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

July 22, 2020

#5E29133-BG13

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

SUBJECT: Remediation Closure Report for the Kachina 8 Federal 1 Release (1RP-5170), Eddy County, New Mexico

To Whom it May Concern:

On behalf of Devon Energy Production Company, 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 Kachina 8 Federal 1 site. The site is in Unit C, Section 8, Township 18S, Range 33E, Eddy County, New Mexico, on Federal 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	Kachina 8 Federal 1	Company	Devon Energy Company
API Number	30-025-30986	Location	32.7673416, -103.6879425
Incident Number	1RP-5170		
Estimated Date of Release	7/30/2018	Date Reported to NMOCD	8/23/2018
Land Owner	Federal	Reported To	NMOCD, BLM
Source of Release	Hole developed on the base of a storage tank.		
Released Volume	12.9 BBLS	Released Material	PW
Recovered Volume	3.2 BBLS	Net Release	9.7 BBLS
NMOCD Closure Criteria	51-100 feet to groundwater		
SMA Response Dates	3/25/2020, 4/28/2020, 6/24/2020, 7/9/2020		

1.0 Background

On July 30, 2018 a release was discovered at the Kachina 8 Federal 1 site due to a puncture developed at the base of a storage tank. Initial response activities were conducted by Devon personnel, and included source elimination and site containment activities, which recovered a total of approximately 3.2 barrels of fluid. Figure 1 illustrates the vicinity and site location; Figure 2 illustrates the release location. The C-141 form is included in Appendix A.

2.0 Site Information and Closure Criteria

The Kachina 8 Federal 1 is located approximately 33 miles from Hobbs, New Mexico on Federal (BLM) land at an elevation of approximately 3,938 feet above mean sea level (amsl).

Based upon OSE well data (Appendix B), depth to groundwater in the area is estimated to be 100 feet below grade surface (bgs). There is one 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 7/13/2020). The nearest significant watercourse is an unnamed draw, located approximately 7,383 feet to the north west. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of between 51-100 feet bgs. Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

3.0 Release Characterization and Remediation Activities

On March 25, and April 28, 2020, SMA personnel arrived on site in response to the release associated with Kachina 8 Federal 1. Following figures of the release areas provided by Devon personnel, SMA performed site delineation activities by collecting soil samples around the release site. Soil samples were field-screened for chloride using an electrical conductivity (EC) and for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp.

A total of nine (9) sample locations (L1-L5 & SW1- SW4) were investigated using a hand-auger, to depths up to two and a half (2.5) feet bgs. A total of 23 samples were collected 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 indicated that an area on the southeast corner of the containment, represented by sample SW3 had been impacted above NMOCD Closure Criteria. The area measured approximately 16 by 21 feet by 1 foot deep had been impacted.

On June 24, and July 9, 2020, SMA returned to the site to guide the excavation of contaminated soil. SMA guided the excavation activities by collecting soil samples for field screening, using the methods above. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria would be met. NMOCD was notified on June 22, and July 7, 2020 that closure samples were expected to be collected in two (2) business days.

On June 24, and July 9, 2020 SMA conducted confirmation sampling of the walls and base of the excavation, which measured approximately 17 feet by 21 feet. The area around sample location SW3 was excavated to a depth of one (1) foot bgs.

Confirmation samples were comprised of five-point composites of the base (CS1) and walls (SW1 and SW2).

A total of six (6) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Laboratory samples were collected in accordance with the sampling protocol included in Appendix C. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico and Cardinal Laboratories in Hobbs, New Mexico (Appendix D).

Figure 3 shows the extent of the excavation and sample locations, 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 R360 Environmental Solutions near Hobbs, NM, 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 Ashley Maxwell at 505-320-9241 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:

Ashley Maxwell
Project Manager

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

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

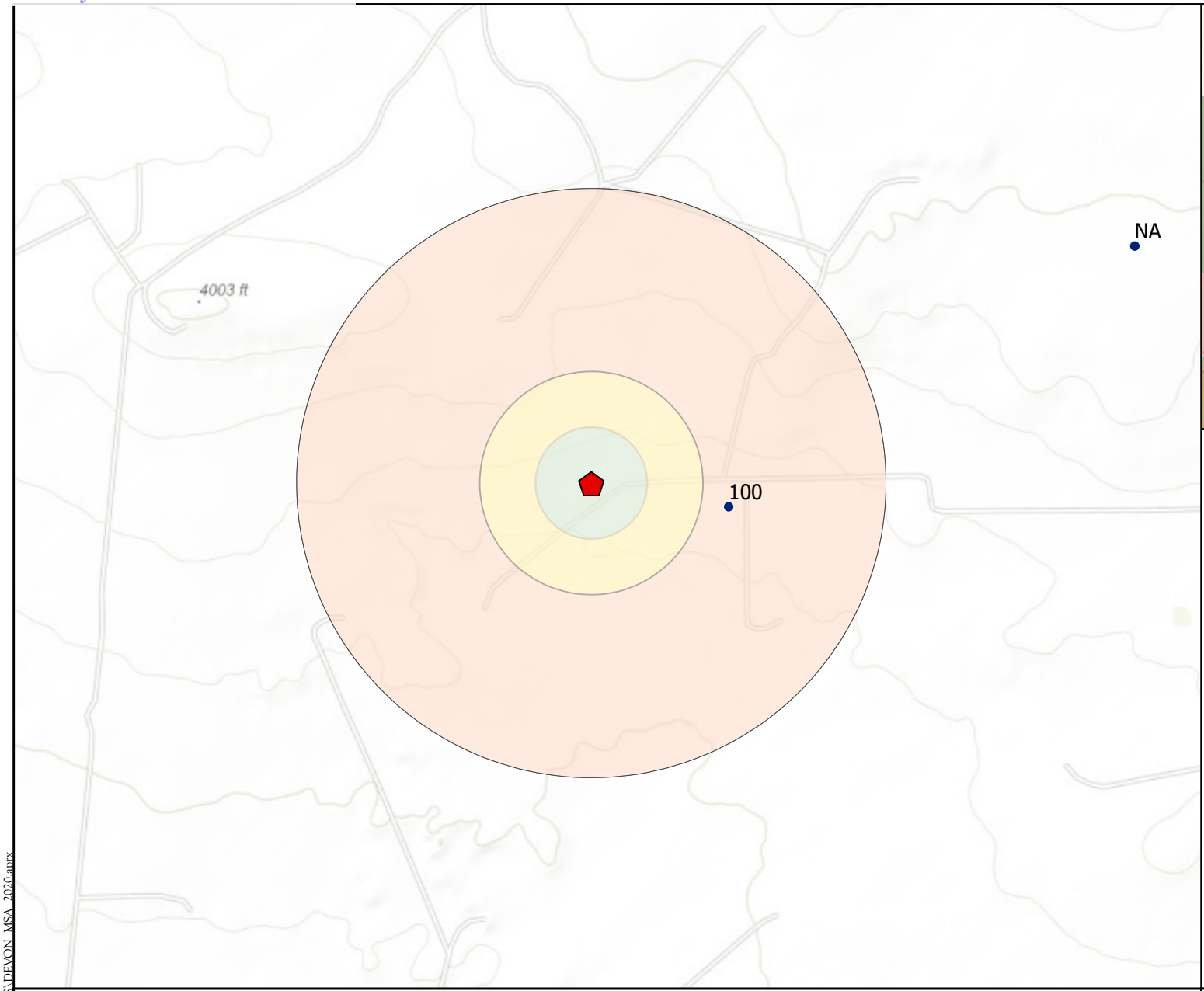
Tables:

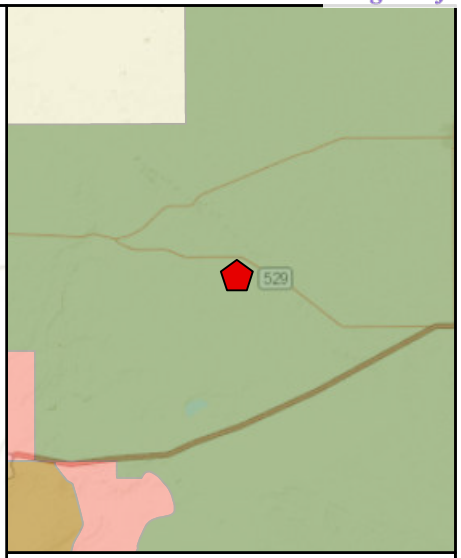
Table 2: NMOCD Closure Criteria Justification
Table 3: Summary of Sample Results

Appendices:

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

FIGURES





Buffer Distance
- .5 Mile
- 1000 Feet
- 500 Feet
- OSE Depth to GW
- USGS GW Well
- Point of Release

Karst Potential
- Critical
- High
- Medium
- Low

N

0 437.5 875 1,750 2,625
Feet

Site Map
Kachina 8 Federal #001- Devon Energy
Sec 8 T18S R33E Eddy County, New Mexico

Figure 1

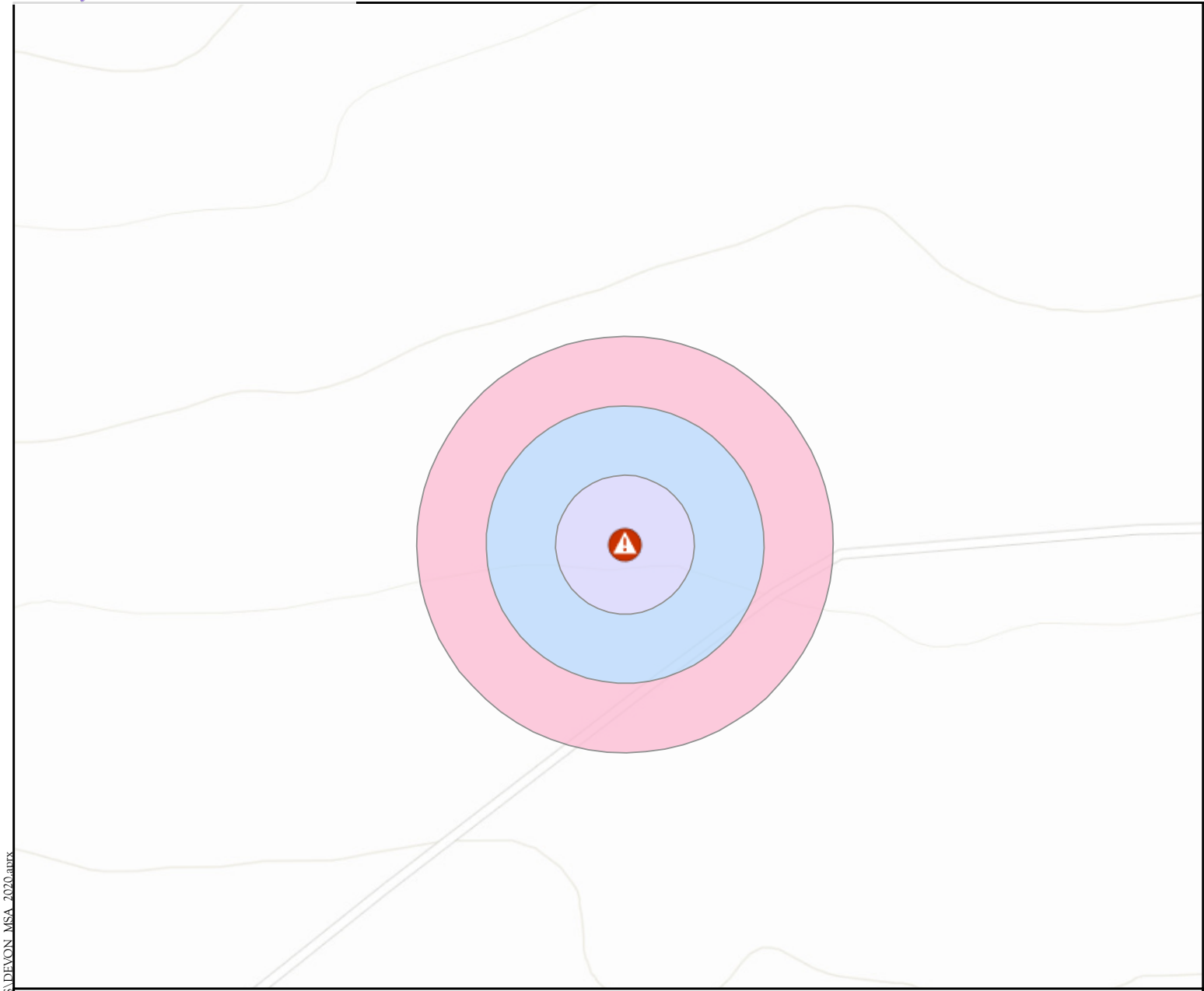
P:\5-Devon MSA 2020 (5E29133)\GIS\DEVON_MSA_2020.mxs
Date Saved: 6/10/2020

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

Drawn Sebastian Orozco
Date 6/22/2020
Checked
Approved

SMA

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



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

N

0 70 140 280 420

Feet

Surface Water Protection Map
Kachina 8 Federal #001- Devon Energy
Sec 8 T18S R33E Eddy County, New Mexico

Figure 2

P:\5-Devon MSA 2020 (5E29133)\GIS\DEVON_MSA_2020.aprx
Date Saved: 3/25/2020

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

Drawn Sebastian Orozco
Date 3/27/2020
Checked
Approved

SMA

201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689-7040
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Pipelines
Other
Storage Tanks
Excavation

Sample Points

Bottom Hole Closure Samples
Side Wall Samples
Initial Soil Samples
Side Wall Closure Samples
Point of Release (1RP-5170)

N

0 4.5 9 18 27
Feet

Site and Sample Location Map
Kachina 8 Federal #001- Devon Energy
Sec 8 T18S R33E Eddy County, New Mexico

Figure 3

P:\5-Devon MSA 2020 (5E29133)\GIS\DEVON_MSA_2020.mxd
Date Saved: 7/20/2020

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

Drawn Sebastian Orozco
Date 7/22/2020
Checked
Approved

SMA

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

TABLES

Table 2:
NMOCD Closure Criteria

Devon Energy
Kachina 8 Federal 1(1RP-5170)

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	100	Office of the State Engineer (OSE)
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	1,236	Office of the State Engineer (OSE)
Hortizontal Distance to Nearest Significant Watercourse (ft)	7,383	Unnamed Draw

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'	X	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					

SMA #

Table 3:
Summary of Sample Results

Devon Energy
Katchina 8 Federal 001 (1RP-5170)

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	1,000			2,500	10,000
L1	3/25/2020	surface	in-situ	<0.208	<0.023	<4.6	170	480	650	5,800
		1	in-situ	<0.219	<0.024	<4.9	20	<49	20	1,500
		2	in-situ	<0.215	<0.024	<4.8	<10	<50	<64.8	420
		2.5	in-situ	<0.211	<0.023	<4.7	<9.4	<47	<61.1	390
L2	3/25/2020	surface	in-situ	<0.215	<0.024	<4.8	160	570	730	520
		1	in-situ	<0.212	<0.024	<4.7	200	440	640	2,700
		1.5	in-situ	<0.216	<0.024	<4.8	350	570	920	960
		2	in-situ	<0.210	<0.023	<4.7	80	200	280	460
		2.5	in-situ	<0.213	<0.024	<4.7	<8.8	<44	<57.5	160
L3	3/25/2020	surface	in-situ	<0.207	<0.023	<4.6	<9.4	<47	<61	<60
		1	in-situ	<0.208	<0.023	<4.6	<9.7	55	55	<60
L4	3/25/2020	surface	in-situ	<0.219	<0.024	<4.9	10	<43	10	83
		1	in-situ	<0.212	<0.024	<4.7	8.3	<37	8.3	<60
L5	3/25/2020	surface	in-situ	<0.210	<0.023	<4.7	9.4	<46	9.4	78
		1	in-situ	<0.211	<0.023	<4.7	240	460	700	310
	4/28/2020	1.5	in-situ	-	-	<4.8	46	180	226	<60
		2	in-situ	-	-	<4.8	55	210	265	<59
SW1	3/25/2020	surface	in-situ	<0.216	<0.024	<4.8	35	84	119	380
SW2	3/25/2020	surface	in-situ	<0.208	<0.023	<4.6	44	110	154	<60
SW3	3/25/2020	surface	excavate	<0.217	<0.024	<4.8	5,900	5,000	10,900	160
	4/28/2020	surface	in-situ	<0.211	<0.023	<4.7	<9.6	<48	<62.3	66
SW4	3/25/2020	surface	in-situ	<0.224	<0.025	<5.0	300	920	1,220	<60
	4/28/2020	surface	in-situ	<0.225	<0.025	<5.0	<9.6	<48	<62.6	<60
Closure Samples										
CS1	6/24/2020	0.5	excavated	<0.219	<0.024	<4.9	1700	3200	4,900	1900
	7/9/2020	1	in-situ	<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	272
SW1	6/24/2020	0-0.5	excavated	<0.219	<0.025	<4.9	140	260	400	1000
	7/9/2020	0-1	in-situ	<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	160
SW2	6/24/2020	0-0.5	excavated	<0.0219	<0.025	<4.9	140	290	430	1100
	7/9/2020	0-1	in-situ	<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	128

"--" = Not Analyzed

SMA #

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

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

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company	Contact Steve McGlasson, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-748-3371
Facility Name Kachina 8 Fed 1	Facility Type Oil

Surface Owner Federal	Mineral Owner Federal	API No. 30-025-30986

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	8	18S	33E	660	FNL	1830	FWL	Eddy

Latitude_32.7673416_ **Longitude**_103.6879425_ NAD83

NATURE OF RELEASE

Type of Release Produced Water (PW)	Volume of Release 12.9BBLS PW	Volume Recovered 3.2BBLS PW
Source of Release Hole in tank	Date and Hour of Occurrence July 30, 2018 @ 11:30 AM MST	Date and Hour of Discovery July 30, 2018 @ 11:30 AM MST
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? Via C141	
By Whom?	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

RECEIVED
By CHernandez at 12:03 pm, Aug 23, 2018

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
A hole was discovered in the bottom of the storage tank. The tank was isolated to prevent any further release. Repairs made.

Describe Area Affected and Cleanup Action Taken.*
Approximately 12.9bbls of pw was released into secondary containment. Approximately 3.2bbls of pw was recovered.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Dana DeLaRosa

Printed Name: Dana DeLaRosa

Title: Field Admin Support

E-mail Address: dana.delarosa@dvn.com

Date: Phone: 575.748.3371

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: BH

Approval Date: 8/23/2018 Expiration Date:

Conditions of Approval:
NMAC 19.15.29 effective August 14, 2018. Complete release characterization before any significant remediation.

Attached ☐

* Attach Additional Sheets If Necessary

1RP-5170

nCH1823544435

pCH1823545076

State of New Mexico
Oil Conservation Division

Incident ID	nCH1823544435
District RP	1RP-5170
Facility ID	
Application ID	pCH1823545076

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?	100 (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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nCH1823545305
District RP	1RP-5170
Facility ID	
Application ID	pCH1823545076

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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 7/22/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nCH1823544435
District RP	1RP-5170
Facility ID	
Application ID	pCH1823545076

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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 7/22/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

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: Brittany Hall Date: 09/14/2022

Printed Name: Brittany Hall Title: Environmental Specialist

Kachina 8 Fed 1

12.9BBLs PW_7.30.2018

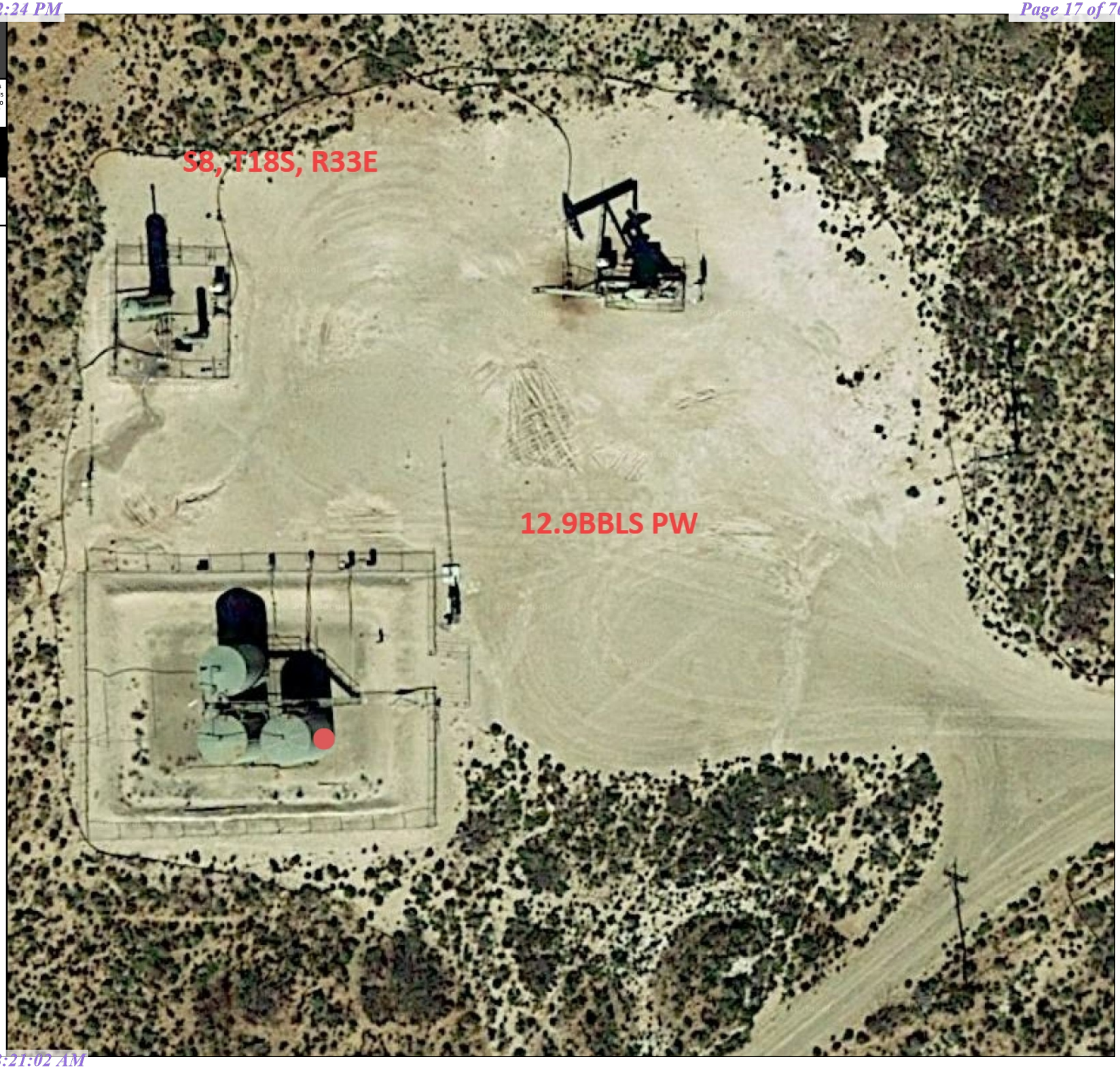
devon

This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Dana DeLaRosa
Map is current as of: 01-Aug-2018

N

Miles
0 0.00 0.00 0.01 1:445



APPENDIX B
NMOSE WELLS REPORT

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 06131		L	LE	3	1	2	08	18S	33E	623241	3626167*	359	194	100	94

Average Depth to Water: **100 feet**

Minimum Depth: **100 feet**

Maximum Depth: **100 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 622892.971 **Northing (Y):** 3626255.944 **Radius:** 805

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

6/22/20 2:31 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

APPENDIX C
SAMPLING PROTOCOL & FIELD NOTES

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

Sampling Protocol

Representatives from SMA chose the Judgmental Sampling Method as described in EPA's Final Sampling Guidance for SW-846, 2002 to adequately quantify contaminant concentrations on Cotton Draw Unit #294H Location. The utility of this particular method functions on the sufficient knowledge of the contaminant, which we possess. This design is also useful when identifying the composition of a release, which we have documented. In addition, this sampling design was chosen for this project because of the locations uniform soil type, and the several operational considerations (such as the liner within the battery and the construction of a new facility) that precluded the implementation of a different statistical design.

The soil samples were collected in laboratory supplied containers in accordance with this sampling protocol, immediately placed on ice and sent under standard chain-of-custody protocols to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico for analysis. A total of eight (8) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D.

Sampling Analysis Field Quality Assurance Procedures

A unique sample numbering was used to identify each sample collected and designated for on-site and off-site laboratory analysis. The purpose of this numbering scheme was to provide a tracking system for the retrieval of analytical and field data on each sample. Sample identification numbers were recorded on sample labels or tags, field notes, chain-of-custody records (COC) and all other applicable documentation used during the project. Sample labels were affixed to all sample containers during sampling activities. Information was recorded on each sample container label at the time of sample collection. The information recorded on the labels were as follows: sample identification number; sample type (discrete or composite); site name and area/location number; analysis to be performed; type of chemical preservative present in container; date and time of sample collection; and sample collector's name and initials. All samples were packed in ice in an approved rigid body container, custody sealed signed and shipped to the appropriate laboratory via insured currier service.

COC procedures implemented for the project provided documentation of the handling of each sample from the time of collection until completion of laboratory analysis. A COC form serves as a legal record of possession of the sample. A sample is considered to be under custody if one or more of the following criteria are met: the sample is in the sampler's possession; the sample is in the sampler's view after being in possession; the sample was in the sampler's possession and then was placed into a locked area to prevent tampering; and/or the sample is in a designated secure area. Custody was documented throughout the project field sampling activities by a chain-of custody form initiated each day during which samples are collected. Container custody seals placed on either individual samples or on the rigid body container were used to ensure that no sample tampering occurs between the time the samples are placed into the containers and the time the containers are opened for analysis at the laboratory. Container custody seals were signed and dated by the individual responsible for completing the COC form contained within the container.

APPENDIX D

LABORATORY ANALYTICAL REPORTS

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 13, 2020

ASHLEY MAXWELL

SOUDER MILLER AND ASSOCIATES

201 S. HALAGUENO

CARLSBAD, NM 88220

RE: KACHINA 8

Enclosed are the results of analyses for samples received by the laboratory on 07/09/20 12:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

SOUDER MILLER AND ASSOCIATES
ASHLEY MAXWELL
201 S. HALAGUENO
CARLSBAD NM, 88220
Fax To: NONE

Received:	07/09/2020	Sampling Date:	07/09/2020
Reported:	07/13/2020	Sampling Type:	Soil
Project Name:	KACHINA 8	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: CS 1 (H001802-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/10/2020	ND	1.85	92.6	2.00	4.67	
Toluene*	<0.050	0.050	07/10/2020	ND	1.86	93.1	2.00	4.79	
Ethylbenzene*	<0.050	0.050	07/10/2020	ND	1.87	93.5	2.00	4.91	
Total Xylenes*	<0.150	0.150	07/10/2020	ND	5.38	89.7	6.00	4.90	
Total BTEX	<0.300	0.300	07/10/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	07/10/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/09/2020	ND	207	103	200	1.29	
DRO >C10-C28*	<10.0	10.0	07/09/2020	ND	240	120	200	14.5	
EXT DRO >C28-C36	<10.0	10.0	07/09/2020	ND					

Surrogate: 1-Chlorooctane *75.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *78.0 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Souder Miller & Associates		**BILL TO**	
Project Manager: Ashley Maxwell		P.O. #:	
Address: 201 S Halagueno St		Company:	
City: Carlsbad	State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name: Kachina 8		State: Zip:	
Project Location:		Phone #:	
Sampler Name:		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Cl	8015D	BTEX 8021									
H001802-1	CS1					X					X		7/9/20	9:20	X	X	X									

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 7-9-20	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1200		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		
Delivered By: (Circle One)		Sample Condition: Cool ☑ Yes ☐ No, Intact ☑ Yes ☐ No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	2.3° C #113		T.O.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 13, 2020

ASHLEY MAXWELL

SOUDER MILLER AND ASSOCIATES

201 S. HALAGUENO

CARLSBAD, NM 88220

RE: KACHINA 8

Enclosed are the results of analyses for samples received by the laboratory on 07/09/20 12:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

SOUDER MILLER AND ASSOCIATES
ASHLEY MAXWELL
201 S. HALAGUENO
CARLSBAD NM, 88220
Fax To: NONE

Received:	07/09/2020	Sampling Date:	07/09/2020
Reported:	07/13/2020	Sampling Type:	Soil
Project Name:	KACHINA 8	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: CS 1 (H001802-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/10/2020	ND	1.85	92.6	2.00	4.67	
Toluene*	<0.050	0.050	07/10/2020	ND	1.86	93.1	2.00	4.79	
Ethylbenzene*	<0.050	0.050	07/10/2020	ND	1.87	93.5	2.00	4.91	
Total Xylenes*	<0.150	0.150	07/10/2020	ND	5.38	89.7	6.00	4.90	
Total BTEX	<0.300	0.300	07/10/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	07/10/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/09/2020	ND	207	103	200	1.29	
DRO >C10-C28*	<10.0	10.0	07/09/2020	ND	240	120	200	14.5	
EXT DRO >C28-C36	<10.0	10.0	07/09/2020	ND					

Surrogate: 1-Chlorooctane *75.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *78.0 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Souder Miller & Associates	**BILL TO**	
Project Manager:	Ashley Maxwell	P.O. #:	
Address:	201 S Halagueno St	Company:	
City:	Carlsbad State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	Kachina 8	State: Zip:	
Project Location:		Phone #:	
Sampler Name:		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Cl	8015D	BTEX 8021									
H001802 1	CS1					X					X		7/9/20	9:20	X	X	X									

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 7-9-20 Time: 1200	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One)	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS:
Sampler - UPS - Bus - Other:	2.3° C #113	T.O.	

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1- Surface
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:00:00 AM
Lab ID: 2003C19-001 **Matrix:** SOIL
Received Date: 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	5800	300		mg/Kg	100	3/31/2020 2:13:21 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	170	47		mg/Kg	5	4/1/2020 3:58:06 PM	51399
Motor Oil Range Organics (MRO)	480	230		mg/Kg	5	4/1/2020 3:58:06 PM	51399
Surr: DNOP	89.0	55.1-146		%Rec	5	4/1/2020 3:58:06 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/30/2020 2:24:29 PM	51394
Surr: BFB	96.5	66.6-105		%Rec	1	3/30/2020 2:24:29 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/30/2020 2:24:29 PM	51394
Toluene	ND	0.046		mg/Kg	1	3/30/2020 2:24:29 PM	51394
Ethylbenzene	ND	0.046		mg/Kg	1	3/30/2020 2:24:29 PM	51394
Xylenes, Total	ND	0.093		mg/Kg	1	3/30/2020 2:24:29 PM	51394
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	3/30/2020 2:24:29 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1- 1'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:05:00 AM
Lab ID: 2003C19-002 **Matrix:** SOIL
Received Date: 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	1500	60		mg/Kg	20	3/30/2020 7:05:56 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	20	9.8		mg/Kg	1	3/31/2020 1:55:13 PM	51399
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/31/2020 1:55:13 PM	51399
Surr: DNOP	84.3	55.1-146		%Rec	1	3/31/2020 1:55:13 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/30/2020 3:34:57 PM	51394
Surr: BFB	96.7	66.6-105		%Rec	1	3/30/2020 3:34:57 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/30/2020 3:34:57 PM	51394
Toluene	ND	0.049		mg/Kg	1	3/30/2020 3:34:57 PM	51394
Ethylbenzene	ND	0.049		mg/Kg	1	3/30/2020 3:34:57 PM	51394
Xylenes, Total	ND	0.097		mg/Kg	1	3/30/2020 3:34:57 PM	51394
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	3/30/2020 3:34:57 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1- 2'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 12:19:00 PM
Lab ID: 2003C19-003 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	420	60		mg/Kg	20	3/30/2020 7:43:10 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/31/2020 2:19:41 PM	51399
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/31/2020 2:19:41 PM	51399
Surr: DNOP	88.5	55.1-146		%Rec	1	3/31/2020 2:19:41 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/30/2020 4:45:23 PM	51394
Surr: BFB	98.8	66.6-105		%Rec	1	3/30/2020 4:45:23 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/30/2020 4:45:23 PM	51394
Toluene	ND	0.048		mg/Kg	1	3/30/2020 4:45:23 PM	51394
Ethylbenzene	ND	0.048		mg/Kg	1	3/30/2020 4:45:23 PM	51394
Xylenes, Total	ND	0.095		mg/Kg	1	3/30/2020 4:45:23 PM	51394
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/30/2020 4:45:23 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1- 2.5'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 12:49:00 PM
Lab ID: 2003C19-004 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	390	60		mg/Kg	20	3/30/2020 7:55:34 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/31/2020 2:44:03 PM	51399
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/31/2020 2:44:03 PM	51399
Surr: DNOP	85.9	55.1-146		%Rec	1	3/31/2020 2:44:03 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2020 5:08:51 PM	51394
Surr: BFB	98.6	66.6-105		%Rec	1	3/30/2020 5:08:51 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/30/2020 5:08:51 PM	51394
Toluene	ND	0.047		mg/Kg	1	3/30/2020 5:08:51 PM	51394
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2020 5:08:51 PM	51394
Xylenes, Total	ND	0.094		mg/Kg	1	3/30/2020 5:08:51 PM	51394
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	3/30/2020 5:08:51 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2- Surface
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:12:00 AM
Lab ID: 2003C19-005 **Matrix:** SOIL
Received Date: 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JMT**
Chloride	520	60		mg/Kg	20	3/30/2020 8:07:58 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	160	39		mg/Kg	5	4/1/2020 5:10:58 PM	51399
Motor Oil Range Organics (MRO)	570	190		mg/Kg	5	4/1/2020 5:10:58 PM	51399
Surr: DNOP	87.3	55.1-146		%Rec	5	4/1/2020 5:10:58 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/30/2020 6:43:02 PM	51394
Surr: BFB	97.2	66.6-105		%Rec	1	3/30/2020 6:43:02 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	3/30/2020 6:43:02 PM	51394
Toluene	ND	0.048		mg/Kg	1	3/30/2020 6:43:02 PM	51394
Ethylbenzene	ND	0.048		mg/Kg	1	3/30/2020 6:43:02 PM	51394
Xylenes, Total	ND	0.095		mg/Kg	1	3/30/2020 6:43:02 PM	51394
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	3/30/2020 6:43:02 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2- 1'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:16:00 AM
Lab ID: 2003C19-006 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	2700	150		mg/Kg	50	3/31/2020 2:25:43 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	200	45		mg/Kg	5	4/1/2020 5:35:29 PM	51399
Motor Oil Range Organics (MRO)	440	230		mg/Kg	5	4/1/2020 5:35:29 PM	51399
Surr: DNOP	88.4	55.1-146		%Rec	5	4/1/2020 5:35:29 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2020 7:06:46 PM	51394
Surr: BFB	97.8	66.6-105		%Rec	1	3/30/2020 7:06:46 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/30/2020 7:06:46 PM	51394
Toluene	ND	0.047		mg/Kg	1	3/30/2020 7:06:46 PM	51394
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2020 7:06:46 PM	51394
Xylenes, Total	ND	0.094		mg/Kg	1	3/30/2020 7:06:46 PM	51394
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/30/2020 7:06:46 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2- 1.5'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 12:23:00 PM
Lab ID: 2003C19-007 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	960	60		mg/Kg	20	3/30/2020 8:32:47 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	350	47		mg/Kg	5	4/1/2020 8:26:36 PM	51399
Motor Oil Range Organics (MRO)	570	240		mg/Kg	5	4/1/2020 8:26:36 PM	51399
Surr: DNOP	87.9	55.1-146		%Rec	5	4/1/2020 8:26:36 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/30/2020 7:30:27 PM	51394
Surr: BFB	93.8	66.6-105		%Rec	1	3/30/2020 7:30:27 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/30/2020 7:30:27 PM	51394
Toluene	ND	0.048		mg/Kg	1	3/30/2020 7:30:27 PM	51394
Ethylbenzene	ND	0.048		mg/Kg	1	3/30/2020 7:30:27 PM	51394
Xylenes, Total	ND	0.096		mg/Kg	1	3/30/2020 7:30:27 PM	51394
Surr: 4-Bromofluorobenzene	99.7	80-120		%Rec	1	3/30/2020 7:30:27 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2- 2'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 12:25:00 PM
Lab ID: 2003C19-008 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	460	60		mg/Kg	20	3/30/2020 8:45:11 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	80	9.6		mg/Kg	1	4/1/2020 12:43:10 PM	51399
Motor Oil Range Organics (MRO)	200	48		mg/Kg	1	4/1/2020 12:43:10 PM	51399
Surr: DNOP	103	55.1-146		%Rec	1	4/1/2020 12:43:10 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2020 7:54:08 PM	51394
Surr: BFB	94.8	66.6-105		%Rec	1	3/30/2020 7:54:08 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/30/2020 7:54:08 PM	51394
Toluene	ND	0.047		mg/Kg	1	3/30/2020 7:54:08 PM	51394
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2020 7:54:08 PM	51394
Xylenes, Total	ND	0.093		mg/Kg	1	3/30/2020 7:54:08 PM	51394
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	3/30/2020 7:54:08 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2- 2.5'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 12:54:00 PM
Lab ID: 2003C19-009 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	160	60		mg/Kg	20	3/30/2020 8:57:36 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	3/31/2020 4:45:56 PM	51399
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	3/31/2020 4:45:56 PM	51399
Surr: DNOP	90.7	55.1-146		%Rec	1	3/31/2020 4:45:56 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2020 8:17:41 PM	51394
Surr: BFB	93.5	66.6-105		%Rec	1	3/30/2020 8:17:41 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/30/2020 8:17:41 PM	51394
Toluene	ND	0.047		mg/Kg	1	3/30/2020 8:17:41 PM	51394
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2020 8:17:41 PM	51394
Xylenes, Total	ND	0.095		mg/Kg	1	3/30/2020 8:17:41 PM	51394
Surr: 4-Bromofluorobenzene	99.0	80-120		%Rec	1	3/30/2020 8:17:41 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3- Surface
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:20:00 AM
Lab ID: 2003C19-010 **Matrix:** SOIL
Received Date: 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/30/2020 9:10:01 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/1/2020 1:07:25 PM	51399
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/1/2020 1:07:25 PM	51399
Surr: DNOP	107	55.1-146		%Rec	1	4/1/2020 1:07:25 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/30/2020 8:41:15 PM	51394
Surr: BFB	94.5	66.6-105		%Rec	1	3/30/2020 8:41:15 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/30/2020 8:41:15 PM	51394
Toluene	ND	0.046		mg/Kg	1	3/30/2020 8:41:15 PM	51394
Ethylbenzene	ND	0.046		mg/Kg	1	3/30/2020 8:41:15 PM	51394
Xylenes, Total	ND	0.092		mg/Kg	1	3/30/2020 8:41:15 PM	51394
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	3/30/2020 8:41:15 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3- 1'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:24:00 AM
Lab ID: 2003C19-011 **Matrix:** SOIL
Received Date: 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/30/2020 9:22:25 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/31/2020 5:34:22 PM	51399
Motor Oil Range Organics (MRO)	55	49		mg/Kg	1	3/31/2020 5:34:22 PM	51399
Surr: DNOP	91.1	55.1-146		%Rec	1	3/31/2020 5:34:22 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/30/2020 9:04:43 PM	51394
Surr: BFB	97.5	66.6-105		%Rec	1	3/30/2020 9:04:43 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/30/2020 9:04:43 PM	51394
Toluene	ND	0.046		mg/Kg	1	3/30/2020 9:04:43 PM	51394
Ethylbenzene	ND	0.046		mg/Kg	1	3/30/2020 9:04:43 PM	51394
Xylenes, Total	ND	0.093		mg/Kg	1	3/30/2020 9:04:43 PM	51394
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/30/2020 9:04:43 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4- Surface
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:28:00 AM
Lab ID: 2003C19-012 **Matrix:** SOIL
Received Date: 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	83	61		mg/Kg	20	3/30/2020 9:34:50 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	10	8.7		mg/Kg	1	4/1/2020 1:32:02 PM	51399
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	4/1/2020 1:32:02 PM	51399
Surr: DNOP	107	55.1-146		%Rec	1	4/1/2020 1:32:02 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/30/2020 9:28:26 PM	51394
Surr: BFB	94.7	66.6-105		%Rec	1	3/30/2020 9:28:26 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/30/2020 9:28:26 PM	51394
Toluene	ND	0.049		mg/Kg	1	3/30/2020 9:28:26 PM	51394
Ethylbenzene	ND	0.049		mg/Kg	1	3/30/2020 9:28:26 PM	51394
Xylenes, Total	ND	0.097		mg/Kg	1	3/30/2020 9:28:26 PM	51394
Surr: 4-Bromofluorobenzene	99.7	80-120		%Rec	1	3/30/2020 9:28:26 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4- 1'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:32:00 AM
Lab ID: 2003C19-013 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/30/2020 10:12:04 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	8.3	7.4		mg/Kg	1	4/1/2020 1:56:14 PM	51399
Motor Oil Range Organics (MRO)	ND	37		mg/Kg	1	4/1/2020 1:56:14 PM	51399
Surr: DNOP	104	55.1-146		%Rec	1	4/1/2020 1:56:14 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2020 9:52:16 PM	51394
Surr: BFB	96.6	66.6-105		%Rec	1	3/30/2020 9:52:16 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/30/2020 9:52:16 PM	51394
Toluene	ND	0.047		mg/Kg	1	3/30/2020 9:52:16 PM	51394
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2020 9:52:16 PM	51394
Xylenes, Total	ND	0.094		mg/Kg	1	3/30/2020 9:52:16 PM	51394
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	3/30/2020 9:52:16 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5- Surface
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:40:00 AM
Lab ID: 2003C19-014 **Matrix:** SOIL
Received Date: 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	78	60		mg/Kg	20	3/30/2020 10:24:28 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	9.4	9.1		mg/Kg	1	4/2/2020 3:32:16 PM	51399
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/2/2020 3:32:16 PM	51399
Surr: DNOP	82.6	55.1-146		%Rec	1	4/2/2020 3:32:16 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2020 10:16:06 PM	51394
Surr: BFB	96.2	66.6-105		%Rec	1	3/30/2020 10:16:06 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/30/2020 10:16:06 PM	51394
Toluene	ND	0.047		mg/Kg	1	3/30/2020 10:16:06 PM	51394
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2020 10:16:06 PM	51394
Xylenes, Total	ND	0.093		mg/Kg	1	3/30/2020 10:16:06 PM	51394
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	3/30/2020 10:16:06 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5- 1'
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 10:45:00 AM
Lab ID: 2003C19-015 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	310	60		mg/Kg	20	3/30/2020 10:36:53 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	240	20		mg/Kg	2	4/1/2020 8:50:59 PM	51399
Motor Oil Range Organics (MRO)	460	100		mg/Kg	2	4/1/2020 8:50:59 PM	51399
Surr: DNOP	97.6	55.1-146		%Rec	2	4/1/2020 8:50:59 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2020 11:51:02 PM	51394
Surr: BFB	97.6	66.6-105		%Rec	1	3/30/2020 11:51:02 PM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/30/2020 11:51:02 PM	51394
Toluene	ND	0.047		mg/Kg	1	3/30/2020 11:51:02 PM	51394
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2020 11:51:02 PM	51394
Xylenes, Total	ND	0.094		mg/Kg	1	3/30/2020 11:51:02 PM	51394
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	3/30/2020 11:51:02 PM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 2:44:00 PM
Lab ID: 2003C19-016 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	380	60		mg/Kg	20	3/30/2020 10:49:17 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	35	8.8		mg/Kg	1	4/1/2020 2:44:56 PM	51399
Motor Oil Range Organics (MRO)	84	44		mg/Kg	1	4/1/2020 2:44:56 PM	51399
Surr: DNOP	103	55.1-146		%Rec	1	4/1/2020 2:44:56 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/31/2020 12:14:46 AM	51394
Surr: BFB	96.0	66.6-105		%Rec	1	3/31/2020 12:14:46 AM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/31/2020 12:14:46 AM	51394
Toluene	ND	0.048		mg/Kg	1	3/31/2020 12:14:46 AM	51394
Ethylbenzene	ND	0.048		mg/Kg	1	3/31/2020 12:14:46 AM	51394
Xylenes, Total	ND	0.096		mg/Kg	1	3/31/2020 12:14:46 AM	51394
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	3/31/2020 12:14:46 AM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 3:32:00 PM
Lab ID: 2003C19-017 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/30/2020 11:01:41 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	44	8.6		mg/Kg	1	4/1/2020 3:09:27 PM	51399
Motor Oil Range Organics (MRO)	110	43		mg/Kg	1	4/1/2020 3:09:27 PM	51399
Surr: DNOP	102	55.1-146		%Rec	1	4/1/2020 3:09:27 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/31/2020 12:38:28 AM	51394
Surr: BFB	95.1	66.6-105		%Rec	1	3/31/2020 12:38:28 AM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	3/31/2020 12:38:28 AM	51394
Toluene	ND	0.046		mg/Kg	1	3/31/2020 12:38:28 AM	51394
Ethylbenzene	ND	0.046		mg/Kg	1	3/31/2020 12:38:28 AM	51394
Xylenes, Total	ND	0.093		mg/Kg	1	3/31/2020 12:38:28 AM	51394
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	3/31/2020 12:38:28 AM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW3
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 3:59:00 PM
Lab ID: 2003C19-018 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	160	60		mg/Kg	20	3/30/2020 11:14:05 PM	51424
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	5900	360		mg/Kg	50	3/31/2020 8:24:18 PM	51399
Motor Oil Range Organics (MRO)	5000	1800		mg/Kg	50	3/31/2020 8:24:18 PM	51399
Surr: DNOP	0	55.1-146	S	%Rec	50	3/31/2020 8:24:18 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/31/2020 1:02:07 AM	51394
Surr: BFB	97.6	66.6-105		%Rec	1	3/31/2020 1:02:07 AM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	3/31/2020 1:02:07 AM	51394
Toluene	ND	0.048		mg/Kg	1	3/31/2020 1:02:07 AM	51394
Ethylbenzene	ND	0.048		mg/Kg	1	3/31/2020 1:02:07 AM	51394
Xylenes, Total	ND	0.097		mg/Kg	1	3/31/2020 1:02:07 AM	51394
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	3/31/2020 1:02:07 AM	51394

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

Qualifiers:

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

Analytical Report
Lab Order **2003C19**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW4
Project: Kachina 8 Federal 001
Collection Date: 3/25/2020 4:25:00 PM
Lab ID: 2003C19-019 **Matrix:** SOIL **Received Date:** 3/27/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/31/2020 2:38:04 PM	51440
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	300	87		mg/Kg	10	4/1/2020 9:15:32 PM	51399
Motor Oil Range Organics (MRO)	920	440		mg/Kg	10	4/1/2020 9:15:32 PM	51399
Surr: DNOP	0	55.1-146	S	%Rec	10	4/1/2020 9:15:32 PM	51399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/31/2020 1:25:45 AM	51394
Surr: BFB	93.5	66.6-105		%Rec	1	3/31/2020 1:25:45 AM	51394
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	3/31/2020 1:25:45 AM	51394
Toluene	ND	0.050		mg/Kg	1	3/31/2020 1:25:45 AM	51394
Ethylbenzene	ND	0.050		mg/Kg	1	3/31/2020 1:25:45 AM	51394
Xylenes, Total	ND	0.099		mg/Kg	1	3/31/2020 1:25:45 AM	51394
Surr: 4-Bromofluorobenzene	99.0	80-120		%Rec	1	3/31/2020 1:25:45 AM	51394

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

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

May 04, 2020

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

RE: Kachina 8 State 1 OrderNo.: 2004C20

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/30/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2004C20**
Date Reported: **5/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 3
Project: Kachina 8 State 1
Collection Date: 4/28/2020 2:45:00 PM
Lab ID: 2004C20-001 **Matrix:** SOIL **Received Date:** 4/30/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	66	60		mg/Kg	20	5/1/2020 4:36:25 PM	52216
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/1/2020 5:13:24 PM	52197
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/1/2020 5:13:24 PM	52197
Surr: DNOP	78.6	55.1-146		%Rec	1	5/1/2020 5:13:24 PM	52197
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/2/2020 7:29:10 AM	52191
Surr: BFB	101	66.6-105		%Rec	1	5/2/2020 7:29:10 AM	52191
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.023		mg/Kg	1	5/2/2020 7:29:10 AM	52191
Toluene	ND	0.047		mg/Kg	1	5/2/2020 7:29:10 AM	52191
Ethylbenzene	ND	0.047		mg/Kg	1	5/2/2020 7:29:10 AM	52191
Xylenes, Total	ND	0.094		mg/Kg	1	5/2/2020 7:29:10 AM	52191
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	5/2/2020 7:29:10 AM	52191

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.

Analytical Report
Lab Order **2004C20**
Date Reported: **5/4/2020**

CLIENT: Souder, Miller & Associates
Project: Kachina 8 State 1
Lab ID: 2004C20-002 **Matrix:** SOIL

Client Sample ID: SW 4
Collection Date: 4/28/2020 2:09:00 PM
Received Date: 4/30/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	5/1/2020 5:13:39 PM	52216
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/1/2020 5:37:57 PM	52197
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/1/2020 5:37:57 PM	52197
Surr: DNOP	81.5	55.1-146		%Rec	1	5/1/2020 5:37:57 PM	52197
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/2/2020 7:52:41 AM	52191
Surr: BFB	101	66.6-105		%Rec	1	5/2/2020 7:52:41 AM	52191
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	5/2/2020 7:52:41 AM	52191
Toluene	ND	0.050		mg/Kg	1	5/2/2020 7:52:41 AM	52191
Ethylbenzene	ND	0.050		mg/Kg	1	5/2/2020 7:52:41 AM	52191
Xylenes, Total	ND	0.10		mg/Kg	1	5/2/2020 7:52:41 AM	52191
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	5/2/2020 7:52:41 AM	52191

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

Qualifiers:

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

Analytical Report
Lab Order **2004C20**
Date Reported: **5/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 5 - 1.5'
Project: Kachina 8 State 1
Collection Date: 4/28/2020 2:16:00 PM
Lab ID: 2004C20-003 **Matrix:** SOIL
Received Date: 4/30/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	5/1/2020 5:26:03 PM	52216
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	46	9.5		mg/Kg	1	5/1/2020 11:20:18 PM	52197
Motor Oil Range Organics (MRO)	180	48		mg/Kg	1	5/1/2020 11:20:18 PM	52197
Surr: DNOP	101	55.1-146		%Rec	1	5/1/2020 11:20:18 PM	52197
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/2/2020 8:16:11 AM	52191
Surr: BFB	103	66.6-105		%Rec	1	5/2/2020 8:16:11 AM	52191

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

Qualifiers:

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

Analytical Report
Lab Order **2004C20**
Date Reported: **5/4/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Kachina 8 State 1
Lab ID: 2004C20-004 **Matrix:** SOIL

Client Sample ID: SW 5 - 2'
Collection Date: 4/28/2020 2:20:00 PM
Received Date: 4/30/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	59		mg/Kg	20	5/1/2020 6:03:16 PM	52216
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	55	9.0		mg/Kg	1	5/2/2020 12:08:55 AM	52197
Motor Oil Range Organics (MRO)	210	45		mg/Kg	1	5/2/2020 12:08:55 AM	52197
Surr: DNOP	112	55.1-146		%Rec	1	5/2/2020 12:08:55 AM	52197
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/2/2020 8:39:40 AM	52191
Surr: BFB	102	66.6-105		%Rec	1	5/2/2020 8:39:40 AM	52191

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#: **2004C20**

04-May-20

Client: Souder, Miller & Associates

Project: Kachina 8 State 1

Sample ID: **MB-52216**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **52216**	RunNo: **68572**							
Prep Date: **5/1/2020**	Analysis Date: **5/1/2020**	SeqNo: **2374259**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52216**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **52216**	RunNo: **68572**							
Prep Date: **5/1/2020**	Analysis Date: **5/1/2020**	SeqNo: **2374260**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004C20**

04-May-20

Client: Souder, Miller & Associates

Project: Kachina 8 State 1

Sample ID: **MB-52208**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **52208**	RunNo: **68568**
Prep Date: **5/1/2020**	Analysis Date: **5/1/2020**	SeqNo: **2372797** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		89.2	55.1	146			

Sample ID: **LCS-52208**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **52208**	RunNo: **68568**
Prep Date: **5/1/2020**	Analysis Date: **5/1/2020**	SeqNo: **2372798** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		82.1	55.1	146			

Sample ID: **MB-52197**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **52197**	RunNo: **68568**
Prep Date: **4/30/2020**	Analysis Date: **5/1/2020**	SeqNo: **2373953** 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	9.9		10.00		99.1	55.1	146			

Sample ID: **LCS-52197**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **52197**	RunNo: **68568**
Prep Date: **4/30/2020**	Analysis Date: **5/1/2020**	SeqNo: **2373954** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	87.7	70	130			
Surr: DNOP	4.4		5.000		87.0	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004C20**

04-May-20

Client: Souder, Miller & Associates

Project: Kachina 8 State 1

Sample ID: **lcs-52195**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **52195**	RunNo: **68583**
Prep Date: **4/30/2020**	Analysis Date: **5/1/2020**	SeqNo: **2372944** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		105	66.6	105			S

Sample ID: **mb-52195**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **52195**	RunNo: **68583**
Prep Date: **4/30/2020**	Analysis Date: **5/1/2020**	SeqNo: **2372945** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	66.6	105			

Sample ID: **lcs-52191**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **52191**	RunNo: **68583**
Prep Date: **4/30/2020**	Analysis Date: **5/1/2020**	SeqNo: **2373046** 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	90.1	80	120			
Surr: BFB	1100		1000		112	66.6	105			S

Sample ID: **mb-52191**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **52191**	RunNo: **68583**
Prep Date: **4/30/2020**	Analysis Date: **5/1/2020**	SeqNo: **2373048** 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		103	66.6	105			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004C20**

04-May-20

Client: Souder, Miller & Associates

Project: Kachina 8 State 1

Sample ID: **LCS-52195** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **52195** RunNo: **68583**

Prep Date: **4/30/2020** Analysis Date: **5/1/2020** SeqNo: **2372949** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		99.0	80	120			

Sample ID: **mb-52195** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **52195** RunNo: **68583**

Prep Date: **4/30/2020** Analysis Date: **5/1/2020** SeqNo: **2372950** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	80	120			

Sample ID: **LCS-52191** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **52191** RunNo: **68583**

Prep Date: **4/30/2020** Analysis Date: **5/1/2020** SeqNo: **2373083** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.1	80	120			
Toluene	0.98	0.050	1.000	0	97.9	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.7	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID: **mb-52191** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **52191** RunNo: **68583**

Prep Date: **4/30/2020** Analysis Date: **5/1/2020** SeqNo: **2373085** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.4	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: **2004C20** RcptNo: **1**

Received By: **Juan Rojas** **4/30/2020 9:00:00 AM** Juan Rojas

Completed By: **Desiree Dominguez** **4/30/2020 9:05:03 AM** DD

Reviewed By: DAD 4/30/20

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: JR 4/30/20

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Not Present			

Chain-of-Custody Record

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 3 day
☑ ~~Standard~~ ST ☐ Rush

Project Name: Kachina 8 State 1

Project #:

Project Manager: Ashley Maxwell

Sampler: SO

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.7+0=2.7 (°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. 2004C20	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)
4/28/20	2:45	Soil	SW3	4oz	Cool	-001	X	X					X			
	2:09		SW4			-002	X	X					X			
	2:16		S5-1.5'			-003		X					X			
	2:20		S5-2'			-004		X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/29/20	1000	Sebastian Droyco			4/29/20	1000
4/28/20	1900		courier		4/30/20	9:00

Remarks: Bill Devon Directly

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: clients.hallenvironmental.com

July 01, 2020

Ashley Maxwell

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

RE: Kachina 8 Fed 1 OrderNo.: 2006E34

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/27/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2006E34**
Date Reported: **7/1/2020**

CLIENT: Souder, Miller & Associates
Client Sample ID: CS1
Project: Kachina 8 Fed 1
Collection Date: 6/24/2020 10:05:00 AM
Lab ID: 2006E34-001 **Matrix:** SOIL **Received Date:** 6/27/2020 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	1900	60		mg/Kg	20	6/29/2020 12:07:28 PM	53383
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2020 2:39:22 AM	53369
Surr: BFB	99.5	70-130		%Rec	1	6/30/2020 2:39:22 AM	53369
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	1700	180		mg/Kg	20	6/29/2020 11:18:54 AM	53370
Motor Oil Range Organics (MRO)	3200	900		mg/Kg	20	6/29/2020 11:18:54 AM	53370
Surr: DNOP	0	55.1-146	S	%Rec	20	6/29/2020 11:18:54 AM	53370
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.024		mg/Kg	1	6/30/2020 2:39:22 AM	53369
Toluene	ND	0.049		mg/Kg	1	6/30/2020 2:39:22 AM	53369
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2020 2:39:22 AM	53369
Xylenes, Total	ND	0.097		mg/Kg	1	6/30/2020 2:39:22 AM	53369
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/30/2020 2:39:22 AM	53369
Surr: 4-Bromofluorobenzene	95.1	70-130		%Rec	1	6/30/2020 2:39:22 AM	53369
Surr: Dibromofluoromethane	104	70-130		%Rec	1	6/30/2020 2:39:22 AM	53369
Surr: Toluene-d8	102	70-130		%Rec	1	6/30/2020 2:39:22 AM	53369

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

Qualifiers:

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

Analytical Report
Lab Order **2006E34**
Date Reported: **7/1/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW1
Project: Kachina 8 Fed 1
Collection Date: 6/24/2020 10:10:00 AM
Lab ID: 2006E34-002 **Matrix:** SOIL **Received Date:** 6/27/2020 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	1000	61		mg/Kg	20	6/29/2020 12:19:49 PM	53383
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2020 3:07:54 AM	53369
Surr: BFB	98.6	70-130		%Rec	1	6/30/2020 3:07:54 AM	53369
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	140	9.5		mg/Kg	1	6/29/2020 12:20:23 PM	53370
Motor Oil Range Organics (MRO)	260	48		mg/Kg	1	6/29/2020 12:20:23 PM	53370
Surr: DNOP	118	55.1-146		%Rec	1	6/29/2020 12:20:23 PM	53370
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/30/2020 3:07:54 AM	53369
Toluene	ND	0.049		mg/Kg	1	6/30/2020 3:07:54 AM	53369
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2020 3:07:54 AM	53369
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2020 3:07:54 AM	53369
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	6/30/2020 3:07:54 AM	53369
Surr: 4-Bromofluorobenzene	91.5	70-130		%Rec	1	6/30/2020 3:07:54 AM	53369
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/30/2020 3:07:54 AM	53369
Surr: Toluene-d8	105	70-130		%Rec	1	6/30/2020 3:07:54 AM	53369

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

Qualifiers:

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

Analytical Report
Lab Order **2006E34**
Date Reported: **7/1/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: Kachina 8 Fed 1
Collection Date: 6/24/2020 10:15:00 AM
Lab ID: 2006E34-003 **Matrix:** SOIL **Received Date:** 6/27/2020 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	1100	60		mg/Kg	20	6/29/2020 12:32:09 PM	53383
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2020 3:36:22 AM	53369
Surr: BFB	98.9	70-130		%Rec	1	6/30/2020 3:36:22 AM	53369
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	140	8.9		mg/Kg	1	6/29/2020 12:30:37 PM	53370
Motor Oil Range Organics (MRO)	290	45		mg/Kg	1	6/29/2020 12:30:37 PM	53370
Surr: DNOP	115	55.1-146		%Rec	1	6/29/2020 12:30:37 PM	53370
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.025		mg/Kg	1	6/30/2020 3:36:22 AM	53369
Toluene	ND	0.049		mg/Kg	1	6/30/2020 3:36:22 AM	53369
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2020 3:36:22 AM	53369
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2020 3:36:22 AM	53369
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	6/30/2020 3:36:22 AM	53369
Surr: 4-Bromofluorobenzene	90.8	70-130		%Rec	1	6/30/2020 3:36:22 AM	53369
Surr: Dibromofluoromethane	110	70-130		%Rec	1	6/30/2020 3:36:22 AM	53369
Surr: Toluene-d8	101	70-130		%Rec	1	6/30/2020 3:36:22 AM	53369

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#: **2006E34**
01-Jul-20

Client: Souder, Miller & Associates
Project: Kachina 8 Fed 1

Sample ID: **MB-53383**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **53383**	RunNo: **70007**							
Prep Date: **6/29/2020**	Analysis Date: **6/29/2020**	SeqNo: **2432186**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-53383**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **53383**	RunNo: **70007**							
Prep Date: **6/29/2020**	Analysis Date: **6/29/2020**	SeqNo: **2432187**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	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#: **2006E34**
01-Jul-20

Client: Souder, Miller & Associates
Project: Kachina 8 Fed 1

Sample ID: **LCS-53370** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **53370** RunNo: **69983**
Prep Date: **6/28/2020** Analysis Date: **6/29/2020** SeqNo: **2431104** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	61	10	50.00	0	122	70	130			
Surr: DNOP	5.8		5.000		115	55.1	146			

Sample ID: **MB-53370** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **53370** RunNo: **69983**
Prep Date: **6/28/2020** Analysis Date: **6/29/2020** SeqNo: **2431105** 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	14		10.00		136	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006E34**
01-Jul-20

Client: Souder, Miller & Associates
Project: Kachina 8 Fed 1

Sample ID: **mb-53369** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **53369** RunNo: **69997**
Prep Date: **6/28/2020** Analysis Date: **6/29/2020** SeqNo: **2431673** 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: 1,2-Dichloroethane-d4	0.54		0.5000		108	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.0	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		112	70	130			
Surr: Toluene-d8	0.52		0.5000		105	70	130			

Sample ID: **lcs-53369** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **53369** RunNo: **69997**
Prep Date: **6/28/2020** Analysis Date: **6/29/2020** SeqNo: **2431674** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	111	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		106	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.8	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.52		0.5000		104	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2006E34**
01-Jul-20

Client: Souder, Miller & Associates
Project: Kachina 8 Fed 1

Sample ID: **mb-53369** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **53369** RunNo: **69997**
Prep Date: **6/28/2020** Analysis Date: **6/29/2020** SeqNo: **2431702** 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	490		500.0		98.4	70	130			

Sample ID: **lcs-53369** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **53369** RunNo: **69997**
Prep Date: **6/28/2020** Analysis Date: **6/29/2020** SeqNo: **2431703** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	5.0	25.00	0	76.4	70	130			
Surr: BFB	480		500.0		96.3	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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Souder, Miller & Associates** Work Order Number: **2006E34** RcptNo: 1

Received By: **Desiree Dominguez** **6/27/2020 8:40:00 AM** DD

Completed By: **Desiree Dominguez** **6/27/2020 8:57:39 AM** DD

Reviewed By: DF 6/27/2020

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

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

Adjusted? _____

Checked by: DAD 6/27/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good	Not Present			

Chain-of-Custody Record

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

Client: SMA

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 3day ☐ Standard ☑ Rush

Project Name: Kachina 8 Fed 1

Project #:

Project Manager: Ashley Maxwell

Sampler: SO

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.3-0.1=0.2 (°C)

Analysis Request

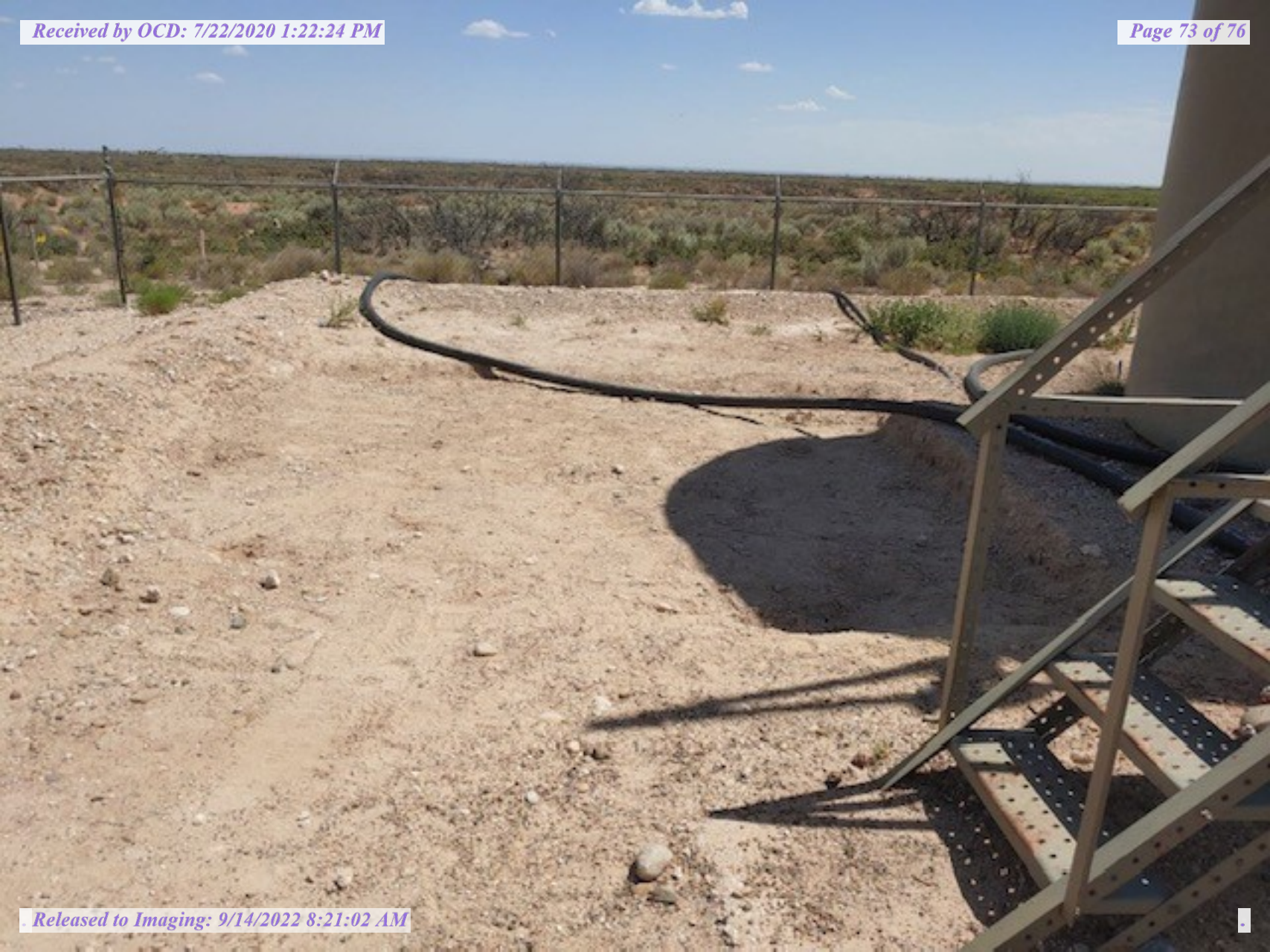
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2006E34	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)						
6/24/20	10:05	Soil	CS1	4oz	Cool	-001	X	X					X									
↓	10:10	↓	SW1	↓	↓	-002	X	X					X									
↓	10:15	↓	SW2	↓	↓	-003	X	X					X									

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/26/20	1200	[signature]	[signature]		6/26/20	1200
6/26/20	1910	[signature]	[signature]	courier	6/27/20	8:40

Remarks: Bill Devon WO#: 20715698

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.

KAPPENDIX E
PHOTO LOG



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 9344

CONDITIONS

Operator:	OGRID:
Pima Environmental Services, LLC 5614 N Lovington Hwy Hobbs, NM 88240	329999
	Action Number: 9344
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	9/14/2022