

Incident ID	NAB1906632805
District RP	
Facility ID	
Application ID	

## Closure

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

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

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

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

Printed Name: Dale Woodall Title: Env. Professional  
Signature: Dale Woodall Date: 11/14/2022  
email: dale.woodall@dvn.com Telephone: 575-748-1838

**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: \_\_\_\_\_

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Printed Name: Dale Woodall Title: Env. Professional  
Signature: Dale Woodall Date: 11/14/2022  
email: dale.woodall@dvn.com Telephone: 575-748-1838

**OCD Only**

Received by: Robert Hamlet Date: 2/28/2023

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: Robert Hamlet Date: 2/28/2023  
Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

# **Devon Energy Production Company Snapping 2 St 14H Battery**

**Closure Report  
U/L P, Sec 2, T26S, R31E  
Eddy County, New Mexico  
NAB1906632805  
NRM2000942346**

**July 22, 2021**



**Prepared for:**

**Devon Energy Production Company  
6488 Seven Rivers Hwy  
Artesia, New Mexico 88211**

**By:**

**Safety & Environmental Solutions, Inc.  
703 East Clinton Street  
Hobbs, New Mexico 88240**

## Company Contacts

Representative	Company	Telephone	E-mail
Tom Bynum	Devon Energy	580-748-1613	<a href="mailto:Tom.Bynum@dvn.com">Tom.Bynum@dvn.com</a>
Bob Allen	SESI	575-397-0510	<a href="mailto:ballen@sesi-nm.com">ballen@sesi-nm.com</a>

## Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was engaged by Devon Energy to perform a site assessment at the Snapping 2 St 14H Battery concerning a 7.3 bbls produced water release around the saddle riser on the pipeline south of the battery. According to the C-141, a gasket blew out and caused the release. No barrels of fluid were recovered. This site is situated in Eddy County, Section 2, Township 24S, and Range 29E.

SESI personnel performed an assessment of the site in February of 2020 based on generator knowledge of the leak location. SESI personnel mapped the leak and performed delineation. A second release was documented on 8/14/2019 as almost 14 bbls of produced water was released inside the SPCC containment area. A pin hole leak in the 2" water line going to the tanks was responsible for the release. As this release was confined to the containment area, this closure report will be used to address both incidents and their closure.

## Surface and Ground Water

Based on the NMOCD Oil and Gas map included in this report, surface water is not present within 3,000 feet of this release. The New Mexico Office of the State Engineer records indicates the average depth to groundwater for the area to be between 340' and 365' bgs. This is evidenced by wells drilled in the area that are less than 25 years old, and are approximately 1400' from the release location(s).

## Characterization

In February 2020, SESI personnel performed sampling to determine vertical extent of the release. SESI advanced 11 auger holes within the leak areas. In August of 2020, Horizontal extent samples were collected to confirm the breadth of the release was mitigated to the defined release area previously determined. The samples were properly packaged and preserved and sent to Cardinal Laboratories for analysis. The results of the testing are captured in the summary below:



<b>Devon Energy</b> <b>Snapping 2 St 14H Battery</b> <b>Soil Sample Results: Cardinal Environmental Laboratories 2/17/20 – NAB1906632805</b>									
SAMPLE ID	Chloride	GRO	DRO	EXT DRO	Benzene	Toluene	Ethyl benzene	Total Xylenes	Total BTEX
AH1 @ SURFACE	224	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH1 @ 1'	240	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH2 @ SURFACE	224	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH2 @ 1'	64	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH3 @ SURFACE	240	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH3 @ 1'	208	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH4 @ SURFACE	224	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH4 @ 1'	64	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH4 @ 1.5'	75	ND	ND	ND	ND	ND	ND	ND	ND
AH5 @ SURFACE	16	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH5 @ 1'	16	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH6 @ SURFACE	80	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH6 @ 1'	16	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH7 @ SURFACE	64	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH7 @ 1'	16	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
NRM2000942346									
AH1 @ SURFACE	192	<10.0	358	110	<0.050	<0.050	<0.050	<0.150	<0.300
AH1 @ 1'	160	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH2 @ SURFACE	192	<10.0	391	101	<0.050	<0.050	<0.050	<0.150	<0.300
AH2 @ 1'	160	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH3 @ SURFACE	192	<10.0	147	28.1	<0.050	<0.050	<0.050	<0.150	<0.300
AH3 @ 1'	144	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
AH4 @ SURFACE	176	<10.0	84.1	17.3	<0.050	<0.050	<0.050	<0.150	<0.300
AH4 @ 1'	160	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300
Horizontal Extent – Hall Labs 7/31/20									
SAMPLE ID	Chloride	GRO	DRO	MRO	Benzene	Toluene	Ethyl benzene	XYLENES	
H-5 North	ND	ND	ND	ND	ND	ND	ND	ND	
H-6 West	73	ND	ND	ND	ND	ND	ND	ND	
H-7 South	ND	ND	ND	ND	ND	ND	ND	ND	
H-8 East	ND	ND	ND	ND	ND	ND	ND	ND	

## Remediation

### NAB1906632805

Based on the results of the delineation, SESI, determined the best course of action is to excavate the contaminated soil to a depth of 1 to 1.5 feet as practicable. Contaminated soils were excavated and subsequently transported to an approved NMOCD disposal facility; the site was then backfilled with clean soil. Pictures of the remediation are included in this report.

## **NRM2000942346**

For this incident, 13.86 bbls of produced water were released into the lined SPCC containment area. According to the C-141, a pin hole leak in the 2" water line going to the water tanks gave rise to the release. All 13.86 bbls of fluid were recovered via vacuum truck. SESI was asked to perform a liner inspection on this containment area and this activity was performed on 7/31/20. The photo documentation is included in this report as well. Because this release was fully contained, and fully recovered, there was no evidence that any fluids left the containment area. As the liner inspection shows, there was no damage observed over a year from when the incident first occurred. Therefore, there were no soil samples taken, and no analytical to report.

### **Closure Request**

Based on the vertical and horizontal sample results, SESI believes the release area to be properly remediated according to the closure criteria set forth in Table I of the Spill Rule 19.15.29 NMAC. Therefore, SESI, on behalf of Devon respectfully requests closure of the following releases, **NAB1906632805 & NRM2000942346**. Supplemental information has been included in this report to support our closure request.

### **Supplemental Documentation for Closure**

Map of Release with sample locations  
Photos of release and remediation  
NMOCD Oil and Gas Map  
BLM Cave Karst Map  
Laboratory Analysis 2/27/20 and 8/14/20  
C-141, pages 3-6

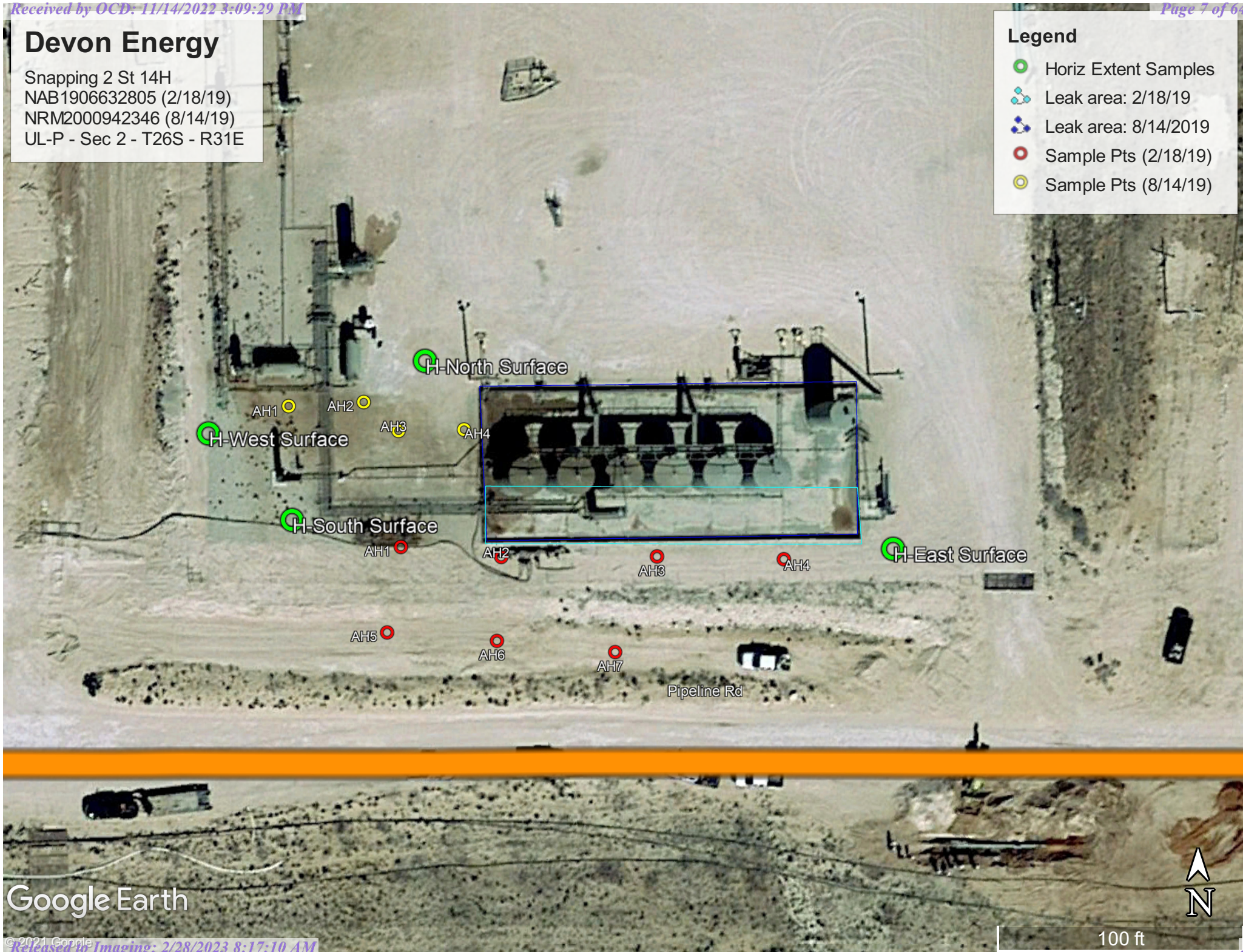


# Devon Energy

Snapping 2 St 14H  
NAB1906632805 (2/18/19)  
NRM2000942346 (8/14/19)  
UL-P - Sec 2 - T26S - R31E

## Legend

- Horiz Extent Samples
- Leak area: 2/18/19
- Leak area: 8/14/2019
- Sample Pts (2/18/19)
- Sample Pts (8/14/19)






Google Earth

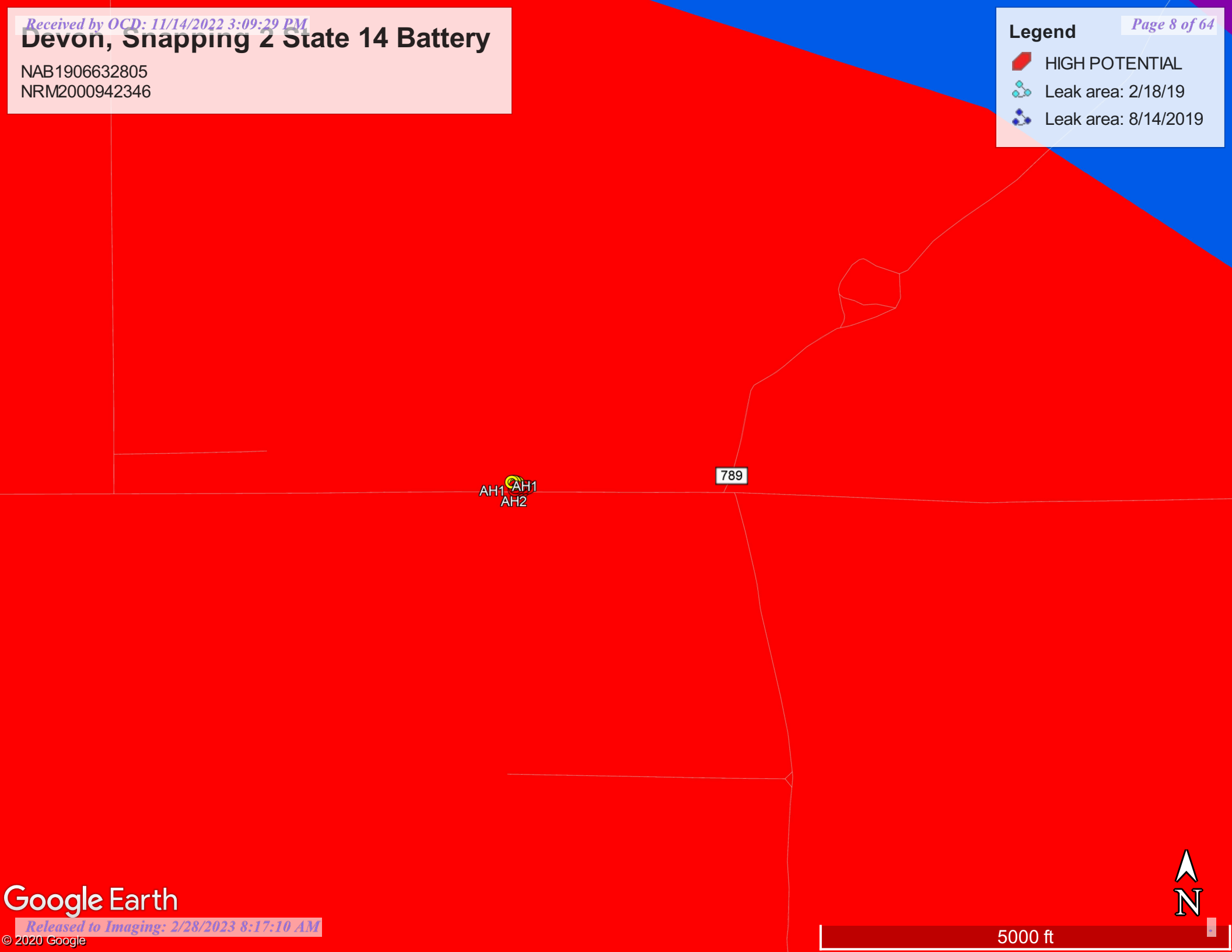


# Devon, Snapping 2 State 14 Battery

NAB1906632805  
NRM2000942346

## Legend

-  HIGH POTENTIAL
-  Leak area: 2/18/19
-  Leak area: 8/14/2019





OSE PUBLIC PRINT



8/12/2021, 11:08:44 AM

- GIS WATERS PODs
- OSE District Boundary

Both Estates

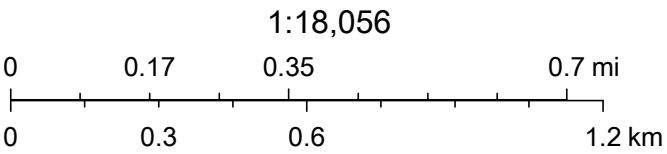
Active

New Mexico State Trust Lands

SiteBoundaries

Pending

Subsurface Estate



Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC, Maxar





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

August 10, 2020

Bob Allen  
Safety & Environmental Solutions  
PO Box 1613  
Hobbs, NM 88241  
TEL: (575) 397-0510  
FAX: (575) 393-4388

RE: Devon Snapping 2 State 14 H

OrderNo.: 2008034

Dear Bob Allen:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/4/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://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".

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 2008034

Date Reported: 8/10/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety &amp; Environmental Solutions

Client Sample ID: AH-4 1.5 ft

Project: Devon Snapping 2 State 14 H

Collection Date: 7/31/2020 9:45:00 AM

Lab ID: 2008034-001

Matrix: SOIL

Received Date: 8/4/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	75	60		mg/Kg	20	8/7/2020 2:23:27 AM	54233
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/5/2020 8:33:39 PM	54146
Surr: BFB	108	70-130		%Rec	1	8/5/2020 8:33:39 PM	54146
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/5/2020 10:20:19 PM	54158
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/5/2020 10:20:19 PM	54158
Surr: DNOP	115	30.4-154		%Rec	1	8/5/2020 10:20:19 PM	54158
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/5/2020 8:33:39 PM	54146
Toluene	ND	0.048		mg/Kg	1	8/5/2020 8:33:39 PM	54146
Ethylbenzene	ND	0.048		mg/Kg	1	8/5/2020 8:33:39 PM	54146
Xylenes, Total	ND	0.097		mg/Kg	1	8/5/2020 8:33:39 PM	54146
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	8/5/2020 8:33:39 PM	54146
Surr: 4-Bromofluorobenzene	88.9	70-130		%Rec	1	8/5/2020 8:33:39 PM	54146
Surr: Dibromofluoromethane	104	70-130		%Rec	1	8/5/2020 8:33:39 PM	54146
Surr: Toluene-d8	102	70-130		%Rec	1	8/5/2020 8:33:39 PM	54146

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 2008034

Date Reported: 8/10/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety &amp; Environmental Solutions

Client Sample ID: H-5 North

Project: Devon Snapping 2 State 14 H

Collection Date: 7/31/2020 10:15:00 AM

Lab ID: 2008034-002

Matrix: SOIL

Received Date: 8/4/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	8/7/2020 3:00:30 AM	54233
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/5/2020 10:02:24 PM	54146
Surr: BFB	109	70-130		%Rec	1	8/5/2020 10:02:24 PM	54146
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/5/2020 10:30:28 PM	54158
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/5/2020 10:30:28 PM	54158
Surr: DNOP	138	30.4-154		%Rec	1	8/5/2020 10:30:28 PM	54158
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/5/2020 10:02:24 PM	54146
Toluene	ND	0.048		mg/Kg	1	8/5/2020 10:02:24 PM	54146
Ethylbenzene	ND	0.048		mg/Kg	1	8/5/2020 10:02:24 PM	54146
Xylenes, Total	ND	0.096		mg/Kg	1	8/5/2020 10:02:24 PM	54146
Surr: 1,2-Dichloroethane-d4	93.4	70-130		%Rec	1	8/5/2020 10:02:24 PM	54146
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	8/5/2020 10:02:24 PM	54146
Surr: Dibromofluoromethane	104	70-130		%Rec	1	8/5/2020 10:02:24 PM	54146
Surr: Toluene-d8	103	70-130		%Rec	1	8/5/2020 10:02:24 PM	54146

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

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

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

Page 2 of 11



**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**Lab Order **2008034**Date Reported: **8/10/2020****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** H-6 West**Project:** Devon Snapping 2 State 14 H**Collection Date:** 7/31/2020 10:45:00 AM**Lab ID:** 2008034-003**Matrix:** SOIL**Received Date:** 8/4/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	73	60		mg/Kg	20	8/7/2020 3:12:50 AM	54233
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/6/2020 1:28:45 AM	54146
Surr: BFB	105	70-130		%Rec	1	8/6/2020 1:28:45 AM	54146
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/5/2020 10:40:38 PM	54158
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/5/2020 10:40:38 PM	54158
Surr: DNOP	100	30.4-154		%Rec	1	8/5/2020 10:40:38 PM	54158
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.023		mg/Kg	1	8/6/2020 1:28:45 AM	54146
Toluene	ND	0.046		mg/Kg	1	8/6/2020 1:28:45 AM	54146
Ethylbenzene	ND	0.046		mg/Kg	1	8/6/2020 1:28:45 AM	54146
Xylenes, Total	ND	0.093		mg/Kg	1	8/6/2020 1:28:45 AM	54146
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%Rec	1	8/6/2020 1:28:45 AM	54146
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	8/6/2020 1:28:45 AM	54146
Surr: Dibromofluoromethane	104	70-130		%Rec	1	8/6/2020 1:28:45 AM	54146
Surr: Toluene-d8	101	70-130		%Rec	1	8/6/2020 1:28:45 AM	54146

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

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

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**Lab Order **2008034**Date Reported: **8/10/2020****CLIENT:** Safety & Environmental Solutions**Client Sample ID:** H-7 South**Project:** Devon Snapping 2 State 14 H**Collection Date:** 7/31/2020 11:10:00 AM**Lab ID:** 2008034-004**Matrix:** SOIL**Received Date:** 8/4/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	8/7/2020 3:25:10 AM	54233
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/6/2020 1:58:08 AM	54146
Surr: BFB	107	70-130		%Rec	1	8/6/2020 1:58:08 AM	54146
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/5/2020 11:40:45 PM	54160
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/5/2020 11:40:45 PM	54160
Surr: DNOP	110	30.4-154		%Rec	1	8/5/2020 11:40:45 PM	54160
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	8/6/2020 1:58:08 AM	54146
Toluene	ND	0.047		mg/Kg	1	8/6/2020 1:58:08 AM	54146
Ethylbenzene	ND	0.047		mg/Kg	1	8/6/2020 1:58:08 AM	54146
Xylenes, Total	ND	0.095		mg/Kg	1	8/6/2020 1:58:08 AM	54146
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%Rec	1	8/6/2020 1:58:08 AM	54146
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	8/6/2020 1:58:08 AM	54146
Surr: Dibromofluoromethane	108	70-130		%Rec	1	8/6/2020 1:58:08 AM	54146
Surr: Toluene-d8	99.4	70-130		%Rec	1	8/6/2020 1:58:08 AM	54146

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

<b>Qualifiers:</b>	*	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

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## Analytical Report

Lab Order 2008034

Date Reported: 8/10/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety &amp; Environmental Solutions

Client Sample ID: H-8 East

Project: Devon Snapping 2 State 14 H

Collection Date: 7/31/2020 11:40:00 AM

Lab ID: 2008034-005

Matrix: SOIL

Received Date: 8/4/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	8/7/2020 3:37:31 AM	54233
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/6/2020 2:27:42 AM	54146
Surr: BFB	103	70-130		%Rec	1	8/6/2020 2:27:42 AM	54146
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/6/2020 12:10:56 AM	54160
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/6/2020 12:10:56 AM	54160
Surr: DNOP	73.0	30.4-154		%Rec	1	8/6/2020 12:10:56 AM	54160
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/6/2020 2:27:42 AM	54146
Toluene	ND	0.048		mg/Kg	1	8/6/2020 2:27:42 AM	54146
Ethylbenzene	ND	0.048		mg/Kg	1	8/6/2020 2:27:42 AM	54146
Xylenes, Total	ND	0.097		mg/Kg	1	8/6/2020 2:27:42 AM	54146
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	8/6/2020 2:27:42 AM	54146
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	8/6/2020 2:27:42 AM	54146
Surr: Dibromofluoromethane	106	70-130		%Rec	1	8/6/2020 2:27:42 AM	54146
Surr: Toluene-d8	98.3	70-130		%Rec	1	8/6/2020 2:27:42 AM	54146

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

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

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

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

WO#: 2008034

10-Aug-20

**Client:** Safety & Environmental Solutions**Project:** Devon Snapping 2 State 14 H

Sample ID: <b>MB-54233</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>54233</b>	RunNo: <b>70878</b>								
Prep Date: <b>8/6/2020</b>	Analysis Date: <b>8/7/2020</b>	SeqNo: <b>2468703</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-54233</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>54233</b>	RunNo: <b>70878</b>								
Prep Date: <b>8/6/2020</b>	Analysis Date: <b>8/7/2020</b>	SeqNo: <b>2468704</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
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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#: 2008034

10-Aug-20

**Client:** Safety & Environmental Solutions**Project:** Devon Snapping 2 State 14 H

Sample ID: <b>2008034-004AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>H-7 South</b>	Batch ID: <b>54160</b>	RunNo: <b>70860</b>								
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>	SeqNo: <b>2467368</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.8	49.12	0	92.0	47.4	136			
Surr: DNOP	4.0		4.912		82.0	30.4	154			

Sample ID: <b>2008034-004AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>H-7 South</b>	Batch ID: <b>54160</b>	RunNo: <b>70860</b>								
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/6/2020</b>	SeqNo: <b>2467369</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.8	48.83	0	89.2	47.4	136	3.64	43.4	
Surr: DNOP	3.8		4.883		78.5	30.4	154	0	0	

Sample ID: <b>LCS-54157</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>54157</b>	RunNo: <b>70860</b>								
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>	SeqNo: <b>2467390</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		99.5	30.4	154			

Sample ID: <b>LCS-54158</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>54158</b>	RunNo: <b>70860</b>								
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>	SeqNo: <b>2467391</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	50.00	0	115	70	130			
Surr: DNOP	4.9		5.000		98.3	30.4	154			

Sample ID: <b>LCS-54160</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>54160</b>	RunNo: <b>70860</b>								
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>	SeqNo: <b>2467392</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.00	0	110	70	130			
Surr: DNOP	4.8		5.000		95.1	30.4	154			

Sample ID: <b>MB-54157</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>54157</b>	RunNo: <b>70860</b>								
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>	SeqNo: <b>2467394</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	13		10.00		131	30.4	154			

**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#: 2008034

10-Aug-20

**Client:** Safety & Environmental Solutions**Project:** Devon Snapping 2 State 14 H

Sample ID: <b>MB-54158</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>54158</b>	RunNo: <b>70860</b>								
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>	SeqNo: <b>2467395</b> Units: <b>mg/Kg</b>								
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		126	30.4	154			

Sample ID: <b>MB-54160</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>54160</b>	RunNo: <b>70860</b>								
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>	SeqNo: <b>2467396</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		109	30.4	154			

**Qualifiers:**

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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

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

WO#: 2008034

10-Aug-20

**Client:** Safety & Environmental Solutions**Project:** Devon Snapping 2 State 14 H

Sample ID: <b>Ics-54146</b>	SampType: <b>LCS4</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>54146</b>		RunNo: <b>70866</b>							
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>		SeqNo: <b>2467903</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	106	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.8	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.5	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		100	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Sample ID: <b>mb-54146</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>PBS</b>	Batch ID: <b>54146</b>		RunNo: <b>70866</b>							
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>		SeqNo: <b>2467904</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		95.9	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		90.7	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.49		0.5000		98.7	70	130			

Sample ID: <b>2008034-002AMS</b>	SampType: <b>MS4</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>H-5 North</b>	Batch ID: <b>54146</b>		RunNo: <b>70866</b>							
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>		SeqNo: <b>2467907</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9911	0	112	71.1	115			
Toluene	1.0	0.050	0.9911	0.005624	103	79.6	132			
Ethylbenzene	1.0	0.050	0.9911	0	102	83.8	134			
Xylenes, Total	3.1	0.099	2.973	0	104	82.4	132			
Surr: 1,2-Dichloroethane-d4	0.49		0.4955		98.0	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.4955		94.1	70	130			
Surr: Dibromofluoromethane	0.51		0.4955		103	70	130			
Surr: Toluene-d8	0.49		0.4955		99.7	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#: 2008034

10-Aug-20

**Client:** Safety & Environmental Solutions**Project:** Devon Snapping 2 State 14 H

Sample ID: <b>2008034-002AMSD</b>		SampType: <b>MSD4</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>						
Client ID: <b>H-5 North</b>		Batch ID: <b>54146</b>		RunNo: <b>70866</b>						
Prep Date: <b>8/4/2020</b>		Analysis Date: <b>8/5/2020</b>		SeqNo: <b>2467908</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9862	0	109	71.1	115	3.57	20	
Toluene	1.0	0.049	0.9862	0.005624	101	79.6	132	2.61	20	
Ethylbenzene	1.0	0.049	0.9862	0	104	83.8	134	1.59	20	
Xylenes, Total	3.1	0.099	2.959	0	103	82.4	132	1.23	20	
Surr: 1,2-Dichloroethane-d4	0.48		0.4931		97.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.45		0.4931		90.5	70	130	0	0	
Surr: Dibromofluoromethane	0.52		0.4931		105	70	130	0	0	
Surr: Toluene-d8	0.48		0.4931		98.3	70	130	0	0	

**Qualifiers:**

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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

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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#: 2008034

10-Aug-20

**Client:** Safety & Environmental Solutions**Project:** Devon Snapping 2 State 14 H

Sample ID: <b>ics-54146</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>54146</b>			RunNo: <b>70866</b>						
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>			SeqNo: <b>2467929</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	90.0	70	130			
Surr: BFB	520		500.0		104	70	130			

Sample ID: <b>mb-54146</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>54146</b>			RunNo: <b>70866</b>						
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>			SeqNo: <b>2467930</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	550		500.0		109	70	130			

Sample ID: <b>2008034-001AMS</b>	SampType: <b>MS</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>AH-4 1.5 ft</b>	Batch ID: <b>54146</b>			RunNo: <b>70866</b>						
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>			SeqNo: <b>2467932</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	24.90	3.101	86.6	49.2	122			
Surr: BFB	520		498.0		104	70	130			

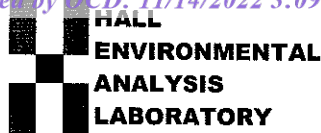
Sample ID: <b>2008034-001AMSD</b>	SampType: <b>MSD</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>AH-4 1.5 ft</b>	Batch ID: <b>54146</b>			RunNo: <b>70866</b>						
Prep Date: <b>8/4/2020</b>	Analysis Date: <b>8/5/2020</b>			SeqNo: <b>2467933</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.41	3.101	83.3	49.2	122	5.09	20	
Surr: BFB	520		488.3		107	70	130	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

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

## Sample Log-In Check List

Client Name: **Safety & Environmental Solutions**

Work Order Number: **2008034**

RcptNo: 1

Received By: **Emily Mocho**

**8/4/2020 8:00:00 AM**

Completed By: **Emily Mocho**

**8/4/2020 8:41:05 AM**

Reviewed By: **DAD 8/4/20**

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

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

Adjusted? \_\_\_\_\_

Checked by: **SPA 8.4.20**

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Not Present			

## Chain-of-Custody Record

Client: Safety & Environmental

Solution

Mailing Address: 703 E. Clinton6666 N. M. 88240Phone #: 575-397-0570

email or Fax#:

QA/QC Package:

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

Turn-Around Time:

☒ Standard ☐ RushProject Name: DevonSwapping 2 since 14th

Project #:

Dev-20-016

Project Manager:

Allen, BobSampler: Sara JorgOn Ice: ☒ Yes ☐ No# of Coolers: 1Cooler Temp (including CF): 1.4 to 2 = 1.6 (°C)

Container Type and #

Preservative Type

HEAL No.

2008634

-001

-002

-003

-004

-005

Date: 8/3/20 Time: 0800Relinquished by: Sara JorgDate: 8/3/20 Time: 1900Relinquished by: [Signature]Received by: [Signature]Via: 24hr courierReceived by: 24hr courierVia: 8/4/20 8:00

Remarks:

## Analysis Request

BTX / MTBE / TMBs (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCBs

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO<sub>3</sub>, PO<sub>4</sub>, SO<sub>4</sub>

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony

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X Ch/colony

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X Ch/colony

X Ch/colony

X Ch/colony

X Ch/colony



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

February 19, 2020

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: SNAPPING 2 STATE 14H BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/17/20 13:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-1 SURFACE (H000472-01)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650		
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739		
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654		
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772		
Total BTEX	<0.300	0.300	02/17/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-1 1' (H000472-02)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650	
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739	
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654	
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772	
Total BTX	<0.300	0.300	02/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 90.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-2 SURFACE (H000472-03)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650	
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739	
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654	
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772	
Total BTX	<0.300	0.300	02/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 87.7 % 41-142

Surrogate: 1-Chlorooctadecane 90.6 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-2 1' (H000472-04)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650	
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739	
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654	
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772	
Total BTEX	<0.300	0.300	02/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 86.6 % 41-142

Surrogate: 1-Chlorooctadecane 91.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-3 SURFACE (H000472-05)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650	
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739	
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654	
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772	
Total BTX	<0.300	0.300	02/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 88.5 % 41-142

Surrogate: 1-Chlorooctadecane 93.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-3 1' (H000472-06)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650		
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739		
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654		
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772		
Total BTEx	<0.300	0.300	02/17/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 92.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.1 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-4 SURFACE (H000472-07)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650	
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739	
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654	
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772	
Total BTX	<0.300	0.300	02/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-4 1' (H000472-08)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650	
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739	
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654	
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772	
Total BTX	<0.300	0.300	02/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 87.5 % 41-142

Surrogate: 1-Chlorooctadecane 89.7 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-5 SURFACE (H000472-09)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650		
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739		
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654		
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772		
Total BTEx	<0.300	0.300	02/17/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 89.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.6 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-5 1' (H000472-10)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650	
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739	
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654	
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772	
Total BTX	<0.300	0.300	02/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/17/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/17/2020	ND					

Surrogate: 1-Chlorooctane 88.6 % 41-142

Surrogate: 1-Chlorooctadecane 91.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-6 SURFACE (H000472-11)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650		
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739		
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654		
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772		
Total BTEx	<0.300	0.300	02/17/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/18/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 82.1 % 41-142

Surrogate: 1-Chlorooctadecane 85.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-6 1' (H000472-12)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650	
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739	
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654	
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772	
Total BTX	<0.300	0.300	02/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	199	99.7	200	1.32	
DRO >C10-C28*	<10.0	10.0	02/18/2020	ND	189	94.6	200	0.735	
EXT DRO >C28-C36	<10.0	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-7 SURFACE (H000472-13)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/17/2020	ND	1.98	99.1	2.00	0.650		
Toluene*	<0.050	0.050	02/17/2020	ND	2.00	100	2.00	0.739		
Ethylbenzene*	<0.050	0.050	02/17/2020	ND	2.01	101	2.00	0.654		
Total Xylenes*	<0.150	0.150	02/17/2020	ND	5.87	97.8	6.00	0.772		
Total BTEx	<0.300	0.300	02/17/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	<10.0	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	<10.0	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 81.5 % 41-142

Surrogate: 1-Chlorooctadecane 84.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AH-7 1' (H000472-14)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2020	ND	1.93	96.5	2.00	4.34	
Toluene*	<0.050	0.050	02/18/2020	ND	1.95	97.6	2.00	4.06	
Ethylbenzene*	<0.050	0.050	02/18/2020	ND	1.94	96.8	2.00	4.38	
Total Xylenes*	<0.150	0.150	02/18/2020	ND	5.63	93.8	6.00	4.25	
Total BTEx	<0.300	0.300	02/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	<10.0	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	<10.0	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 92.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

---

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Safety and Environmental Solutions

Project Manager: Bob Allen

Address: 703 East Clinton, PO Box 1613

City: Hobbs State: NM Zip: 88240

Phone #: 575 397-0510 Fax #: 575 393-4388

Project #: Del-20-016 Project Owner:

Project Name: Sumpings 2 State 14H TAT

Project Location:

Sample Name: S052 Jerry

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

HDDC472

1 AH-1 Surface

2 AH-1 15T

3 AH-2 Surface

4 AH-2 15T

5 AH-3 Surface

6 AH-3 15T

7 AH-4 Surface

8 AH-4 15T

9 AH-5 Surface

10 AH-5 15T

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# CARDINAL Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Safety and Environmental Solutions

Project Manager: Bob Allen

Address: 703 East Clinton, PO Box 1613

City: Hobbs State: NM Zip: 88240

Phone #: 575 397-0510 Fax #: 575 393-4388

Project #: 2016 Project Owner:

Project Name: SWAMPY 2 STATE 144 BATT

Project Location:

Sample Name: SOSA Jerry

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H000472

11 AH-6 SURFACE

12 AH-6 SURFACE

13 AH-7 SURFACE

14 AH-7 LGT

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

TPH (8015 F)

BTEX

Chlorides

ANALYSIS REQUEST

RECEIVED BY:

DATE

TIME

TPH (8015 F)

BTEX

Chlorides

ANALYSIS REQUEST

RECEIVED BY:

DATE

TIME

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DATE

Delivered By: (Circle One)

#113 / #4.3

Sample Condition  
Cool Intact  
Yes Yes

CHECKED BY:  
(Signature)

REMARKS:

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

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REMARKS:

REMARKS:

REMARKS:



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

February 19, 2020

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: SNAPPING 2 STATE 14H BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/17/20 13:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	TOP		

**Sample ID: AH-1 SURFACE (H000473-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2020	ND	1.93	96.5	2.00	4.34	
Toluene*	<0.050	0.050	02/18/2020	ND	1.95	97.6	2.00	4.06	
Ethylbenzene*	<0.050	0.050	02/18/2020	ND	1.94	96.8	2.00	4.38	
Total Xylenes*	<0.150	0.150	02/18/2020	ND	5.63	93.8	6.00	4.25	
Total BTEX	<0.300	0.300	02/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	02/18/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	358	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	110	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 85.3 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	TOP		

**Sample ID: AH-1 1' (H000473-02)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/18/2020	ND	1.93	96.5	2.00	4.34		
Toluene*	<0.050	0.050	02/18/2020	ND	1.95	97.6	2.00	4.06		
Ethylbenzene*	<0.050	0.050	02/18/2020	ND	1.94	96.8	2.00	4.38		
Total Xylenes*	<0.150	0.150	02/18/2020	ND	5.63	93.8	6.00	4.25		
Total BTX	<0.300	0.300	02/18/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	02/18/2020	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	<10.0	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	<10.0	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 79.6 % 41-142

Surrogate: 1-Chlorooctadecane 82.5 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	TOP		

**Sample ID: AH-2 SURFACE (H000473-03)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/18/2020	ND	1.93	96.5	2.00	4.34		
Toluene*	<0.050	0.050	02/18/2020	ND	1.95	97.6	2.00	4.06		
Ethylbenzene*	<0.050	0.050	02/18/2020	ND	1.94	96.8	2.00	4.38		
Total Xylenes*	<0.150	0.150	02/18/2020	ND	5.63	93.8	6.00	4.25		
Total BTX	<0.300	0.300	02/18/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	02/18/2020	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	391	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	101	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 83.5 % 41-142

Surrogate: 1-Chlorooctadecane 92.6 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	TOP		

**Sample ID: AH-2 1' (H000473-04)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/18/2020	ND	1.93	96.5	2.00	4.34		
Toluene*	<0.050	0.050	02/18/2020	ND	1.95	97.6	2.00	4.06		
Ethylbenzene*	<0.050	0.050	02/18/2020	ND	1.94	96.8	2.00	4.38		
Total Xylenes*	<0.150	0.150	02/18/2020	ND	5.63	93.8	6.00	4.25		
Total BTEX	<0.300	0.300	02/18/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	02/18/2020	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	<10.0	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	<10.0	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 90.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	TOP		

**Sample ID: AH-3 SURFACE (H000473-05)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/18/2020	ND	1.93	96.5	2.00	4.34		
Toluene*	<0.050	0.050	02/18/2020	ND	1.95	97.6	2.00	4.06		
Ethylbenzene*	<0.050	0.050	02/18/2020	ND	1.94	96.8	2.00	4.38		
Total Xylenes*	<0.150	0.150	02/18/2020	ND	5.63	93.8	6.00	4.25		
Total BTEX	<0.300	0.300	02/18/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	02/18/2020	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	147	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	28.1	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 84.2 % 41-142

Surrogate: 1-Chlorooctadecane 88.9 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	TOP		

**Sample ID: AH-3 1' (H000473-06)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2020	ND	1.93	96.5	2.00	4.34	
Toluene*	<0.050	0.050	02/18/2020	ND	1.95	97.6	2.00	4.06	
Ethylbenzene*	<0.050	0.050	02/18/2020	ND	1.94	96.8	2.00	4.38	
Total Xylenes*	<0.150	0.150	02/18/2020	ND	5.63	93.8	6.00	4.25	
Total BTX	<0.300	0.300	02/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	02/18/2020	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	<10.0	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	<10.0	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 87.4 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	TOP		

**Sample ID: AH-4 SURFACE (H000473-07)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/18/2020	ND	1.93	96.5	2.00	4.34		
Toluene*	<0.050	0.050	02/18/2020	ND	1.95	97.6	2.00	4.06		
Ethylbenzene*	<0.050	0.050	02/18/2020	ND	1.94	96.8	2.00	4.38		
Total Xylenes*	<0.150	0.150	02/18/2020	ND	5.63	93.8	6.00	4.25		
Total BTX	<0.300	0.300	02/18/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	02/18/2020	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	84.1	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	17.3	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 81.9 % 41-142

Surrogate: 1-Chlorooctadecane 94.1 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received:	02/17/2020	Sampling Date:	02/14/2020
Reported:	02/19/2020	Sampling Type:	Soil
Project Name:	SNAPPING 2 STATE 14H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	DEV-20-016	Sample Received By:	Jodi Henson
Project Location:	TOP		

**Sample ID: AH-4 1' (H000473-08)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2020	ND	1.93	96.5	2.00	4.34	
Toluene*	<0.050	0.050	02/18/2020	ND	1.95	97.6	2.00	4.06	
Ethylbenzene*	<0.050	0.050	02/18/2020	ND	1.94	96.8	2.00	4.38	
Total Xylenes*	<0.150	0.150	02/18/2020	ND	5.63	93.8	6.00	4.25	
Total BTX	<0.300	0.300	02/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	02/18/2020	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2020	ND	193	96.3	200	0.0970	
DRO >C10-C28*	<10.0	10.0	02/18/2020	ND	211	105	200	3.88	
EXT DRO >C28-C36	<10.0	10.0	02/18/2020	ND					

Surrogate: 1-Chlorooctane 80.8 % 41-142

Surrogate: 1-Chlorooctadecane 83.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

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

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### Notes and Definitions

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

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\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager





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(575) 393-2326 FAX (575) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Safety and Environmental Solutions		P.O. #:		ANALYSIS REQUEST	
Project Manager: Bob Allen		Company: Same			
Address: 703 East Clinton, PO Box 1613		Attn:			
City: Hobbs		Address:			
Phone #: 575 397-0510		City:			
Fax #: 575 393-4388		State:			
Project #: Del-20-06		Zip:			
Project Name: SNAPPY 2 STATE 144 RATT.		Phone #:			
Project Location:		Fax #:			
Sampler Name: 5082- Jerry		PRESERV			
FOR LAB USE ONLY		SAMPLING			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.			
HD00473	78P	# CONTAINERS			
		GROUNDWATER			
		WASTEWATER			
		SOIL			
		OIL			
		SLUDGE			
		OTHER :			
		ACID/BASE:			
		ICE / COOL			
		OTHER :			
		DATE			
		TIME			
1	Att-1 Surface	X	02/14	1340	X
2	Att-1 1ft	X	1355		X
3	Att-2 Surface	X	1410		X
4	Att-2 1ft	X	1425		X
5	Att-3 Surface	X	1435		X
6	Att-3 1ft	X	1445		X
7	Att-4 Surface	X	1455		X
8	Att-4 1ft	X	02/14	1510	X

TPH (8015 GT)  
BTEX  
Chlorides

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

Relinquished By: *[Signature]* Date: 02/17/20 Received By: *[Signature]* Date: 02/17/20

Relinquished By: *[Signature]* Date: 02/17/20 Received By: *[Signature]* Date: 02/17/20

Delivered By: (Circle One) *[Signature]* Sample Condition: *[Signature]* Checked By: *[Signature]*

Phone Result: ☐ Yes ☐ No Add'l Phone #: *[Signature]*

Fax Result: ☐ Yes ☐ No Add'l Fax #: *[Signature]*

REMARKS: *[Signature]*



**Liner Integrity Inspection Report**Name of Site: SWAPPING 2 STATE 1414 Project #: DEV-20-016Inspection Tech: Sosa, Larry Date of Inspection: 07/31/20 Time: 1230 PM**Visual Inspection****Type of Secondary Containment:**

- Earthen ☐
- Clay ☐
- Supported, Coated Fabrics and Laminates ☒
- Unsupported Geomembranes ☐
- Steel ☐
- Cement ☐

**Status:**

- Free Fluid in Secondary Containment ☒
- Intermittent Pooling ☐
- Sump has Fluid ☒
- Dry ☐
- Release or leak traces inside containment ☐
- Release or leak traces outside containment ☐

**Observations****Environmental Damage:**

- Damage from animals or vegetation compromising liner integrity ☒
- Discoloration, erosion, or chemical degradation of the liner ☐
- Degradation of the liner system from storm water flow or erosion of the secondary containment system ☐

**Comments:**

NO Damage Found

Slight Discoloration from Rust Pipe Supports, (Rinse after)

NONE

**Physical Damage:**

- Cracks, bulges, stains, chips, seepages in the liner system
- Improper or deferred maintenance of the liner system
- Dike wall, foundation, or embankment movement, settlement, or deterioration compromising the integrity of the liner system
- Degradation of the liner system at penetrations (piping, supports, wells, foundations, pads, etc.)
- Damage to the liner system from equipment, vehicles, foot traffic, frost heave, etc.
- Evidence of foundation movement, settlement, or deterioration

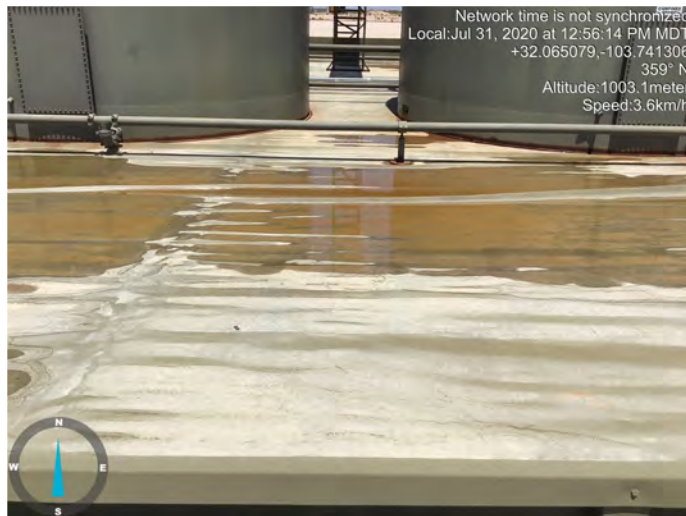
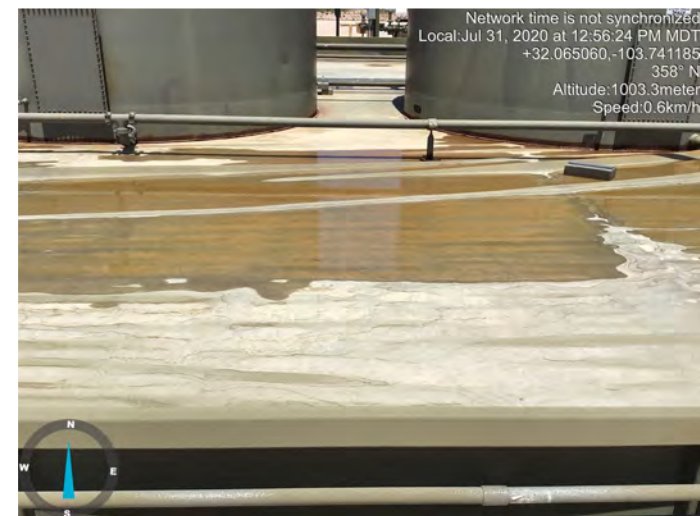
**Comments:**

- ☒ NONE FOUND
- ☐ \_\_\_\_\_
- ☐ NONE
- ☐ NONE Found all Blocks Pipe Supports checked
- ☐ Liner System is Straight NO Damage
- ☐ \_\_\_\_\_

**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****700-Location sign****701-SW corner facing North inside****702-SW corner facing North outside****703-SW corner facing East inside**



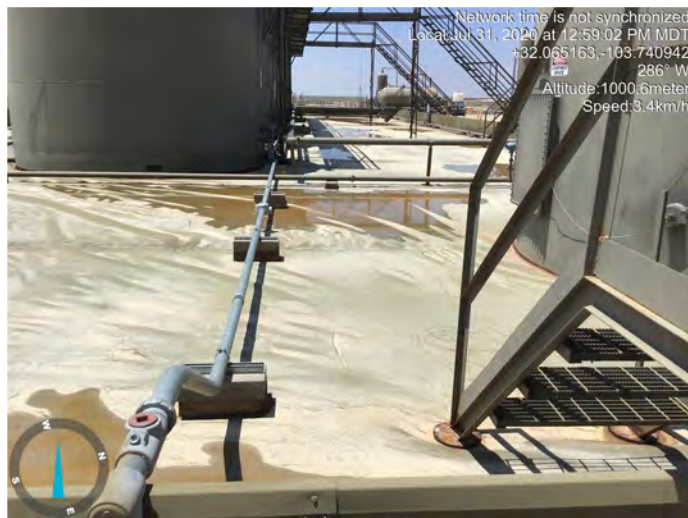
**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****704-SW corner facing East outside****705-South side facing North inside****706-South side facing North inside****707-South side facing North inside**

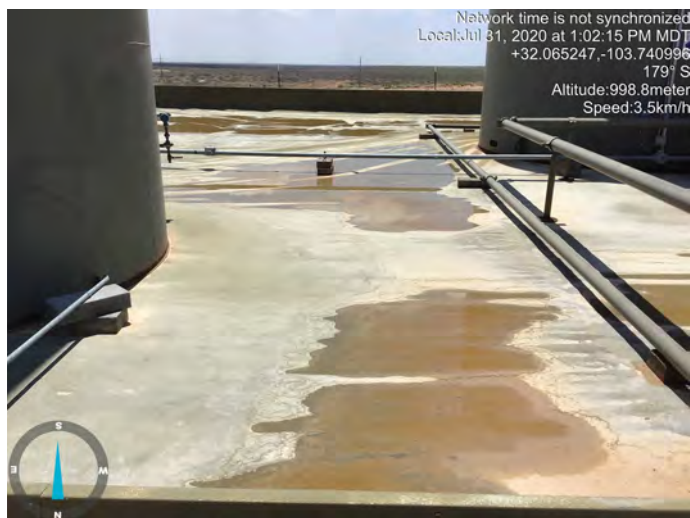
**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****708-South side facing North inside****709-South side facing North inside****710-South side facing North inside****711-South side facing North inside**



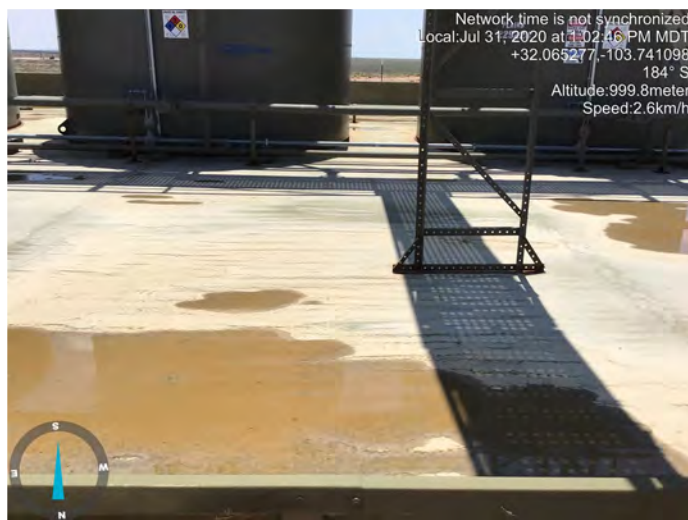
**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****712-SE corner facing North outside****713-SE corner facing West inside****714-SE corner facing West outside****715-East side facing West inside**



**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****716-East side facing West inside****717-NE corner facing North Sump****718-NE corner facing South inside****719-NE corner facing South outside**

**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****720-NE corner facing West inside****721-NE corner facing West outside****722-North side facing South inside****723-North side facing South inside**



**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****724-North side facing South inside****725-North side facing South inside****726-North side facing South inside****727-North side facing South inside**



**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****728-NW corner facing South outside****729-NW corner facing South inside****730-NW corner facing East inside****731-NW corner facing East outside**



**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****732-NW corner facing North Sump****733-West side facing East inside****734-West side facing East inside****735-Center facing NE inside**

**Devon, Snapping 2 State 14H Battery, DEV-20-016****Liner/Containment Inspection Photos****736-Center facing NW inside****737-Center facing SE inside****738-Center facing SW inside**

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

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

CONDITIONS  
  
Action 158660

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 158660
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAB1906632805 SNAPPING 2 STATE #014H, thank you. This closure is approved.	2/28/2023