterson

Sampler: LA/JI

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 5.1+0.1(CF)=5.2°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. 1908967	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/14/19	0953	SOIL	L2	4oz		-001	X	X					X			
8/14/19	1015	SOIL	SW2	4oz		-002	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time	Remarks:
					8/16/19	0900	
8/16/19	1920			courier	8/17/19	0425	Enterprise

ENM 8/17/19

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 16, 2019

Lynn A. Acosta

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

RE: 1009 Pipeline OrderNo.: 1909439

Dear Lynn A. Acosta:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/10/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1909439**
Date Reported: **9/16/2019**

CLIENT: Souder, Miller & Associates
Project: 1009 Pipeline
Lab ID: 1909439-001 **Matrix:** SOIL

Client Sample ID: SW1
Collection Date: 9/6/2019 10:12:00 AM
Received Date: 9/10/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	9/15/2019 6:02:44 PM	47490

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW3
Project: 1009 Pipeline
Collection Date: 9/6/2019 9:28:00 AM
Lab ID: 1909439-002 **Matrix:** SOIL **Received Date:** 9/10/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	60		mg/Kg	20	9/15/2019 6:39:57 PM	47490

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2
Project: 1009 Pipeline
Collection Date: 9/6/2019 10:18:00 AM
Lab ID: 1909439-003 **Matrix:** SOIL **Received Date:** 9/10/2019 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/12/2019 11:31:47 PM	47424
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	9/12/2019 11:31:47 PM	47424
Surr: DNOP	86.5	70-130		%Rec	1	9/12/2019 11:31:47 PM	47424
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/12/2019 7:38:36 PM	47421
Surr: BFB	95.3	77.4-118		%Rec	1	9/12/2019 7:38:36 PM	47421
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	9/12/2019 7:38:36 PM	47421
Toluene	ND	0.050		mg/Kg	1	9/12/2019 7:38:36 PM	47421
Ethylbenzene	ND	0.050		mg/Kg	1	9/12/2019 7:38:36 PM	47421
Xylenes, Total	ND	0.10		mg/Kg	1	9/12/2019 7:38:36 PM	47421
Surr: 4-Bromofluorobenzene	86.3	80-120		%Rec	1	9/12/2019 7:38:36 PM	47421

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1909439**

16-Sep-19

Client: Souder, Miller & Associates

Project: 1009 Pipeline

Sample ID: **MB-47490**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **47490**	RunNo: **62939**
Prep Date: **9/15/2019**	Analysis Date: **9/15/2019**	SeqNo: **2144905** Units: **mg/Kg**

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

Sample ID: **LCS-47490**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **47490**	RunNo: **62939**
Prep Date: **9/15/2019**	Analysis Date: **9/15/2019**	SeqNo: **2144906** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1909439**
16-Sep-19

Client: Souder, Miller & Associates
Project: 1009 Pipeline

Sample ID: **MB-47424** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **47424** RunNo: **62855**
Prep Date: **9/11/2019** Analysis Date: **9/12/2019** SeqNo: **2141599** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		95.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1909439**

16-Sep-19

Client: Souder, Miller & Associates

Project: 1009 Pipeline

Sample ID: **MB-47421**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **47421**	RunNo: **62879**
Prep Date: **9/11/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142846** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		96.4	77.4	118			

Sample ID: **LCS-47421**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **47421**	RunNo: **62879**
Prep Date: **9/11/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142847** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.3	80	120			
Surr: BFB	1200		1000		118	77.4	118			S

Sample ID: **MB-47445**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **47445**	RunNo: **62922**
Prep Date: **9/12/2019**	Analysis Date: **9/13/2019**	SeqNo: **2144336** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.3	77.4	118			

Sample ID: **LCS-47445**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **47445**	RunNo: **62922**
Prep Date: **9/12/2019**	Analysis Date: **9/13/2019**	SeqNo: **2144337** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		112	77.4	118			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1909439**

16-Sep-19

Client: Souder, Miller & Associates

Project: 1009 Pipeline

Sample ID: **MB-47421**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **47421**	RunNo: **62879**
Prep Date: **9/11/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142874** 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	0.86		1.000		86.0	80	120			

Sample ID: **LCS-47421**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **47421**	RunNo: **62879**
Prep Date: **9/11/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142875** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.2	80	120			
Toluene	0.99	0.050	1.000	0	99.2	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.0	80	120			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.4	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **SMA-CARLSBAD** Work Order Number: **1909439** RcptNo: **1**

Received By: **Yazmine Garduno** **9/10/2019 9:05:00 AM**

Completed By: **Yazmine Garduno** **9/10/2019 1:09:05 PM**

Reviewed By: ENM 9/10/19

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: YG 9/10/19

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good				
2	5.8	Good				

Chain-of-Custody Record

Client: SMA- Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

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

Project Name:
1009 - Pipeline

Project #:

Project Manager:
Lynn A. Acosta

Sampler: LAA

On Ice: ☑ Yes ☐ No

# of Coolers: 2 4.9-0.5=3.9°

Cooler Temp(including CF): 6.3-0.5=5.8°

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No 1909436	(BTEX) MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9/6/19	1012	Soil	SW1	4oz		-001							X			
1	938	1	SW3	1		-002							X			
1	1018		L2	1		-003	X	X								

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					9/9/19	1400
Date: 9/9/19	Time: 1900	Relinquished by:	Received by:	Via: Courier	Date 9/10/19	Time 0905

Remarks:
Enterprise

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.