

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	Not assigned
Facility ID	
Application ID	

Release Notification for 2019-10-14 Cedar Canyon Hydrotest Water Discharge 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?	21 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.

Form C-141

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State of New Mexico
Oil Conservation Division

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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.

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

Printed Name: Jon E. Fields

Title: Director, Field Environmental

Signature: Date: 1/8/2020

email: jefields@eprod.com

Telephone: 713-381-6684

OCD Only

Received by: _____

Date: _____

Form C-141

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State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
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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: Jon E. Fields

Title: Director, Field Environmental

Signature: 

Date: 1/8/2020

email: jeffields@eprod.com

Telephone: 713-381-6684

OCD Only

Received by: _____

Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



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

December 31, 2019

#5E27957-BG21

NMOCD District 2
Mr. Mike Bratcher
811 S. First Street
Artesia, New Mexico 88210

SUBJECT: Remediation Closure Report for the Cedar Canyon Hydrotest Release, Malaga, Eddy County, New Mexico

Dear Mr. Mike Bratcher:

On behalf of Enterprise Field Services LLC (Enterprise), Souder, Miller & Associates (SMA) has prepared this Remediation Closure Report that describes the remediation of a release of liquids related to oil and gas production activities at the Cedar Canyon Hydrotest site. Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of less than 50 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC and SMA recommends no further action. The site is in Unit C, Section 15, Township 24S, Range 29E, Eddy County, New Mexico, on private land.

Table 1: Release Information and Closure Criteria

Name	Cedar Canyon Hydrotest	Company	Enterprise Field Services LLC
API Number	n/a	Location	32.222908, -103.9751512
Incident Number	TBD		
Estimated Date of Release	10/14/2019 10/15/2019	Date Reported to NMOCD	10/14/2019 10/16/2019
Land Owner	Private	Reported To	NMOCD District 2
Source of Release	Fresh water tank		
Released Volume	43.37 bbls 500 bbls	Released Material	Freshwater
Recovered Volume	0 bbls 0 bbls	Net Release	43.37 bbls 500 bbls
NMOCD Closure Criteria	<50 feet to groundwater		
SMA Response Dates	October 14 and October 23, 2019		

1.0 Background

On October 14, 2019, a release was discovered at the Cedar Canyon Hydrotest site due to a stuck valve which caused two (2) freshwater tanks to overfill spilling approximately 43 bbls fluid. Initial response activities were conducted by the contractor conducting the hydrotest, and included source elimination, site security, containment, and site stabilization activities. No fluids were recovered.

On October 15, 2019, a second release occurred due to an open valve on a fresh water tank causing the entire tank (500 bbls) to empty. Initial response activities were conducted by the contractor conducting the hydrotest, and included source elimination, site security, containment, and site stabilization activities. No fluids were recovered.

Figure 1 illustrates the vicinity and site location, Figure 2 illustrates the release location. The C-141 form for both releases are included in Appendix A.

2.0 Site Information and Closure Criteria

The Cedar Canyon Hydrotest site is located approximately 6 miles east of Malaga, New Mexico on privately-owned land at an elevation of approximately 2930 feet above mean sea level (amsl).

Based upon New Mexico Office of the State Engineer (NMOSE) online water well database (Appendix B), depth to groundwater in the area is estimated to be 21 feet below grade surface (bgs). The nearest significant watercourse is an intermittent stream, located approximately 740 feet to the southwest. 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 less than 50 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC.

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

3.0 Release Characterization and Remediation Activities

On October 14, 2019, SMA personnel arrived on site in response to the release associated with Cedar Canyon Hydrotest site. SMA performed initial site assessment activities by collecting soil samples around the release site and throughout the visibly stained area. A total of six (6) samples (L1-L6) were collected at a depth of approximately 0.5 feet bgs. One (1) water sample was also collected from the pipeline connecting the frac tanks, adjacent to L1. Samples were analyzed 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. Two (2) additional background samples (BG1, BG2) were also collected. Background samples were analyzed for chlorides only.

On October 23, 2019, SMA personnel returned to the site in response to the second release which occurred on October 15, 2019. Soil samples were field-screened for chloride using an electrical conductivity (EC) meter. A total of five (5) sample locations (POR, L1-L2, L7-L8) were investigated using

Cedar Canyon Hydrotest Remediation Closure Report
December 31, 2019

Page 3 of 4

a hand-auger, to depths up to 0.5 feet bgs. The second release overlapped over sample locations L1 and L2, which were re-sampled and analyzed for any additional impact. In addition, a sample was collected from the point of release (POR) where equipment was previously placed and sample locations L7 and L8 were established to characterize the October 15 release area that was not shared with the October 14 release area. Sample location L4 was also recollected as the lab analysis returned an elevated chloride level. These five (5) additional surface sample locations 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. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix D).

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

Results show that no hydrocarbons or chlorides were contained in the water tanks. Location L4 appears to have slight chloride impacts, but this appears isolated to this location and not as a result of the releases. In addition to meeting the Closure Criteria, the top four (4) feet of impacted areas meet the Reclamation requirement of 19.15.29.13(D)(1). Removal of impacted soils is not required because the closure criteria has been met. SMA recommends no further action.

5.0 Scope and Limitations

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

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

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Ashley Maxwell
Project Scientist



Shawna Chubbuck
Senior Scientist

Cedar Canyon Hydrotest Remediation Closure Report (2RP-TBD)
December 31, 2019

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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:

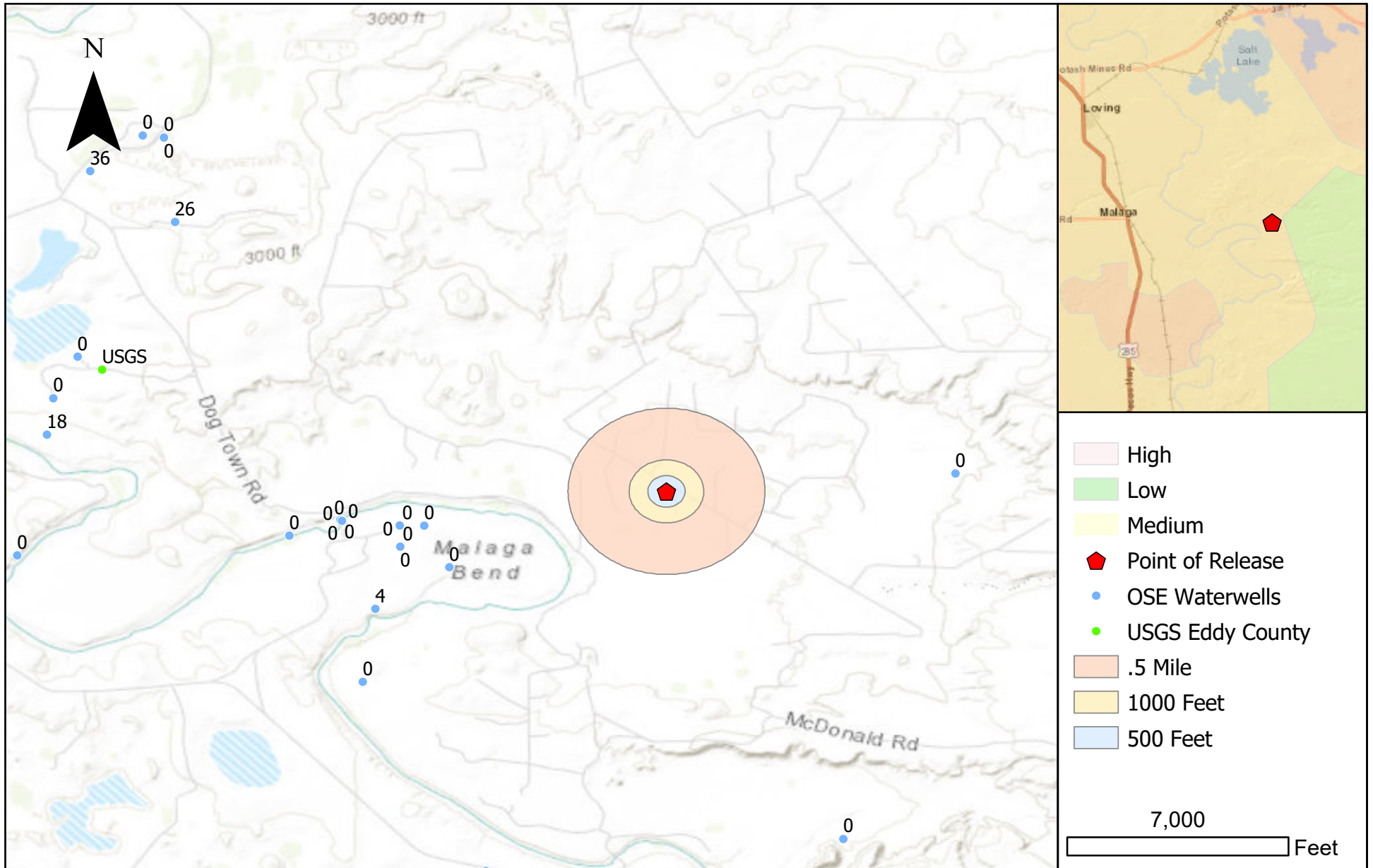
Appendix A: Form C141

Appendix B: NMOSE Wells Report

Appendix C: Photo log and Field Notes

Appendix D: Laboratory Analytical Reports

FIGURES




Regional Vicinity & Wellhead Protection Map
Cedar Canyon (Facility)- Enterprise
Unit C Sec. 15 T24S R29E Eddy County, New Mexico

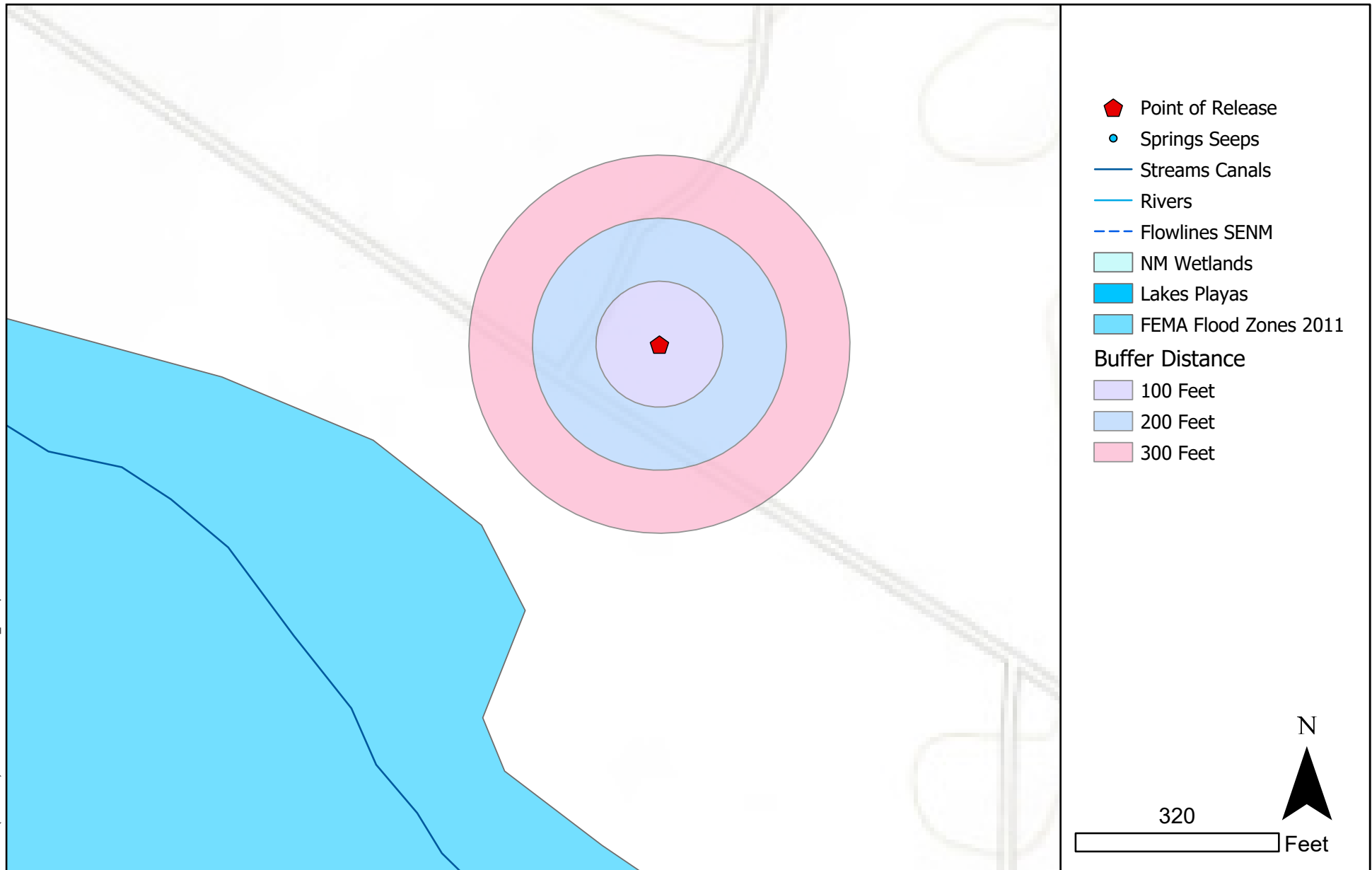
Figure 1

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

Drawn	Henryetta Price
Date	11/11/2019
Checked	_____
Approved	_____



201 South Halaguena Street
Carlsbad, New Mexico 88221
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Surface Water Protection Map
Cedar Canyon Hydrotest - Enterprise
Unit C Sec 15 T24S R29E, Eddy County, New Mexico

Figure 2

Date Saved:
11/11/2019

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

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Drawn Henryetta Price
Date 11/11/2019
Checked _____
Approved _____



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Site and Sample Location Map
 Cedar Canyon Hydrotest -Enterprise
 Unit C Sec 15 T24S R29E, Eddy County, New Mexico

Figure 3

Date Saved:
11/11/2019

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

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Drawn	<u>Henryetta Price</u>
Date	<u>11/11/2019</u>
Checked	_____
Approved	_____



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 Carlsbad, New Mexico 88220
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TABLES

Table 2:
NMOCD Closure Criteria

Enterprise Products
Cedar Canyon Hydrotest

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	~21 ft.	NMOSE & USGS (Figure 1 & Appendix B)
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)	N/A	Figure 1
Horizontal Distance to Nearest Significant Watercourse (ft)	740 ft.	Intermittent Stream to the southwest

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS	x	600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	yes or no	if yes, then				
<300' from continuously flowing watercourse or other significant watercourse?	no	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	no					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	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?	Med. Karst					
within a 100-year floodplain?	no					

SMA #

Table 3:
Summary of Sample Results

Enterprise Products
Cedar Canyon Hydrotest

Sample ID	Sample Date	Depth (feet bgs)	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria			50.0	10				100	600
POR	10/23/2019	Surface	< 0.208	<0.023	<4.6	13	<45	13	<60
L1	10/14/2019	Surface	< 0.180	<0.020	<4.0	<8.7	<44	<56.7	<60
	10/23/2019	Surface	< 0.217	<0.024	<4.8	<9.6	<48	<62.4	<60
L2	10/14/2019	Surface	< 0.172	<0.019	<3.8	<9.6	<48	<61.4	<60
	10/23/2019	Surface	< 0.216	<0.024	<4.8	<8.5	<42	<55.3	<60
L3	10/14/2019	Surface	< 0.148	<0.016	<3.3	<8.3	<41	<52.6	<60
L4	10/14/2019	Surface	< 0.202	<0.022	<4.5	<9.1	<45	<58.6	1100
	10/23/2019	Surface	-	-	-	-	-	-	380
L5	10/14/2019	Surface	< 0.125	<0.014	<2.8	<8.5	<43	<54.3	68
L6	10/14/2019	Surface	< 0.130	<0.014	<2.9	<9.6	<48	<60.5	68
L7	10/23/2019	Surface	< 0.210	<0.023	<4.7	<9.4	<47	<61.1	<60
L8	10/23/2019	Surface	< 0.213	<0.024	<4.7	<9.3	<46	<60.0	<60
BG1	10/14/2019	Surface	-	-	-	-	-	-	<61
BG2	10/14/2019	Surface	-	-	-	-	-	-	<60
Frac Tank (aqueous)	10/14/2019	-	-	-	0.11	<1.0	<5	0.11	52

"-" = Not Analyzed

APPENDIX A

FORM C141

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

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude N32.2229082 Longitude W -103.9751512
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Cedar Canyon	Site Type	Pipeline ROW
Date Release Discovered	10/14/2019	API# (if applicable)	N/A

Unit Letter	Section	Township	Range	County
C	15	24S	29E	Eddy

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input checked="" type="checkbox"/> Other (describe)	Volume/Weight Released (provide units) 43.37 bbls	Volume/Weight Recovered (provide units) 0 bbls

Cause of Release

Water from the hydrotest of a clean, new pipeline was released due to the overflow of a frac tank intended to contain the hydrotest water. The hydrotest water was originally obtained from a municipal source and was not in contact with any piping or equipment that has been in natural gas or condensate service. The hydrotest water was used to pressure test new, clean piping only. The hydrotest water was intended to be stored temporarily in frac tanks prior to shipment to a disposal well and was not intended to be discharged.

Form C-141

Page 2

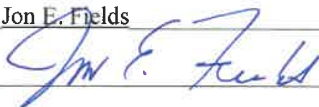
State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The volume of liquid released exceeded the major release thresholds as defined by 19.15.29.7(A) NMAC. The volume of liquid was originally reported to the agency as 37 bbls, however after further evaluation of the impacted soil, the volume was revised to 43.37 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notice was submitted via email on 10/14/2019 at 2:53 pm to Mr. Jim Griswold and Mr. Mike Bratcher.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: N/A	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Jon E. Fields</u> Signature: <u></u> email: <u>jefields@eprod.com</u>	Title: <u>Director, Field Environmental</u> Date: <u>10/28/19</u> Telephone: <u>713-381-6684</u>
<u>OCD Only</u> Received by: _____ Date: _____	

10/14/19
Henryetta Price

¹ infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface: (National Soil Survey Handbook (USDA)

² (Ksat) Hydraulic Conductivity. (National Soil Survey Handbook (USDA) conductivity is often referred to as coefficient of permeability, most commonly shortened to permeability



Souder, Miller & Associates
Engineering ♦ Environmental ♦ Surveying

201 S. Halagueno ♦ Carlsbad, NM 88220
(575) 689-8801 ♦ www.soudermiller.com

Mendez, Brenda

From: OCDOnline@state.nm.us
Sent: Monday, October 28, 2019 7:41 AM
To: Mendez, Brenda
Subject: OCD Receipt of Fee Application Payment
Attachments: OCDReceiptOfFeePayment.pdf

Thank you for your fee application payment! Your receipt is attached.

PO Number: DUKY7-191028-C-1410
Payment Date: 10/28/2019
Payment Amount: \$150.00
Payment Type: Credit Card

Application Type: Application for administrative approval of a release notification and corrective action.
Fee Amount: \$150.00
Application Status: Under OCD Review

OGRID: 241602
First Name: Brenda
Last Name: Mendez
Email: bjmenendez@eprod.com

IMPORTANT: If you are mailing or delivering your application, you must print and include your receipt of payment as the first page on your application. All mailed and delivered applications must be sent to the following address: 1220 S. St. Francis Dr., Santa Fe, NM 87505. For inquiries, reference the PO Number listed above.

Oil Conservation Division * 1220 South St. Francis Drive * Santa Fe, New Mexico 87505
(505) 476-3441 * ocd.fees@state.nm.us * www.emnrd.state.nm.us/OCD

This is an automated email please do not reply.

10/28/2019

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division



Receipt of Fee Application Payment

PO Number: DUKY7-191028-C-1410

Payment Date: 10/28/2019 6:40:56 AM

Payment Amount: \$150.00

Payment Type: Credit Card

Application Type: Application for administrative approval of a release notification and corrective action.

Fee Amount: \$150.00

Application Status: Under OCD Review

OGRID: 241602

First Name: Brenda

Last Name: Mendez

Email: bjmendez@eprod.com

IMPORTANT: If you are mailing or delivering your application, you must print and include your receipt of payment as the first page on your application. All mailed and delivered applications must be sent to the following address: 1220 S. St. Francis Dr., Santa Fe, NM 87505. For inquiries, reference the PO Number listed above.

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Submit to appropriate OCD District office

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Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude N32.2229082 Longitude W -103.9751512
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Cedar Canyon	Site Type	Pipeline ROW
Date Release Discovered	10/15/2019	API# (if applicable)	N/A

Unit Letter	Section	Township	Range	County
C	15	24S	29E	Eddy

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input checked="" type="checkbox"/> Other (describe)	Volume/Weight Released (provide units) 500 bbls	Volume/Weight Recovered (provide units) 0 bbls

Cause of Release

The worksite contains 50 frac tanks for temporary storage of hydrotest water prior to shipment for disposal. It was thought that the frac tanks had been secured for the evening. However, it was discovered upon arrival the following morning that one of the frac tank drain plugs was not secured and the drain valve was open. A single frac tank can hold up to 500 bbls of fluid and it is assumed that the entire contents were discharged.

The hydrotest water was obtained from a municipal source and was not in contact with any piping or equipment that has been in natural gas or condensate service. The hydrotest water was used to pressure test new, clean piping only. The hydrotest water was intended to be stored temporarily in frac tanks prior to shipment to a disposal well and was not intended to be discharged.

Form C-141

Page 2

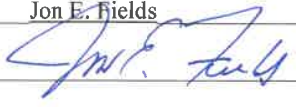
State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The volume of liquid released exceeded the major release thresholds as defined by 19.15.29.7(A) NMAC. A single frac tank can hold up to 500 bbls of fluid and it is assumed that the entire contents were discharged.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notice was submitted via email on 10/16/2019 at 8:46 am to Mr. Jim Griswold and Mr. Mike Bratcher.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: N/A	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Jon E. Fields</u> Signature:  email: <u>jefields@eprod.com</u>	Title: <u>Director, Field Environmental</u> Date: <u>10/28/19</u> Telephone: <u>713-381-6684</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Mendez, Brenda

From: OCDOnline@state.nm.us
Sent: Monday, October 28, 2019 10:16 AM
To: Mendez, Brenda
Subject: OCD Receipt of Fee Application Payment
Attachments: OCDReceiptOfFeePayment.pdf

Thank you for your fee application payment! Your receipt is attached.

PO Number: VNQAI-191028-C-1410
Payment Date: 10/28/2019
Payment Amount: \$150.00
Payment Type: Credit Card

Application Type: Application for administrative approval of a release notification and corrective action.
Fee Amount: \$150.00
Application Status: Under OCD Review

OGRID: 241602
First Name: Brenda
Last Name: Mendez
Email: bjmenendez@eprod.com

IMPORTANT: If you are mailing or delivering your application, you must print and include your receipt of payment as the first page on your application. All mailed and delivered applications must be sent to the following address: 1220 S. St. Francis Dr., Santa Fe, NM 87505. For inquiries, reference the PO Number listed above.

Oil Conservation Division * 1220 South St. Francis Drive * Santa Fe, New Mexico 87505
(505) 476-3441 * ocd.fees@state.nm.us * www.emnrd.state.nm.us/OCD

This is an automated email please do not reply.

10/28/2019

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division



Receipt of Fee Application Payment

PO Number: VNQAI-191028-C-1410

Payment Date: 10/28/2019 9:16:24 AM

Payment Amount: \$150.00

Payment Type: Credit Card

Application Type: Application for administrative approval of a release notification and corrective action.

Fee Amount: \$150.00

Application Status: Under OCD Review

OGRID: 241602

First Name: Brenda

Last Name: Mendez

Email: bjmendez@eprod.com

IMPORTANT: If you are mailing or delivering your application, you must print and include your receipt of payment as the first page on your application. All mailed and delivered applications must be sent to the following address: 1220 S. St. Francis Dr., Santa Fe, NM 87505. For inquiries, reference the PO Number listed above.

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	Tws	Rng	X	Y	Distance	Depth	Well	Depth	Water Column
C 00863		CUB	ED	3	3	1	16	24S	29E	594524	3565091*	2364	220			
C 00863 CLW199506	O	CUB	ED	3	3	1	16	24S	29E	594524	3565091*	2364	220			
C 00463		C	ED	4	4	4	17	24S	29E	594332	3564282*	3000	260	4	256	
C 03615 POD2		CUB	ED	4	2	4	06	24S	29E	592661	3568013	4266	60	26	34	
C 01627		C	ED	1	4	4	28	23S	29E	595649	3570959*	4758	170			
C 00381	C	CUB	ED	3	2	3	07	24S	29E	591682	3566297*	4881	2797			
C 02713		CUB	ED	4	4	1	16	24S	29E	591633	3565944	4941	230	18	212	

Average Depth to Water: **16 feet**

Minimum Depth: **4 feet**

Maximum Depth: **26 feet**

Record Count: 7

UTM NAD83 Radius Search (in meters):

Easting (X): 596563.25

Northing (Y): 3566288.76

Radius: 5000

*UTM location was derived from PLSS - see Help

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

10/28/19 1:55 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface


USGS Water Resources

Data Category:
Groundwater

Geographic Area:
United States

GO

Click to hideNews Bulletins

- [Introducing The Next Generation of USGS Water Data for the Nation](#)
- [Full News](#) 

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 321355104012001

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321355104012001 24S.29E.07.14444

Available data for this site

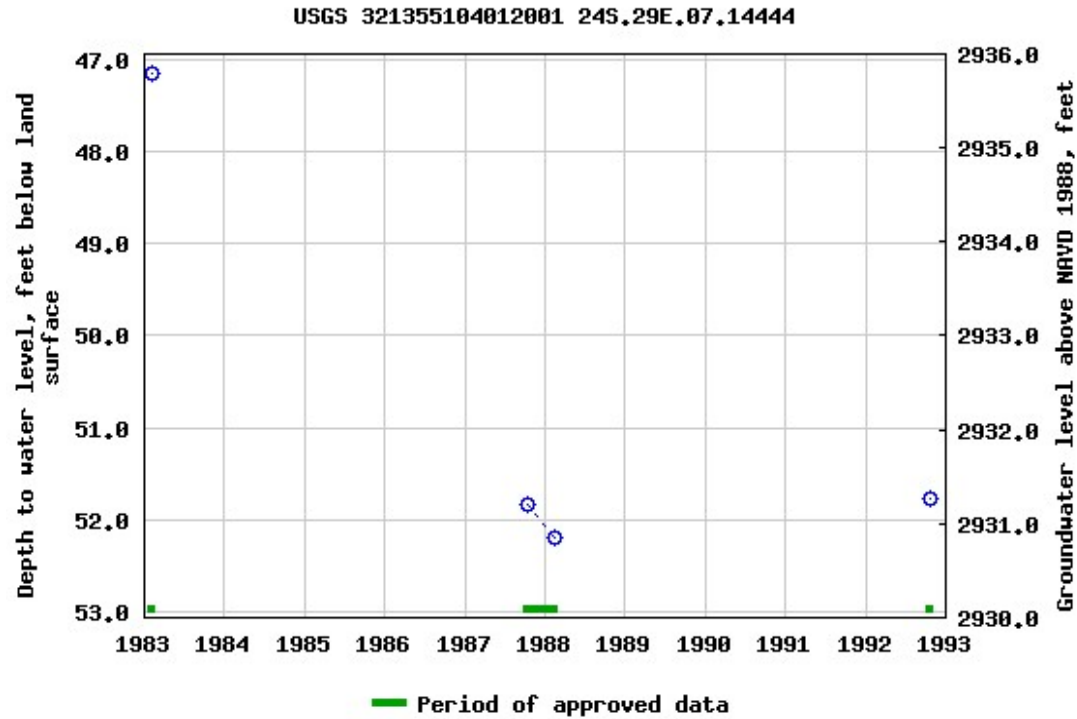
Groundwater: Field measurements

GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°13'55", Longitude 104°01'20" NAD27
Land-surface elevation 2,983 feet above NAVD88
The depth of the well is 160 feet below land surface.
This well is completed in the Castile Gypsum (312CSTL) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

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[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-10-28 17:00:39 EDT

0.57 0.48 nadww01

APPENDIX C PHOTO LOG AND FIELD NOTES

Enterprise Products - Cedar Canyon Hydrotest Water discharge 10/14/2019

L1 - Filling sample container from valve (Facing North)



L2 (Facing West)



Enterprise Products - Cedar Canyon Hydrotest Water discharge 10/14/2019

L2 (Facing West)



Between the rows of frac tanks (Facing North)



Enterprise Products - Cedar Canyon Hydrotest Water discharge 10/14/2019

Facing south towards the road



Western part of the well pad (Facing East)



Enterprise Products - Cedar Canyon Hydrotest Water discharge 10/14/2019

Western Part of the well pad (Between L2 and L3 Facing East)



L4- Road (facing East)



Enterprise Products - Cedar Canyon Hydrotest Water discharge 10/14/2019

L5 (Facing East)

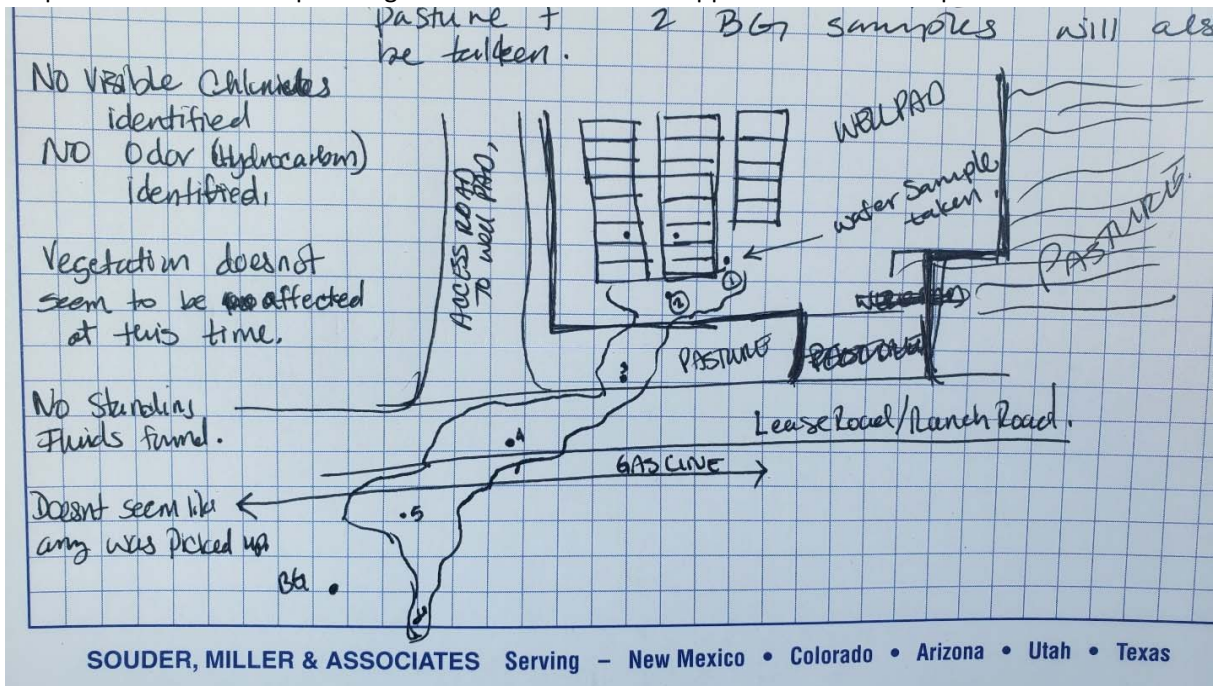


Facing south towards L6



Enterprise Products - Cedar Canyon Hydrotest Water discharge 10/14/2019

No photo at L6. The flow path began to narrow and ended approx. 40 ft. into the pasture.



Enterprise Products – Cedar Canyon Hydrotest Water discharge 10/23/19

Southern edge of frac tanks facing East overlooking the impact area (frac tanks removed)



Southern edge of frac tanks facing North overlooking the POR (frac tanks removed)

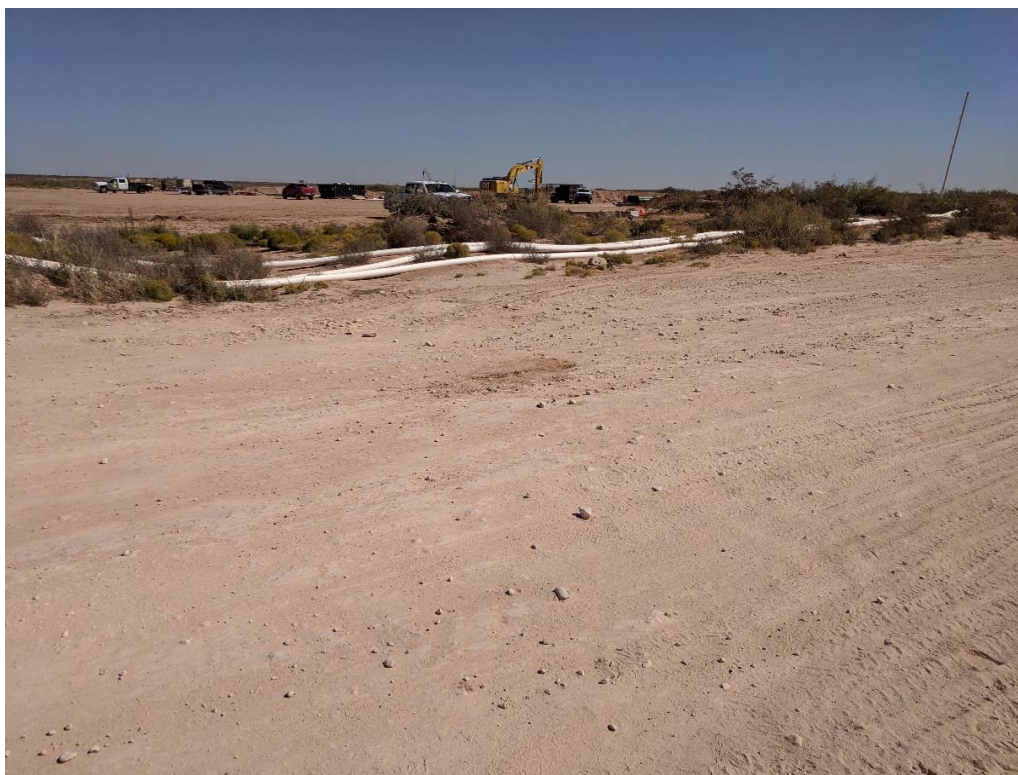


Enterprise Products – Cedar Canyon Hydrotest Water discharge 10/23/19

Southern edge of frac tanks facing North overlooking L7 and L8 (frac tanks removed)



L4 Facing North



Enterprise Products – Cedar Canyon Hydrotest Water discharge 10/23/19

L4 Facing West



SUBJECT Cedar Canyon

PROJECT

PAGE

CLIENT Enterprise

DATE 10/23

BY MRS

CHECKED

BY MUP

- 830
388
1918
- frac tanks been removed
 - equip. on site removing trash/tanks
 - 2nd release pooled all on pad around frac tanks
 - Hugh Cornelius & Tommy were both here on the 14th & 15th & walked through both releases. Release from the 14th matches H. Arlos snapshot.
 - L4 recollected in road & surface.
 - new release only included L1 & L2. POR L7 & L8 added to characterize difference in releases. (also - POR couldn't originally be accessed due to the tanks in the way.)

POR	surf	0.09 @ 22.9
	0.5	0.10 @ 22.4
	1	0.12 @ 25.7
	2	0.5 @ 27.7

L1	surf	0.16 @ 21.4
	0.5	0.15 @ 21.8
	1	0.11 @ 26.6
	2	0.07 @ 27.1

L2	surf	0.07 @ 21.9
	0.5	0.13 @ 26.3
	1	0.13 @ 26.7
	2	0.28 @ 25.5

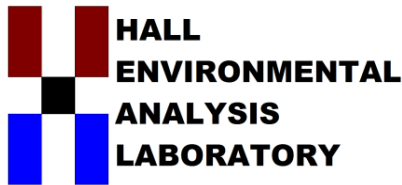
L4 surf 0.45 @ 25.4

L7	surf	1	0.08 @ 30.0
	0.5		0.05 @ 28.8
	1		0.13 @ 28.0
	2		0.08 @ 29.2

L8	surf		0.1 @ 28.1
	0.5		0.13 @ 28.2
	1		0.09 @ 28.4
	2		0.08 @ 28.7

APPENDIX D

LABORATORY ANALYTICAL REPORTS



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

October 18, 2019

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

RE: Cedar Canyon Hydrotest

OrderNo.: 1910891

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 9 sample(s) on 10/16/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1910891

Date Reported: 10/18/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L1

Project: Cedar Canyon Hydrotest

Collection Date: 10/14/2019 5:00:00 PM

Lab ID: 1910891-001

Matrix: MEOH (SOIL)

Received Date: 10/16/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	10/16/2019 11:25:47 AM	48188
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	10/16/2019 10:33:00 AM	48182
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/16/2019 10:33:00 AM	48182
Surr: DNOP	97.7	70-130		%Rec	1	10/16/2019 10:33:00 AM	48182
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	10/16/2019 11:24:10 AM	48166
Surr: BFB	87.8	77.4-118		%Rec	1	10/16/2019 11:24:10 AM	48166
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	10/16/2019 11:24:10 AM	48166
Toluene	ND	0.040		mg/Kg	1	10/16/2019 11:24:10 AM	48166
Ethylbenzene	ND	0.040		mg/Kg	1	10/16/2019 11:24:10 AM	48166
Xylenes, Total	ND	0.080		mg/Kg	1	10/16/2019 11:24:10 AM	48166
Surr: 4-Bromofluorobenzene	93.1	80-120		%Rec	1	10/16/2019 11:24:10 AM	48166

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

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

Analytical Report

Lab Order 1910891

Date Reported: 10/18/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L2

Project: Cedar Canyon Hydrotest

Collection Date: 10/14/2019 5:07:00 PM

Lab ID: 1910891-002

Matrix: MEOH (SOIL)

Received Date: 10/16/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	10/16/2019 11:38:12 AM	48188
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/16/2019 10:54:59 AM	48182
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/16/2019 10:54:59 AM	48182
Surr: DNOP	99.1	70-130		%Rec	1	10/16/2019 10:54:59 AM	48182
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	10/16/2019 11:47:51 AM	48166
Surr: BFB	95.1	77.4-118		%Rec	1	10/16/2019 11:47:51 AM	48166
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.019		mg/Kg	1	10/16/2019 11:47:51 AM	48166
Toluene	ND	0.038		mg/Kg	1	10/16/2019 11:47:51 AM	48166
Ethylbenzene	ND	0.038		mg/Kg	1	10/16/2019 11:47:51 AM	48166
Xylenes, Total	ND	0.077		mg/Kg	1	10/16/2019 11:47:51 AM	48166
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	10/16/2019 11:47:51 AM	48166

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

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

Analytical Report

Lab Order 1910891

Date Reported: 10/18/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L3

Project: Cedar Canyon Hydrotest

Collection Date: 10/14/2019 5:12:00 PM

Lab ID: 1910891-003

Matrix: MEOH (SOIL)

Received Date: 10/16/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	10/16/2019 11:50:37 AM	48188
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.3		mg/Kg	1	10/16/2019 11:17:10 AM	48182
Motor Oil Range Organics (MRO)	ND	41		mg/Kg	1	10/16/2019 11:17:10 AM	48182
Surr: DNOP	99.0	70-130		%Rec	1	10/16/2019 11:17:10 AM	48182
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	10/16/2019 10:31:51 AM	A63728
Surr: BFB	93.0	77.4-118		%Rec	1	10/16/2019 10:31:51 AM	A63728
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	10/16/2019 10:31:51 AM	D63728
Toluene	ND	0.033		mg/Kg	1	10/16/2019 10:31:51 AM	D63728
Ethylbenzene	ND	0.033		mg/Kg	1	10/16/2019 10:31:51 AM	D63728
Xylenes, Total	ND	0.066		mg/Kg	1	10/16/2019 10:31:51 AM	D63728
Surr: 4-Bromofluorobenzene	96.8	80-120		%Rec	1	10/16/2019 10:31:51 AM	D63728

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

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

Analytical Report

Lab Order 1910891

Date Reported: 10/18/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L4

Project: Cedar Canyon Hydrotest

Collection Date: 10/14/2019 5:15:00 PM

Lab ID: 1910891-004

Matrix: MEOH (SOIL)

Received Date: 10/16/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	1100	60		mg/Kg	20	10/16/2019 12:03:02 PM	48188
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	10/16/2019 11:39:19 AM	48182
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/16/2019 11:39:19 AM	48182
Surr: DNOP	99.0	70-130		%Rec	1	10/16/2019 11:39:19 AM	48182
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	10/16/2019 10:54:43 AM	A63728
Surr: BFB	89.4	77.4-118		%Rec	1	10/16/2019 10:54:43 AM	A63728
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.022		mg/Kg	1	10/16/2019 10:54:43 AM	D63728
Toluene	ND	0.045		mg/Kg	1	10/16/2019 10:54:43 AM	D63728
Ethylbenzene	ND	0.045		mg/Kg	1	10/16/2019 10:54:43 AM	D63728
Xylenes, Total	ND	0.090		mg/Kg	1	10/16/2019 10:54:43 AM	D63728
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	10/16/2019 10:54:43 AM	D63728

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

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

Analytical Report

Lab Order 1910891

Date Reported: 10/18/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L5

Project: Cedar Canyon Hydrotect

Collection Date: 10/14/2019 5:19:00 PM

Lab ID: 1910891-005

Matrix: MEOH (SOIL)

Received Date: 10/16/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	68	60		mg/Kg	20	10/16/2019 12:15:27 PM	48188
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	10/16/2019 12:01:25 PM	48182
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	10/16/2019 12:01:25 PM	48182
Surr: DNOP	99.5	70-130		%Rec	1	10/16/2019 12:01:25 PM	48182
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.8		mg/Kg	1	10/16/2019 11:17:36 AM	A63728
Surr: BFB	91.3	77.4-118		%Rec	1	10/16/2019 11:17:36 AM	A63728
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.014		mg/Kg	1	10/16/2019 11:17:36 AM	D63728
Toluene	ND	0.028		mg/Kg	1	10/16/2019 11:17:36 AM	D63728
Ethylbenzene	ND	0.028		mg/Kg	1	10/16/2019 11:17:36 AM	D63728
Xylenes, Total	ND	0.055		mg/Kg	1	10/16/2019 11:17:36 AM	D63728
Surr: 4-Bromofluorobenzene	93.3	80-120		%Rec	1	10/16/2019 11:17:36 AM	D63728

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

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

Analytical Report

Lab Order 1910891

Date Reported: 10/18/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L6

Project: Cedar Canyon Hydrotest

Collection Date: 10/14/2019 5:27:00 PM

Lab ID: 1910891-006

Matrix: MEOH (SOIL)

Received Date: 10/16/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	68	60		mg/Kg	20	10/16/2019 12:27:51 PM	48188
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/16/2019 12:23:48 PM	48182
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/16/2019 12:23:48 PM	48182
Surr: DNOP	98.3	70-130		%Rec	1	10/16/2019 12:23:48 PM	48182
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.9		mg/Kg	1	10/16/2019 11:40:33 AM	A63728
Surr: BFB	90.9	77.4-118		%Rec	1	10/16/2019 11:40:33 AM	A63728
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.014		mg/Kg	1	10/16/2019 11:40:33 AM	D63728
Toluene	ND	0.029		mg/Kg	1	10/16/2019 11:40:33 AM	D63728
Ethylbenzene	ND	0.029		mg/Kg	1	10/16/2019 11:40:33 AM	D63728
Xylenes, Total	ND	0.058		mg/Kg	1	10/16/2019 11:40:33 AM	D63728
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	10/16/2019 11:40:33 AM	D63728

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

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

Analytical ReportLab Order **1910891**Date Reported: **10/18/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Souder, Miller & Associates**Client Sample ID:** BG1**Project:** Cedar Canyon Hydrotest**Collection Date:** 10/14/2019 5:30:00 PM**Lab ID:** 1910891-007**Matrix:** SOIL**Received Date:** 10/16/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	61		mg/Kg	20	10/16/2019 12:40:16 PM	48188

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

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

Analytical ReportLab Order **1910891**Date Reported: **10/18/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Souder, Miller & Associates**Client Sample ID:** BG2**Project:** Cedar Canyon Hydrotest**Collection Date:** 10/14/2019 5:33:00 PM**Lab ID:** 1910891-008**Matrix:** SOIL**Received Date:** 10/16/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	10/16/2019 1:17:30 PM	48188

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

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

Analytical ReportLab Order **1910891**Date Reported: **10/18/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Souder, Miller & Associates**Client Sample ID:** Frac Tank**Project:** Cedar Canyon Hydrotest**Collection Date:** 10/14/2019 4:00:00 PM**Lab ID:** 1910891-009**Matrix:** AQUEOUS**Received Date:** 10/16/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	52	10		mg/L	20	10/16/2019 11:44:51 AM	R63736
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: BRM
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/16/2019 3:00:30 PM	48196
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/16/2019 3:00:30 PM	48196
Surr: DNOP	101	70-130		%Rec	1	10/16/2019 3:00:30 PM	48196
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	0.11	0.050		mg/L	1	10/16/2019 12:03:29 PM	B63728
Surr: BFB	102	65.8-143		%Rec	1	10/16/2019 12:03:29 PM	B63728

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

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910891****18-Oct-19****Client:** Souder, Miller & Associates**Project:** Cedar Canyon Hydrotest

Sample ID: MB-48188	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 48188	RunNo: 63729								
Prep Date: 10/16/2019	Analysis Date: 10/16/2019	SeqNo: 2178920	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-48188	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 48188	RunNo: 63729								
Prep Date: 10/16/2019	Analysis Date: 10/16/2019	SeqNo: 2178921	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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910891****18-Oct-19****Client:** Souder, Miller & Associates**Project:** Cedar Canyon Hydrotest

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions									
Client ID: PBW	Batch ID: R63736	RunNo: 63736									
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2179041 Units: mg/L									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	0.50									

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions									
Client ID: LCSW	Batch ID: R63736	RunNo: 63736									
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2179042 Units: mg/L									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	4.6	0.50	5.000	0	92.5	90	110				

Qualifiers:

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1910891

18-Oct-19

Client: Souder, Miller & Associates**Project:** Cedar Canyon Hydrotect

Sample ID: LCS-48182	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 48182	RunNo: 63721								
Prep Date: 10/16/2019	Analysis Date: 10/16/2019	SeqNo: 2177763			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.5	63.9	124			
Surr: DNOP	4.7		5.000		93.2	70	130			

Sample ID: MB-48171	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 48171	RunNo: 63721								
Prep Date: 10/15/2019	Analysis Date: 10/16/2019	SeqNo: 2177765			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		96.6	70	130			

Sample ID: MB-48182	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 48182	RunNo: 63721								
Prep Date: 10/16/2019	Analysis Date: 10/16/2019	SeqNo: 2177768			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.8		10.00		98.3	70	130			

Sample ID: LCS-48160	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 48160	RunNo: 63724								
Prep Date: 10/15/2019	Analysis Date: 10/16/2019	SeqNo: 2177810			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		102	70	130			

Sample ID: MB-48160	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 48160	RunNo: 63724								
Prep Date: 10/15/2019	Analysis Date: 10/16/2019	SeqNo: 2177811			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		123	70	130			

Sample ID: LCS-48171	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 48171	RunNo: 63721								
Prep Date: 10/15/2019	Analysis Date: 10/16/2019	SeqNo: 2178334			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.7		5.000		114	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910891****18-Oct-19****Client:** Souder, Miller & Associates**Project:** Cedar Canyon Hydrotest

Sample ID: LCS-48196	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range								
Client ID: LCSW	Batch ID: 48196	RunNo: 63724								
Prep Date: 10/16/2019	Analysis Date: 10/16/2019	SeqNo: 2178328	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	71.8	135			
Surr: DNOP	0.43		0.5000		85.9	70	130			

Sample ID: MB-48196	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range								
Client ID: PBW	Batch ID: 48196	RunNo: 63724								
Prep Date: 10/16/2019	Analysis Date: 10/16/2019	SeqNo: 2178329	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.99		1.000		98.8	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910891**

18-Oct-19

Client: Souder, Miller & Associates**Project:** Cedar Canyon Hydrotect

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: A63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178625		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	980		1000		98.0	77.4	118			

Sample ID: 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: A63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178626		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	80	120			
Surr: BFB	1200		1000		116	77.4	118			

Sample ID: 1910891-003AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: L3	Batch ID: A63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178627		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.3	16.45	0	101	69.1	142			
Surr: BFB	700		657.9		106	77.4	118			

Sample ID: 1910891-003AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: L3	Batch ID: A63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178628		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.3	16.45	0	99.6	69.1	142	1.55	20	
Surr: BFB	700		657.9		106	77.4	118	0	0	

Sample ID: MB-48166	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 48166	RunNo: 63727								
Prep Date: 10/15/2019	Analysis Date: 10/16/2019	SeqNo: 2178684		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		90.5	77.4	118			

Sample ID: LCS-48166	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 48166	RunNo: 63727								
Prep Date: 10/15/2019	Analysis Date: 10/16/2019	SeqNo: 2178685		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1910891

18-Oct-19

Client: Souder, Miller & Associates

Project: Cedar Canyon Hydrotest

Sample ID: LCS-48166		SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range					
Client ID: LCSS		Batch ID: 48166			RunNo: 63727					
Prep Date: 10/15/2019		Analysis Date: 10/16/2019			SeqNo: 2178685		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	80	120			
Surr: BFB	1100		1000		106	77.4	118			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 15 of 18

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910891****18-Oct-19****Client:** Souder, Miller & Associates**Project:** Cedar Canyon Hydrotest

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBW	Batch ID: B63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178643		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		98.0	65.8	143			

Sample ID: 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSW	Batch ID: B63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178644		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	100	73.6	119			
Surr: BFB	23		20.00		116	65.8	143			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910891**

18-Oct-19

Client: Souder, Miller & Associates**Project:** Cedar Canyon Hydrotect

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: D63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178675		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: 100NG BTEX LCS	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: D63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178676		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.5	80	120			
Toluene	0.95	0.050	1.000	0	95.3	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.2	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID: 1910891-004AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: L4	Batch ID: D63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178679		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.022	0.8977	0	89.4	76	123			
Toluene	0.84	0.045	0.8977	0.007720	93.2	80.3	127			
Ethylbenzene	0.85	0.045	0.8977	0.009991	93.2	80.2	131			
Xylenes, Total	2.5	0.090	2.693	0.02596	91.3	78	133			
Surr: 4-Bromofluorobenzene	0.91		0.8977		101	80	120			

Sample ID: 1910891-004AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: L4	Batch ID: D63728	RunNo: 63728								
Prep Date:	Analysis Date: 10/16/2019	SeqNo: 2178680		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.022	0.8977	0	87.6	76	123	2.05	20	
Toluene	0.82	0.045	0.8977	0.007720	90.0	80.3	127	3.41	20	
Ethylbenzene	0.82	0.045	0.8977	0.009991	90.3	80.2	131	3.13	20	
Xylenes, Total	2.4	0.090	2.693	0.02596	88.2	78	133	3.39	20	
Surr: 4-Bromofluorobenzene	0.92		0.8977		102	80	120	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910891**

18-Oct-19

Client: Souder, Miller & Associates**Project:** Cedar Canyon Hydrotest

Sample ID: MB-48166	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 48166	RunNo: 63727								
Prep Date: 10/15/2019	Analysis Date: 10/16/2019	SeqNo: 2178705 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	0.94		1.000		94.0	80	120			

Sample ID: LCS-48166	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 48166	RunNo: 63727								
Prep Date: 10/15/2019	Analysis Date: 10/16/2019	SeqNo: 2178706 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.1	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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



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: 1910891

RcptNo: 1

Received By: *Jim Rojas* 10/16/2019 8:55:00 AM

Completed By: Leah Baca 10/16/2019 9:17:21 AM

Reviewed By: *DM 10/15/19**Leah Baca*

Chain of Custody

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

Log In

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

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: *DAD 10/16/19*

Special Handling (if applicable)

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

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

On Sample -009, poured off 500mL from unpreserved amber into plastic bottle for anions analysis

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			

Chain-of-Custody Record

Client: SMA

- Carlsbad

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard
 ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Project Manager:

Ashley Maxwell

Sampler: HAP

On Ice: ☒ Yes ☐ No

of Coolers: 4:00 (1)

Cooler Temp (including GFI): 41.0N 852 = 46.2 (°C)

Date Time Matrix Sample Name

10/14/19 1700 Soil L1

1707 L2

1712 L3

1715 L4

1719 L5

1727 L6

1730 B611

1733 B612

10/14/19 1600 Water Frac Tank

Aged Water

1/2 HCL

Date: 10/15/19

Time: 1130

Relinquished by: Ashley Maxwell

Date: 10/15/19

Time: 1900

Relinquished by: [Signature]

Turn-Around Time:

☐ Standard☒ Rush

Project Name:

Cedar Canyon Hydrotest

Project #:

Same Day

Rush

Project Name:

Cedar Canyon Hydrotest

Project #:

Project Manager:

Ashley Maxwell

Sampler: HAP

On Ice: ☒ Yes ☐ No

of Coolers: 4:00 (1)

Cooler Temp (including GFI): 41.0N 852 = 46.2 (°C)

Container Type and #

402

Preservative Type

100

HEAL No.

1910891

Date Time

11/15/19 1500

Date Time

10-16-19 8:55

Received by: [Signature]

Via: [Signature]

Received by: [Signature]

Via: [Signature]

Received by: [Signature]

Via: [Signature]

Received by: [Signature]

Via: [Signature]

Received by: [Signature]

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Via: [Signature]

Received by: [Signature]

Via: [Signature]

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

TPH: 8015D (GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

MTBE / TMB's (8021)

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

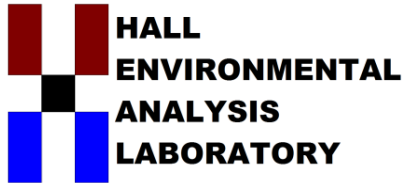
X

X

X

Remarks:

Enterprise



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

November 05, 2019

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

RE: Cedar Canyon

OrderNo.: 1910D63

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 11 sample(s) on 10/25/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1910D63

Date Reported: 11/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates	Client Sample ID: L4- Surface
Project: Cedar Canyon	Collection Date: 10/23/2019 2:00:00 PM
Lab ID: 1910D63-001	Received Date: 10/25/2019 9:15:00 AM
Matrix: SOIL	

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: CAS	
Chloride	380	59		mg/Kg	20	10/30/2019 8:25:57 PM	48493

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

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

Analytical Report

Lab Order 1910D63

Date Reported: 11/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: POR- Surface

Project: Cedar Canyon

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

Lab ID: 1910D63-002

Matrix: SOIL

Received Date: 10/25/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	10/30/2019 8:38:18 PM	48493
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	13	8.9		mg/Kg	1	10/31/2019 12:55:32 PM	48441
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/31/2019 12:55:32 PM	48441
Surr: DNOP	124	70-130		%Rec	1	10/31/2019 12:55:32 PM	48441
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/30/2019 4:03:31 AM	48399
Surr: BFB	94.0	77.4-118		%Rec	1	10/30/2019 4:03:31 AM	48399
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/30/2019 4:03:31 AM	48399
Toluene	ND	0.046		mg/Kg	1	10/30/2019 4:03:31 AM	48399
Ethylbenzene	ND	0.046		mg/Kg	1	10/30/2019 4:03:31 AM	48399
Xylenes, Total	ND	0.093		mg/Kg	1	10/30/2019 4:03:31 AM	48399
Surr: 4-Bromofluorobenzene	90.9	80-120		%Rec	1	10/30/2019 4:03:31 AM	48399

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

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

Analytical ReportLab Order **1910D63**Date Reported: **11/5/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Souder, Miller & Associates**Client Sample ID:** L1- Surface**Project:** Cedar Canyon**Collection Date:** 10/23/2019 10:00:00 AM**Lab ID:** 1910D63-004**Matrix:** SOIL**Received Date:** 10/25/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	10/30/2019 8:50:38 PM	48493
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/30/2019 10:05:38 AM	48441
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/30/2019 10:05:38 AM	48441
Surr: DNOP	117	70-130		%Rec	1	10/30/2019 10:05:38 AM	48441
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/29/2019 7:55:04 PM	48399
Surr: BFB	100	77.4-118		%Rec	1	10/29/2019 7:55:04 PM	48399
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/29/2019 7:55:04 PM	48399
Toluene	ND	0.048		mg/Kg	1	10/29/2019 7:55:04 PM	48399
Ethylbenzene	ND	0.048		mg/Kg	1	10/29/2019 7:55:04 PM	48399
Xylenes, Total	ND	0.097		mg/Kg	1	10/29/2019 7:55:04 PM	48399
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	10/29/2019 7:55:04 PM	48399

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

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

Analytical Report

Lab Order 1910D63

Date Reported: 11/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L2- Surface

Project: Cedar Canyon

Collection Date: 10/23/2019 11:00:00 AM

Lab ID: 1910D63-006

Matrix: SOIL

Received Date: 10/25/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	10/30/2019 9:02:58 PM	48493
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	10/30/2019 10:20:42 AM	48441
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	10/30/2019 10:20:42 AM	48441
Surr: DNOP	121	70-130		%Rec	1	10/30/2019 10:20:42 AM	48441
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/29/2019 8:18:43 PM	48399
Surr: BFB	103	77.4-118		%Rec	1	10/29/2019 8:18:43 PM	48399
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/29/2019 8:18:43 PM	48399
Toluene	ND	0.048		mg/Kg	1	10/29/2019 8:18:43 PM	48399
Ethylbenzene	ND	0.048		mg/Kg	1	10/29/2019 8:18:43 PM	48399
Xylenes, Total	ND	0.096		mg/Kg	1	10/29/2019 8:18:43 PM	48399
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	10/29/2019 8:18:43 PM	48399

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

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

Analytical Report

Lab Order 1910D63

Date Reported: 11/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Client Sample ID: L7- Surface

Project: Cedar Canyon

Collection Date: 10/23/2019 12:00:00 PM

Lab ID: 1910D63-008

Matrix: SOIL

Received Date: 10/25/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	10/30/2019 9:15:18 PM	48493
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/30/2019 10:29:40 AM	48441
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/30/2019 10:29:40 AM	48441
Surr: DNOP	156	70-130	S	%Rec	1	10/30/2019 10:29:40 AM	48441
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/29/2019 8:42:18 PM	48399
Surr: BFB	116	77.4-118		%Rec	1	10/29/2019 8:42:18 PM	48399
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/29/2019 8:42:18 PM	48399
Toluene	ND	0.047		mg/Kg	1	10/29/2019 8:42:18 PM	48399
Ethylbenzene	ND	0.047		mg/Kg	1	10/29/2019 8:42:18 PM	48399
Xylenes, Total	ND	0.093		mg/Kg	1	10/29/2019 8:42:18 PM	48399
Surr: 4-Bromofluorobenzene	121	80-120	S	%Rec	1	10/29/2019 8:42:18 PM	48399

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

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

Analytical ReportLab Order **1910D63**Date Reported: **11/5/2019****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Souder, Miller & Associates**Client Sample ID:** L8- Surface**Project:** Cedar Canyon**Collection Date:** 10/23/2019 1:00:00 PM**Lab ID:** 1910D63-010**Matrix:** SOIL**Received Date:** 10/25/2019 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	10/30/2019 9:27:38 PM	48493
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/30/2019 10:38:42 AM	48441
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/30/2019 10:38:42 AM	48441
Surr: DNOP	113	70-130		%Rec	1	10/30/2019 10:38:42 AM	48441
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/29/2019 2:50:14 PM	48431
Surr: BFB	110	77.4-118		%Rec	1	10/29/2019 2:50:14 PM	48431
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/29/2019 2:50:14 PM	48431
Toluene	ND	0.047		mg/Kg	1	10/29/2019 2:50:14 PM	48431
Ethylbenzene	ND	0.047		mg/Kg	1	10/29/2019 2:50:14 PM	48431
Xylenes, Total	ND	0.095		mg/Kg	1	10/29/2019 2:50:14 PM	48431
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	10/29/2019 2:50:14 PM	48431

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

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910D63****05-Nov-19****Client:** Souder, Miller & Associates**Project:** Cedar Canyon

Sample ID: MB-48493	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 48493	RunNo: 64105								
Prep Date: 10/30/2019	Analysis Date: 10/30/2019	SeqNo: 2193433	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-48493	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 48493	RunNo: 64105								
Prep Date: 10/30/2019	Analysis Date: 10/30/2019	SeqNo: 2193434	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910D63**

05-Nov-19

Client: Souder, Miller & Associates**Project:** Cedar Canyon

Sample ID: MB-48441	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 48441	RunNo: 64090								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2192649	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	13		10.00		125	70	130			

Sample ID: LCS-48441	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 48441	RunNo: 64090								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2192650	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.8	63.9	124			
Surr: DNOP	4.5		5.000		90.2	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910D63**

05-Nov-19

Client: Souder, Miller & Associates**Project:** Cedar Canyon

Sample ID: MB-48431	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 48431	RunNo: 64058								
Prep Date: 10/28/2019	Analysis Date: 10/29/2019	SeqNo: 2191347		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	1100		1000		105	77.4	118			

Sample ID: LCS-48431	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 48431	RunNo: 64058								
Prep Date: 10/28/2019	Analysis Date: 10/29/2019	SeqNo: 2191348		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.4	80	120			
Surr: BFB	1100		1000		112	77.4	118			

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: G64058	RunNo: 64058								
Prep Date:	Analysis Date: 10/29/2019	SeqNo: 2191371		Units: %Rec						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		99.7	77.4	118			

Sample ID: 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: G64058	RunNo: 64058								
Prep Date:	Analysis Date: 10/29/2019	SeqNo: 2191372		Units: %Rec						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1200		1000		116	77.4	118			

Sample ID: MB-48399	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 48399	RunNo: 64059								
Prep Date: 10/25/2019	Analysis Date: 10/29/2019	SeqNo: 2191592		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	920		1000		91.5	77.4	118			

Sample ID: LCS-48399	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 48399	RunNo: 64059								
Prep Date: 10/25/2019	Analysis Date: 10/29/2019	SeqNo: 2191593		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.4	80	120			
Surr: BFB	1100		1000		106	77.4	118			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910D63**

05-Nov-19

Client: Souder, Miller & Associates**Project:** Cedar Canyon

Sample ID: MB-48446	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 48446	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2193023 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		99.9	77.4	118			

Sample ID: LCS-48446	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 48446	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2193024 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		108	77.4	118			

Sample ID: MB-48453	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 48453	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/31/2019	SeqNo: 2193052 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		100	77.4	118			

Sample ID: LCS-48453	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 48453	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2193053 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		109	77.4	118			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910D63**

05-Nov-19

Client: Souder, Miller & Associates**Project:** Cedar Canyon

Sample ID: MB-48431	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 48431	RunNo: 64058								
Prep Date: 10/28/2019	Analysis Date: 10/29/2019	SeqNo: 2191513 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID: LCS-48431	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 48431	RunNo: 64058								
Prep Date: 10/28/2019	Analysis Date: 10/29/2019	SeqNo: 2191524 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	0.98	0.050	1.000	0	97.8	80	120			
Ethylbenzene	0.95	0.050	1.000	0	94.9	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.6	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID: MB-48399	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 48399	RunNo: 64059								
Prep Date: 10/25/2019	Analysis Date: 10/29/2019	SeqNo: 2191621 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.1	80	120			

Sample ID: LCS-48399	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 48399	RunNo: 64059								
Prep Date: 10/25/2019	Analysis Date: 10/29/2019	SeqNo: 2191622 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.9	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.9	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.3	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910D63****05-Nov-19****Client:** Souder, Miller & Associates**Project:** Cedar Canyon

Sample ID: MB-48446	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 48446	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2193064 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID: LCS-48453	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 48453	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2193065 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID: MB-48453	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 48453	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/31/2019	SeqNo: 2193088 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID: LCS-48446	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 48446	RunNo: 64076								
Prep Date: 10/29/2019	Analysis Date: 10/30/2019	SeqNo: 2193181 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
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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: 1910D63

RcptNo: 1

Received By: Juan Rojas 10/25/2019 9:15:00 AMCompleted By: Yazmine Garduno 10/25/2019 10:11:44 AMReviewed By: DAD 10/25/19

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: ENM 10/25/19

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good				
2	2.3	Good				

