

DEVON ENERGY
Thistle Unit #44H

Work Plan

U/L N, Section 33, T23S, R33E
Lea County, New Mexico

NAB1905153070 AND NRM2003159278

June 12, 2020



Prepared for:

Devon Energy
6488 Seven Rivers Hwy
Artesia, NM 88210

By:

Safety & Environmental Solutions, Inc.
703 East Clinton
Hobbs, New Mexico 88240
(575) 397-0510

Company Contacts

Representative	Company	Telephone	E-mail
Tom Bynum	Devon Energy	580-748-1613	Tom.Bynum@dvn.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was contracted by Devon Energy to assess two spills at the Thistle Unit #44H location. This site is situated in U/L N, Section 33, Township 23S and Range 33E, in Lea County New Mexico. We are addressing two separate leaks in this plan which will be remediated upon plan approval.

According to the C-141 for incident NAB1905153070, the dump was stuck open causing the free water knockout to pop off which resulted in a 4 bbl release of oil and a 18.38 bbls release of produced water. A vacuum truck was dispatched to recover all free-standing fluids.

Incident NRM2003159278 was caused by a line leak in the heater treater water dump line releasing 32.9 bbls of produced water. A vacuum truck was dispatched to recover all free-standing fluids.

Surface and Ground Water

According to the NMOCD Oil and Gas Map, there is no surface water within 3,000 feet of this location and spill areas. Depth to groundwater determination was not successfully established based on the guidelines required by NMOCD; therefore, Devon will remediate these spills according to the most stringent criteria set forth by NMOCD in NMAC 19.15.29.

Characterization

Both leaks have been fully delineated both vertically and horizontally at the request of NMOCD in their 5/12/20 denial of the previously submitted workplan dated 3/10/2020. In this plan rejection, NMOCD requested additional requirements which included delineation establishing horizontal extent and vertical delineation to the most stringent standard of 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene. NMOCD also requested, "Devon investigate the area directly adjacent to the tank battery on the east side" due to visible staining. Due to the denial of the initial workplan and the requests made by NMOCD, SESI personnel returned to the Thistle #44 site to fulfill the requests made by NMOCD. Each spill, as well as the area of concern outlined by NMOCD, will be addressed separately in this report to avoid confusion.

OCD Area of Concern, Investigation

During the investigation of "the area directly adjacent to the tank battery on the east side", SESI personnel discovered that the area did not in fact have staining, but instead determined the dark color areas seen in Google Earth imaging is actually red sand that had either been placed in the area as backfill or had been tracked onto location by traffic. To ensure the area was indeed not contaminated, SESI personnel conducted spot sampling of the area by taking 5 samples (SPA-SPE). The sample placements can be seen in the Area of Concern map included in this report.

The samples were properly packaged and preserved and taken to Hall Environmental Laboratory for analyzation. The results of the labs are captured in the table below:

Devon Energy Thistle Unit #44H, NMOCD Area of Concern Soil Sample Results: Hall Environmental Laboratories 5/14/20								
SAMPLE ID	Chloride	DRO	MRO	GRO	Benzene	Toluene	Ethyl benzene	Total Xylenes
SP-A	220	ND	ND	ND	ND	ND	ND	ND
SP-B	210	ND	ND	ND	ND	ND	ND	ND
SP-C	230	15	63	ND	ND	ND	ND	ND
SP-D	200	ND	ND	ND	ND	ND	ND	ND
SP-E	230	14	60	ND	ND	ND	ND	ND

OCD Area of Concern, Action Plan

Based on the results of the samples taken in this area, SESI does not feel any action is warranted in this area. Each sample met the most stringent criteria at the surface.

Release Area 1 (nAB1905153070; 1RP-5372), Investigation

Release area 1 was improperly identified in the initial workplan as part of the 2nd release area. Upon, further investigation of photos and narratives, SESI personnel learned that the February release was located just north of the November release and is outlined in the nAB1905153070 map included in this report. Therefore, on 5/14/20, SESI personnel tracked and mapped the February release and sampled the area to achieve both vertical and horizontal delineation. Nine samples were taken at the surface and 1 foot intervals until field testing indicated the samples to be clean. AH-1 through AH-4 were used to determine vertical extent and AH-5 through AH-10 were used to determine horizontal extent. An additional horizontal sample taken 4/24/20 was used to establish horizontal extent for the November release was used to help establish horizontal extent on the NE corner of this release. The horizontal extent samples are denoted on the map with an H beside the sample number. The samples were properly preserved and packaged and sent to Hall Environmental Labs for testing. The results of the analytical are captured in the summary table below:

Devon Energy								
Thistle Unit #44H, Release Area 1, nAB1905153070, 1RP-5372								
Vertical Extent Soil Sample Results: Hall Environmental Laboratories 5/14/20								
SAMPLE ID	Chloride	DRO	MRO	GRO	Benzene	Toluene	Ethyl benzene	Total Xylenes
AH-1 @ Surface	ND	11000	5200	ND	ND	ND	ND	ND
AH-1 @ 1'	ND	ND	ND	ND	ND	ND	ND	ND
AH-1 @ 2'	81	ND	ND	ND	ND	ND	ND	ND
AH-2 @ Surface	ND	11000	4500	220	ND	0.19	1.6	9.3
AH-2 @ 1'	ND	16	ND	ND	ND	ND	ND	ND
AH-2 @ 2'	ND	ND	ND	ND	ND	ND	ND	ND
AH-3 @ Surface	ND	ND	ND	ND	ND	ND	ND	ND
AH-3 @ 1'	ND	ND	ND	ND	ND	ND	ND	ND
AH-4 @ Surface	ND	9000	4300	ND	ND	ND	ND	ND
AH-4 @ 1'	ND	17	ND	ND	ND	ND	ND	ND
AH-4 @ 2'	ND	ND	ND	ND	ND	ND	ND	ND
HORIZONTAL EXTENT SAMPLE RESULTS								
AH-5 @ Surface	ND	ND	ND	ND	ND	ND	ND	ND
AH-5 @ 1'	ND	ND	ND	ND	ND	ND	ND	ND
AH-6 @ Surface	270	ND	ND	ND	ND	ND	ND	ND
AH-6 @ 1'	ND	ND	ND	ND	ND	ND	ND	ND
AH-7 @ Surface	ND	ND	ND	ND	ND	ND	ND	ND
AH-7 @ 1'	ND	13	ND	ND	ND	ND	ND	ND
AH-8 @ Surface	270	ND	ND	ND	ND	ND	ND	ND
AH-8 @ 1'	85	ND	ND	ND	ND	ND	ND	ND
AH-9 @ Surface	ND	ND	ND	ND	ND	ND	ND	ND
AH-9 @ 1'	ND	12	ND	ND	ND	ND	ND	ND
AH-10 @ Surface	290	ND	ND	ND	ND	ND	ND	ND
AH-10 @ 1'	ND	ND	ND	ND	ND	ND	ND	ND

Release Area 1 (nAB1905153070; 1RP-5372), Action Plan

Based on the results above for vertical extent samples AH-1 through AH-4, SESI respectfully recommends the entire leak of release area 1 be remediated to a depth of one foot. The excavation area is outlined in the map of this release located in this report. Once this remediation plan is approved, Devon will perform the remediation and all removed soil will be disposed of in an OCD-approved landfill. Approximately 1,100 ft³ will be excavated from this release area. Devon will then conduct both bottom and sidewall confirmation sampling to ensure all contaminated materials have been removed to the most stringent criteria established by NMOCD. Upon receipt of lab results verifying all contaminants have been removed, Devon will backfill the site with uncontaminated soil. If it becomes apparent that facility equipment

and/or structure integrity is compromised, SESI respectfully requests deferment of those areas until a later date. If this happens, pictures of the area of equipment/structures will be provided to provide evidence of deferral necessity.

Release Area 2 (nRM2003159278), Investigation

Release area 2 is a spill dated 11/24/2019 that has now been fully delineated both vertically and horizontally by SESI personnel on behalf of Devon Energy. After tracking and mapping the release area, SESI personnel conducted initial sampling on 12/19/2019. Thirteen auger holes were obtained at the surface, properly packaged and preserved, and sent to Cardinal Labs for analyzation. When SESI received the results of the samples, it was observed that many of the samples were still hot at the surface and further testing would need to be conducted.

On January 17, 2020 SESI personnel returned to the Thistle #44 to conduct deeper sampling hoping to achieve vertical extent. Samples were obtained at 1 foot intervals until field testing revealed clean samples. The samples were properly packaged and preserved and sent to Cardinal Labs for testing. The results of both sampling events are captured in the table below:

Devon Energy									
Thistle Unit #44H, Release area 2, nRM2003159278									
Soil Sample Results: Cardinal Laboratories 12/19/19 and (1/17/20)									
SAMPLE ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	Chlorides	TPH GRO	TPH DRO	EXT DRO
AH1 @ Surface	<0.050	<0.050	<0.050	<0.150	<0.300	35600	<10.0	<10.0	<10.0
(SP1 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	128	<10.0	<10.0	<10.0
AH2 @ Surface	<0.050	<0.050	<0.050	<0.150	<0.300	752	57	3110	572
(SP2 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	1060	<10.0	<10.0	<10.0
AH3 @ Surface	<0.050	<0.050	<0.050	<0.150	<0.300	768	71.4	3730	687
(SP3 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	1090	<10.0	<10.0	<10.0
AH4 @ Surface	<0.050	<0.050	<0.050	<0.150	<0.300	752	62.6	3270	566
(TT-4 @ 2')	<0.050	<0.050	<0.050	<0.150	<0.300	528	<10.0	<10.0	<10.0
AH5 @ Surface	<0.050	0.387	2.91	15.7	18.9	3240	521	8990	1480
(TT-5 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	448	<10.0	<10.0	<10.0
AH6 @ Surface	<0.050	0.269	2.29	11.5	14	3600	545	10200	1590
(TT-6 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	608	<10.0	<10.0	<10.0
AH7 @ Surface	<0.050	<0.050	<0.050	<0.150	<0.300	21600	<10.0	<10.0	<10.0
(TT-7 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	4720	<10.0	<10.0	<10.0
AH8 @ Surface	<0.050	0.291	2.35	11.6	14.3	3080	563	10300	1670
(TT-8 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	4720	<10.0	<10.0	<10.0
AH9 @ Surface	<0.050	<0.050	<0.050	<0.150	<0.300	16400	<10.0	<10.0	<10.0
(TT-9 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	1410	<10.0	<10.0	<10.0

AH10 @ Surface	<0.050	<0.050	<0.050	<0.150	<0.300	14000	<10.0	<10.0	<10.0
(TT-10 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	5040	<10.0	<10.0	<10.0
AH11 @ Surface	<0.050	<0.050	<0.050	<0.150	<0.300	20000	<10.0	<10.0	<10.0
(TT-11 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	1460	<10.0	<10.0	<10.0
AH12 @ Surface	<0.050	<0.050	<0.050	<0.150	<0.300	20800	<10.0	<10.0	<10.0
(TT-12 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	4640	<10.0	<10.0	<10.0
AH13 @ 1'	<0.050	<0.050	<0.050	<0.150	<0.300	3640	<10.0	<10.0	<10.0
(TT-13 @ 1')	<0.050	<0.050	<0.050	<0.150	<0.300	1100	<10.0	<10.0	<10.0
(TT-13 @ 2')	<0.050	<0.050	<0.050	<0.150	<0.300	80	<10.0	<10.0	<10.0

Upon completion of these two sampling events, SESI personnel along with Devon personnel believed full delineation had been achieved; therefore, a workplan was submitted to NMOCD on 03/10/2020. However, in May of 2020, NMOCD informed Devon and SESI that wells over 25 years old and wells with a distance greater than a half mile from the release site could no longer be used to determine groundwater depth. Furthermore, if groundwater depth could not be established, then the most stringent criteria must be met during the remediation approval process and closure requests. It was also learned that all leaks would need to have horizontal extent established. Therefore, SESI personnel returned to the November release area to obtain both vertical and horizontal delineation.

Since vertical extent had previously been successfully achieved at samples AH1, AH4, AH5, and AH13, additional deeper samples were only obtained at AH2, AH3, AH6, AH7, AH8, AH9, AH10, AH11, and AH12. These samples were preserved, packaged, and sent to Hall Labs. The results of this testing are captured in the table below:

Devon Energy								
Thistle Unit #44H, Release area 2, nRM2003159278								
Soil Sample Results: Hall Environmental Laboratories 6/1/2020								
SAMPLE ID	Chloride	DRO	MRO	GRO	Benzene	Toluene	Ethyl benzene	Total Xylenes
AH2/SP2 @ 2'	200	ND	ND	ND	ND	ND	ND	ND
AH3/SP3 @ 2'	ND	ND	ND	ND	ND	ND	ND	ND
AH6/SP6 @ 2'	150	ND	ND	ND	ND	ND	ND	ND
AH7,TT7 @ 2'	150	ND	ND	ND	ND	ND	ND	ND
AH8/TT8 @ 2'	ND	ND	ND	ND	ND	ND	ND	ND
AH9/TT9 @ 2'	150	ND	ND	ND	ND	ND	ND	ND
AH10/TT10 @ 2'	200	ND	ND	ND	ND	ND	ND	ND
AH11/TT11 @ 2'	ND	ND	ND	ND	ND	ND	ND	ND
AH12/TT12 @ 2'	ND	ND	ND	ND	ND	ND	ND	ND

In order to determine horizontal extent and fulfill the NMOCD request to do so, SESI personnel performed sampling on 4/24/20. Since chlorides were the only constituent of concern for this leak, horizontal samples were only tested for chlorides to reduce the very high costs associated with this release area during a time of economic difficulties. All constituents will be addressed

during confirmation sampling of the release area. The horizontal samples are denoted on the map with and H beside the sample ID. Eleven samples were obtained, properly preserved and packaged and sent to Hall Environmental labs for chloride testing. The results of the sample testing are captured in the table below:

Devon Energy Thistle Unit #44H, Release area 2, nRM2003159278 HORIZONTAL Soil Sample Results: Hall Environmental Laboratories 4/24/2020	
SAMPLE ID	Chloride
AH14 @ Surface North	ND
AH14 @ 1' North	ND
AH15 @ Surface North	220
AH 15 @ 1' North	ND
AH16 @ Surface North	260
AH16 @ 1' North	ND
AH17 @ Surface North	61
AH17 @ 1' North	180
AH18 @ Surface South	ND
AH18 @ 1' South	ND
AH19 @ Surface South	440
AH19 @ 1' South	180
AH20 @ Surface South	440
AH20 @ 1' South	180
AH21 @ Surface South	60
AH21 @ 1' South	180
AH22 @ Surface West	440
AH22 @ 1' West	ND
AH23 @ Surface North	ND
AH23 @ 1' North	190
AH24 @ Surface BCKGRND	ND
AH24 @ 1' BCKGRND	ND

Release Area 2 (nRM2003159278), Action Plan

Based on the results of the sampling events and the requirement to meet the most stringent criteria set forth by NMOCD, SESI recommends feasible remediation of this release area to a depth of 2 feet in all areas except for the areas of AH1/SP1 and AH5/SP5. Those two areas will be feasibly excavated to a depth of 2 feet. Approximately 33,000 ft³ will be excavated and disposed of in a NMOCD-approved facility. Once the remediation plan is approved, Devon will remediate the site according the approved plan then obtain bottom and sidewall confirmation samples to confirm the most stringent criteria of 600 mg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene. After confirmation samples are confirmed to meet the most stringent closure criteria, Devon will backfill the site with clean soil. If it becomes apparent that facility equipment and/or structure integrity is compromised, SESI respectfully requests deferment of those areas until a later date. If this happens, pictures of the area of equipment/structures will be provided to provide evidence of deferral necessity.

SESI, on behalf of Devon respectfully submits this remediation plan and requests approval at your earliest convenience. Upon approval, remediation efforts will be conducted within 90 days.

Supplemental and Supporting Documentation

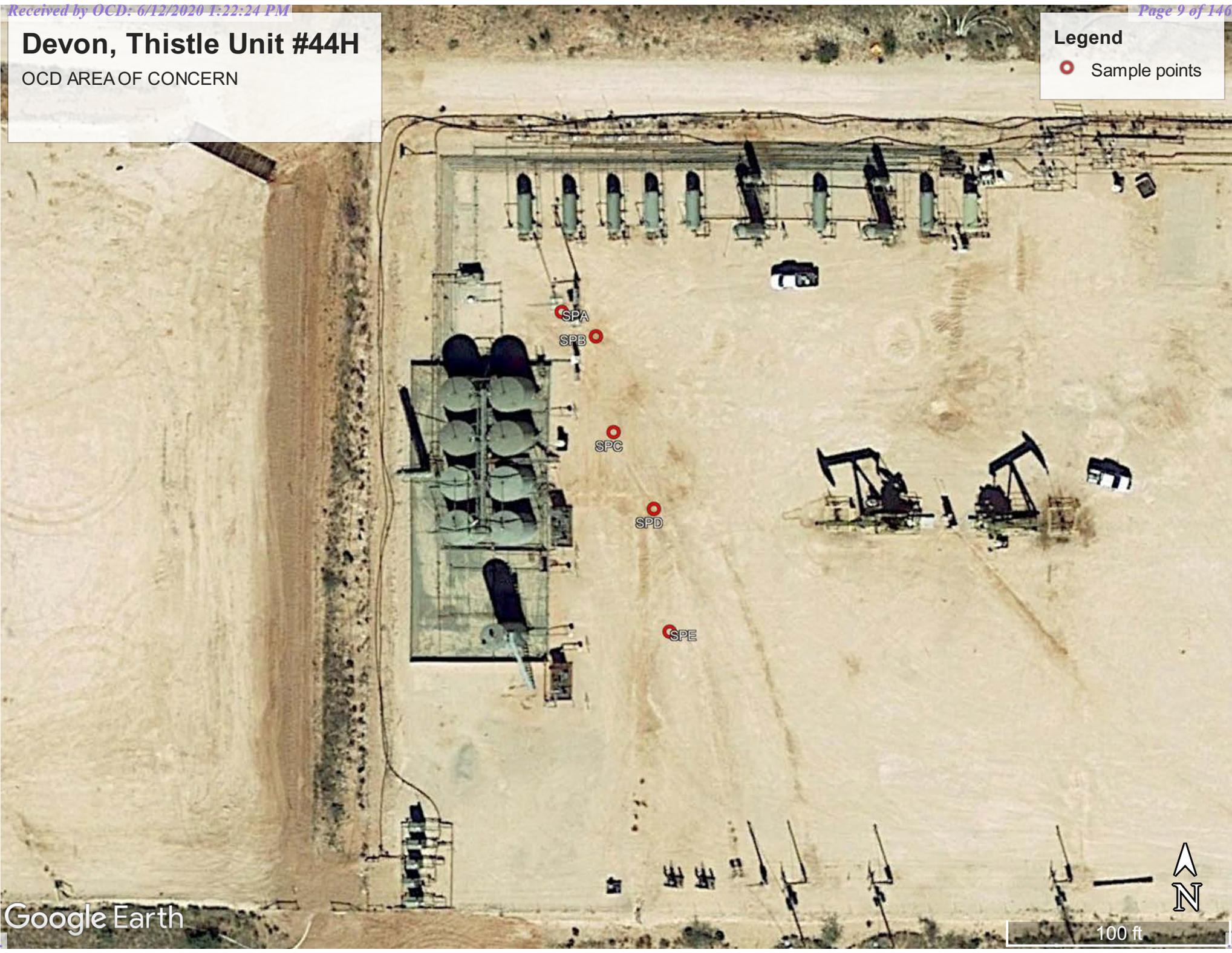
- Evidence Document 1: Map of OCD Area of Concern denoting sample point locations
- Evidence Document 2: Map of Release area 1, nAB1905153070 with vertical and horizontal extent sample locations
- Evidence Document 3: Map of Release area 2, nRM2003159278 with vertical and horizontal extent sample locations
- Evidence Document 4: NMOCD Oil and Gas Topo map detailing area water features
- Evidence Document 5: BLM Cave Karst map showing location in low potential area
- Evidence Document 6: FEMA demonstrating minimal flood hazards for this area
- Evidence Document 7: Lab analysis for OCD area of concern, 5/14/20
- Evidence Document 8: Lab analysis for Release area 1, 5/14/20
- Evidence Document 9: Lab analysis for Release area 2, 12/19/19
- Evidence Document 10: Lab analysis for Release area 2, 1/17/20
- Evidence Document 11: Lab analysis for Release area 2, 6/1/20
- Evidence Document 12: Lab analysis for Release area 2, 4/24/20
- Evidence Document 13: Workplan Denial email from NMOCD with requests for supplemental evidence
- Evidence Document 13: C-141, pgs. 3-5 for nAB1905153070 AND nRM2003153278

Devon, Thistle Unit #44H

OCD AREA OF CONCERN

Legend

- Sample points

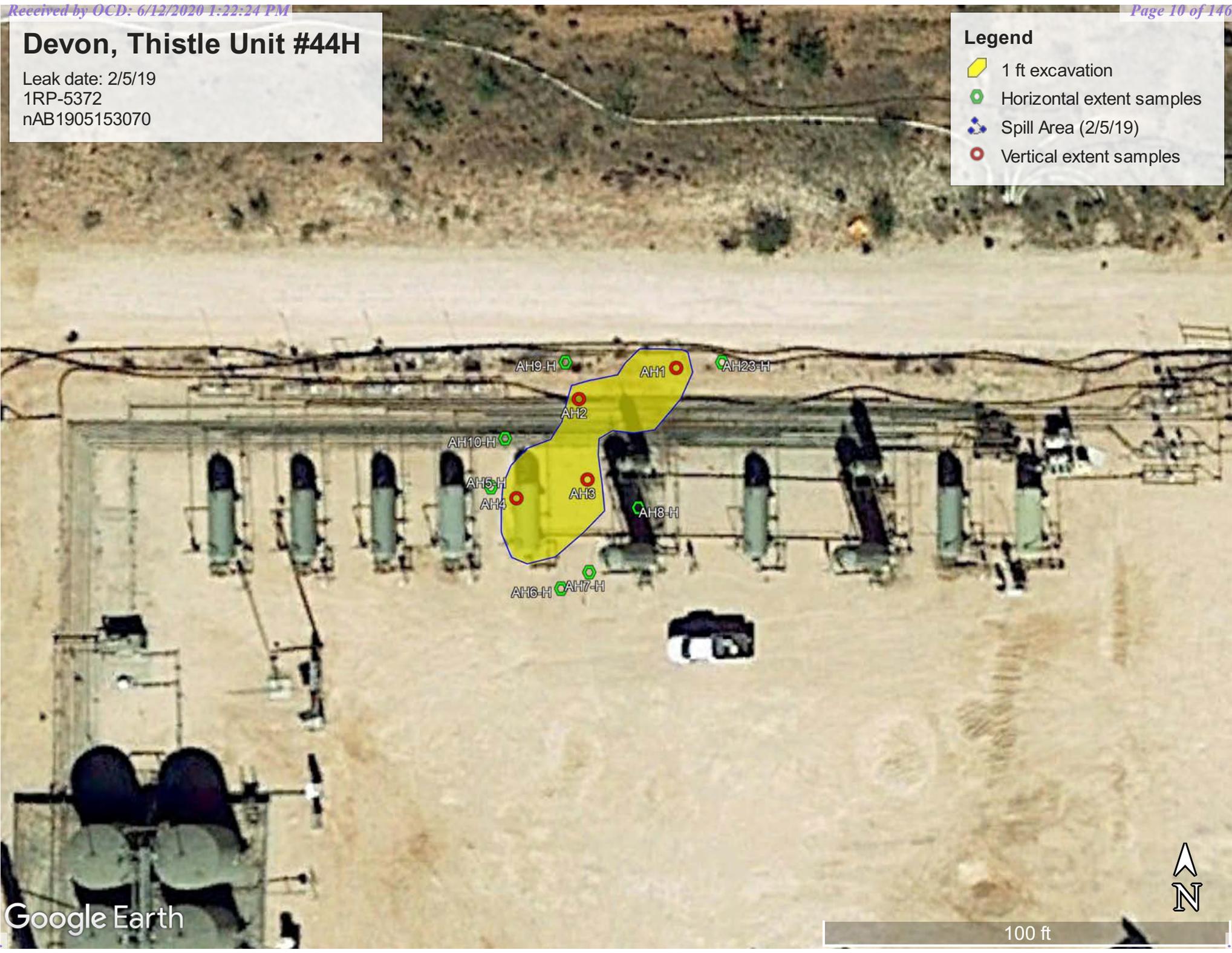


Devon, Thistle Unit #44H

Leak date: 2/5/19
1RP-5372
nAB1905153070

Legend

-  1 ft excavation
-  Horizontal extent samples
-  Spill Area (2/5/19)
-  Vertical extent samples



Google Earth



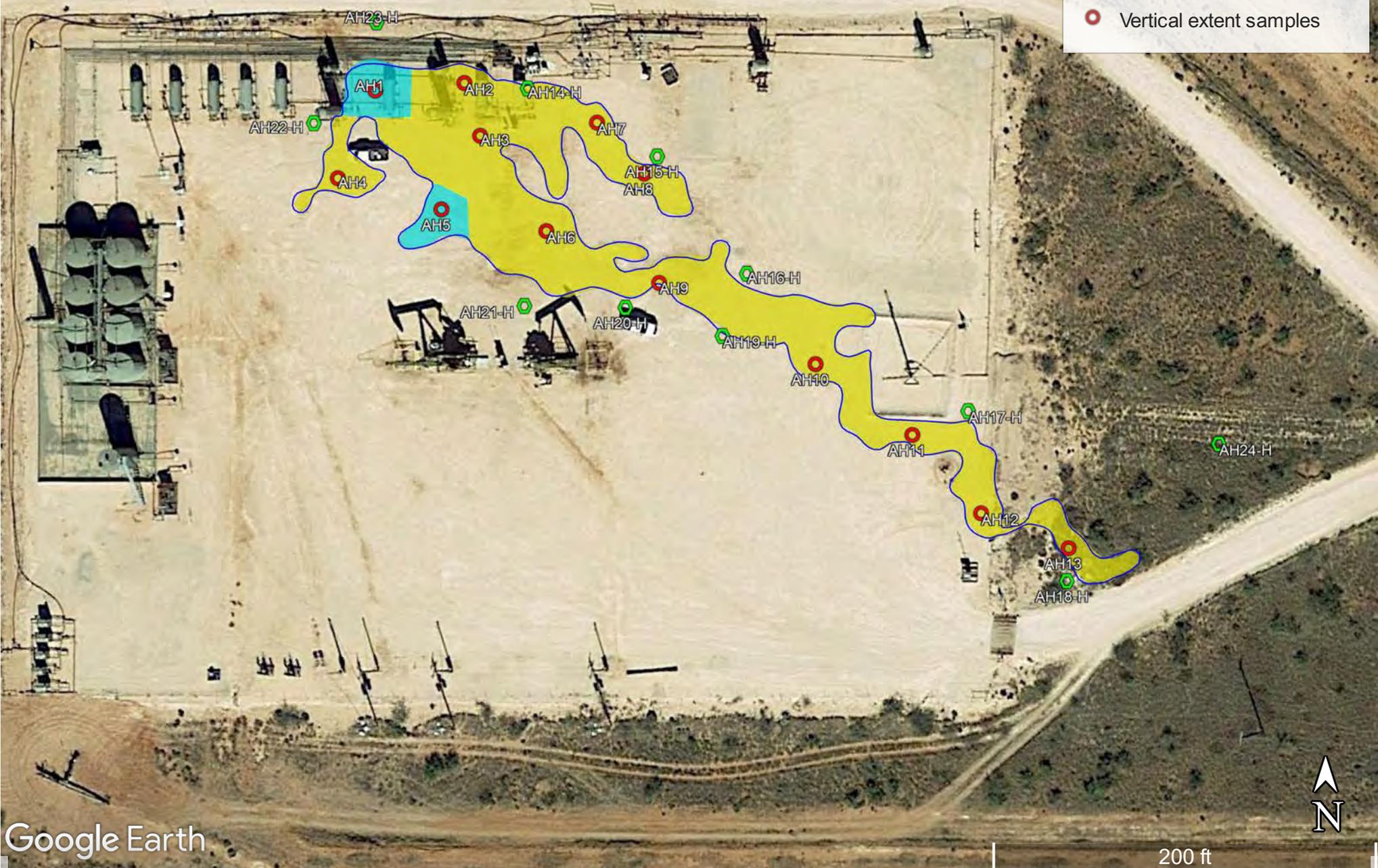
100 ft

Devon, Thistle Unit #44H

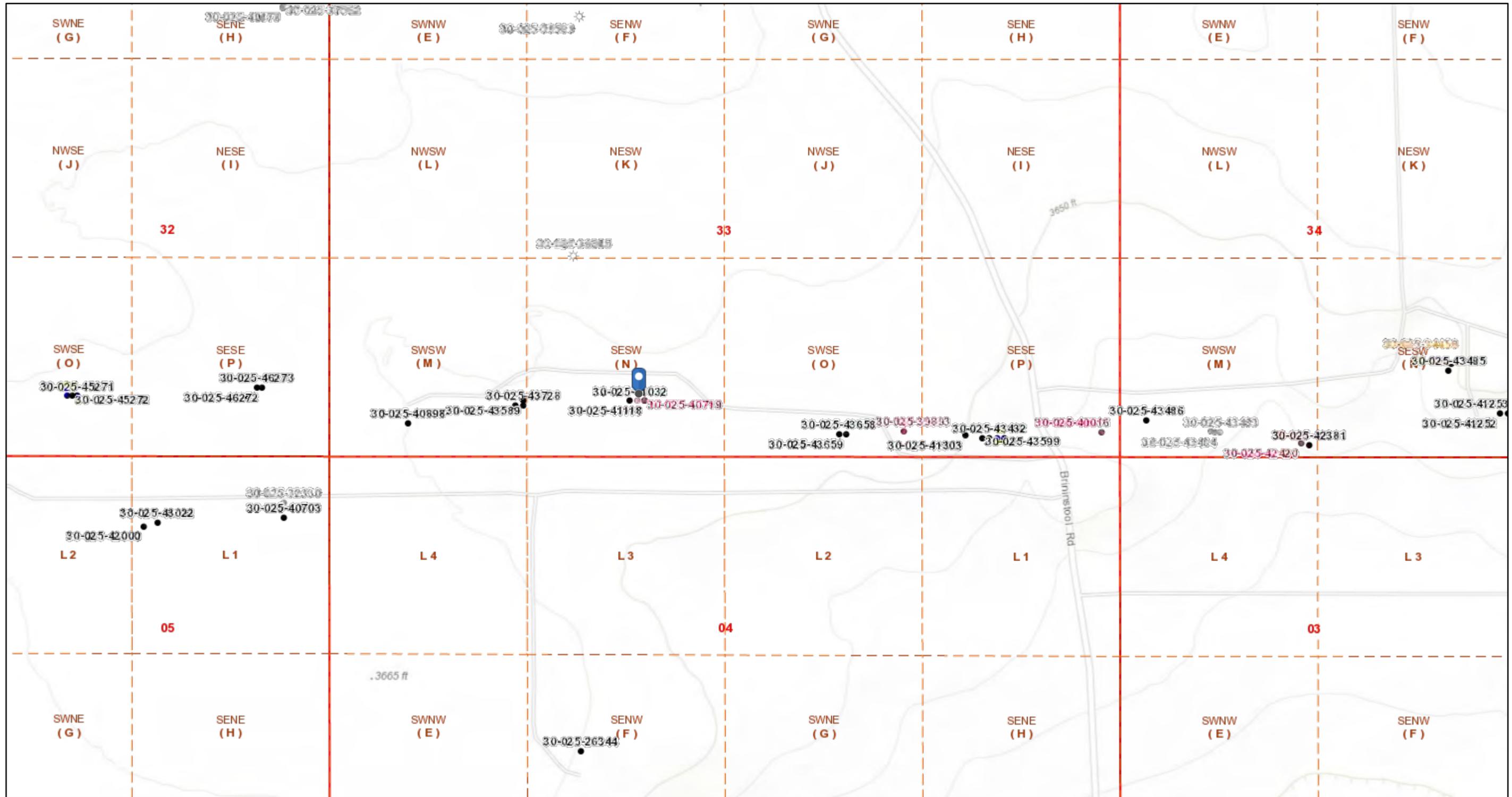
Leak date: 11/24/2019
nRM2003159278

Legend

-  1 ft excavation
-  2 ft excavation
-  Horizontal extent samples
-  Spill Area (blue outline)
-  Vertical extent samples



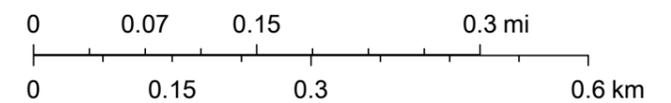
Devon, Thistle Unit #44H



3/4/2020, 10:38:55 AM

1:9,028

- | | | | | |
|---------------------|----------------------------|----------------------------------|---------------------------------|---|
| Wells - Large Scale | CO2, Temporarily Abandoned | Injection, Active | Oil, Cancelled | Salt Water Injection, New |
| undefined | Gas, Active | Injection, Cancelled | Oil, New | Salt Water Injection, Plugged |
| Miscellaneous | Gas, Cancelled | Injection, New | Oil, Plugged | Salt Water Injection, Temporarily Abandoned |
| CO2, Active | Gas, New | Injection, Plugged | Oil, Temporarily Abandoned | Water, Active |
| CO2, Cancelled | Gas, Plugged | Injection, Temporarily Abandoned | Salt Water Injection, Active | Water, Cancelled |
| CO2, New | Gas, Temporarily Abandoned | Oil, Active | Salt Water Injection, Cancelled | Water, New |
| CO2, Plugged | | | | |



Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI,

Devon, Thistle Unit #44H

Lea County, NM
NAB1905153070 AND NRM2003159278

Legend

-  LOW POTENTIAL
-  SPILL AREA (YELLOW)



Co Rd 2-A



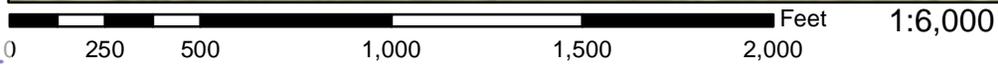
Google Earth



National Flood Hazard Layer FIRMette



32°34'59.60"N



USGS The National Map: Orthoimagery, Data refreshed April, 2019.

32°34'29.28"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>

GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/9/2020 at 5:28:05 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

103°14'59.78"W



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

May 22, 2020

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

RE: Devon Thistle 44H

OrderNo.: 2005735

Dear Bob Allen:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/16/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2005735

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-A

Project: Devon Thistle 44H

Collection Date: 5/14/2020 1:50:00 PM

Lab ID: 2005735-001

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	220	60		mg/Kg	20	5/21/2020 10:34:24 PM	52637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.1		mg/Kg	1	5/19/2020 6:49:31 PM	52528
Motor Oil Range Organics (MRO)	ND	40		mg/Kg	1	5/19/2020 6:49:31 PM	52528
Surr: DNOP	94.0	55.1-146		%Rec	1	5/19/2020 6:49:31 PM	52528
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/19/2020 10:54:55 PM	52514
Surr: BFB	85.5	66.6-105		%Rec	1	5/19/2020 10:54:55 PM	52514
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/19/2020 10:54:55 PM	52514
Toluene	ND	0.050		mg/Kg	1	5/19/2020 10:54:55 PM	52514
Ethylbenzene	ND	0.050		mg/Kg	1	5/19/2020 10:54:55 PM	52514
Xylenes, Total	ND	0.10		mg/Kg	1	5/19/2020 10:54:55 PM	52514
Surr: 4-Bromofluorobenzene	99.2	80-120		%Rec	1	5/19/2020 10:54:55 PM	52514

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 2005735

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-B

Project: Devon Thistle 44H

Collection Date: 5/14/2020 2:10:00 PM

Lab ID: 2005735-002

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	210	60		mg/Kg	20	5/21/2020 11:11:24 PM	52637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/19/2020 7:14:34 PM	52528
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/19/2020 7:14:34 PM	52528
Surr: DNOP	95.3	55.1-146		%Rec	1	5/19/2020 7:14:34 PM	52528
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/19/2020 11:18:50 PM	52514
Surr: BFB	86.5	66.6-105		%Rec	1	5/19/2020 11:18:50 PM	52514
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/19/2020 11:18:50 PM	52514
Toluene	ND	0.049		mg/Kg	1	5/19/2020 11:18:50 PM	52514
Ethylbenzene	ND	0.049		mg/Kg	1	5/19/2020 11:18:50 PM	52514
Xylenes, Total	ND	0.098		mg/Kg	1	5/19/2020 11:18:50 PM	52514
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	5/19/2020 11:18:50 PM	52514

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 **2005735**

Date Reported: **5/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-C

Project: Devon Thistle 44H

Collection Date: 5/14/2020 2:25:00 PM

Lab ID: 2005735-003

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	230	60		mg/Kg	20	5/21/2020 11:23:45 PM	52637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	15	8.5		mg/Kg	1	5/19/2020 7:39:15 PM	52528
Motor Oil Range Organics (MRO)	63	43		mg/Kg	1	5/19/2020 7:39:15 PM	52528
Surr: DNOP	136	55.1-146		%Rec	1	5/19/2020 7:39:15 PM	52528
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/19/2020 11:42:48 PM	52514
Surr: BFB	85.8	66.6-105		%Rec	1	5/19/2020 11:42:48 PM	52514
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/19/2020 11:42:48 PM	52514
Toluene	ND	0.049		mg/Kg	1	5/19/2020 11:42:48 PM	52514
Ethylbenzene	ND	0.049		mg/Kg	1	5/19/2020 11:42:48 PM	52514
Xylenes, Total	ND	0.098		mg/Kg	1	5/19/2020 11:42:48 PM	52514
Surr: 4-Bromofluorobenzene	98.3	80-120		%Rec	1	5/19/2020 11:42:48 PM	52514

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 2005735

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-D

Project: Devon Thistle 44H

Collection Date: 5/14/2020 2:30:00 PM

Lab ID: 2005735-004

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	200	60		mg/Kg	20	5/21/2020 11:36:06 PM	52637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/19/2020 11:58:43 PM	52538
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/19/2020 11:58:43 PM	52538
Surr: DNOP	87.8	55.1-146		%Rec	1	5/19/2020 11:58:43 PM	52538
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/20/2020 12:06:32 AM	52514
Surr: BFB	83.5	66.6-105		%Rec	1	5/20/2020 12:06:32 AM	52514
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/20/2020 12:06:32 AM	52514
Toluene	ND	0.050		mg/Kg	1	5/20/2020 12:06:32 AM	52514
Ethylbenzene	ND	0.050		mg/Kg	1	5/20/2020 12:06:32 AM	52514
Xylenes, Total	ND	0.099		mg/Kg	1	5/20/2020 12:06:32 AM	52514
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	5/20/2020 12:06:32 AM	52514

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 2005735

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-E

Project: Devon Thistle 44H

Collection Date: 5/14/2020 2:50:00 PM

Lab ID: 2005735-005

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	230	60		mg/Kg	20	5/21/2020 11:48:27 PM	52637
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	14	9.8		mg/Kg	1	5/20/2020 12:47:30 AM	52538
Motor Oil Range Organics (MRO)	60	49		mg/Kg	1	5/20/2020 12:47:30 AM	52538
Surr: DNOP	112	55.1-146		%Rec	1	5/20/2020 12:47:30 AM	52538
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/20/2020 12:30:08 AM	52514
Surr: BFB	86.2	66.6-105		%Rec	1	5/20/2020 12:30:08 AM	52514
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/20/2020 12:30:08 AM	52514
Toluene	ND	0.049		mg/Kg	1	5/20/2020 12:30:08 AM	52514
Ethylbenzene	ND	0.049		mg/Kg	1	5/20/2020 12:30:08 AM	52514
Xylenes, Total	ND	0.099		mg/Kg	1	5/20/2020 12:30:08 AM	52514
Surr: 4-Bromofluorobenzene	97.9	80-120		%Rec	1	5/20/2020 12:30:08 AM	52514

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

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

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

WO#: 2005735

22-May-20

Client: Safety & Environmental Solutions**Project:** Devon Thistle 44H

Sample ID: MB-52637	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 52637	RunNo: 69084								
Prep Date: 5/21/2020	Analysis Date: 5/21/2020	SeqNo: 2392598	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-52637	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 52637	RunNo: 69084								
Prep Date: 5/21/2020	Analysis Date: 5/21/2020	SeqNo: 2392599	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical 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#: 2005735

22-May-20

Client: Safety & Environmental Solutions**Project:** Devon Thistle 44H

Sample ID: MB-52538	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 52538	RunNo: 68994								
Prep Date: 5/18/2020	Analysis Date: 5/19/2020	SeqNo: 2390222	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		110	55.1	146			

Sample ID: LCS-52538	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 52538	RunNo: 68994								
Prep Date: 5/18/2020	Analysis Date: 5/19/2020	SeqNo: 2390223	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	70	130			
Surr: DNOP	5.0		5.000		99.0	55.1	146			

Sample ID: LCS-52528	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 52528	RunNo: 69010								
Prep Date: 5/18/2020	Analysis Date: 5/19/2020	SeqNo: 2390294	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	50.00	0	119	70	130			
Surr: DNOP	6.0		5.000		120	55.1	146			

Sample ID: MB-52528	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 52528	RunNo: 69010								
Prep Date: 5/18/2020	Analysis Date: 5/19/2020	SeqNo: 2390296	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		125	55.1	146			

Sample ID: MB-52569	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 52569	RunNo: 69027								
Prep Date: 5/19/2020	Analysis Date: 5/20/2020	SeqNo: 2390565	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0		10.00		89.8	55.1	146			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical 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#: 2005735

22-May-20

Client: Safety & Environmental Solutions**Project:** Devon Thistle 44H

Sample ID: LCS-52569	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 52569	RunNo: 69027								
Prep Date: 5/19/2020	Analysis Date: 5/20/2020	SeqNo: 2390897	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.0	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2005735

22-May-20

Client: Safety & Environmental Solutions

Project: Devon Thistle 44H

Sample ID: mb-52514	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 52514	RunNo: 68996								
Prep Date: 5/17/2020	Analysis Date: 5/19/2020	SeqNo: 2389750	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		87.7	66.6	105			

Sample ID: ics-52514	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 52514	RunNo: 68996								
Prep Date: 5/17/2020	Analysis Date: 5/19/2020	SeqNo: 2389751	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.1	80	120			
Surr: BFB	970		1000		96.7	66.6	105			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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#: 2005735

22-May-20

Client: Safety & Environmental Solutions**Project:** Devon Thistle 44H

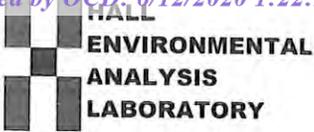
Sample ID: mb-52514	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 52514	RunNo: 68996								
Prep Date: 5/17/2020	Analysis Date: 5/19/2020	SeqNo: 2389795	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: LCS-52514	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 52514	RunNo: 68996								
Prep Date: 5/17/2020	Analysis Date: 5/19/2020	SeqNo: 2389796	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.4	80	120			
Toluene	0.95	0.050	1.000	0	95.3	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.7	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	80	120			

Qualifiers:

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

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



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

Sample Log-In Check List

Client Name: **Safety Env Solutions**

Work Order Number: **2005735**

RcptNo: 1

Received By: **Leah Baca**

5/16/2020 8:00:00 AM

Leah Baca

Completed By: **Leah Baca**

5/16/2020 8:36:32 AM

Leah Baca

Reviewed By: *LB*

5/16/20

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

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *DAD 5/16/20*

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good				
2	1.6	Good				

Chain-of-Custody Record

Client: Safety & Environmental Solutions
 Mailing Address: 703 E. CLINTON Hobbs NM 88240
 Phone #: 575-397-0510

email or Fax#: _____
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: Az Compliance NELAC Other
 EDD (Type) _____

Turn-Around Time: 5 Day
 Standard Rush
 Project Name: Devon 4414
 Project #: Dev-19-004

Project Manager: Allen Bob
 Sampler: Sosa Jerry
 On Ice: Yes No
 # of Coolers: (2)

Cooler Temp (including CF): 4.7 - 0.5 = 0.2 (°C)
 Container Type and # 1 Preservative Type Ice HEAL No. 2005735
1 -001
1 -002
1 -003
1 -004
1 -005



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

Analysis Request	
BTEX / MTBE / TMB's (8021)	<input checked="" type="checkbox"/>
TPH:8015D(GRO / DRO / MRO)	<input checked="" type="checkbox"/>
8081 Pesticides/8082 PCB's	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
Cl, F, Br, NO ₂ , NO ₃ , PO ₄ , SO ₄	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	<u>OK</u>

Remarks:

Received by: [Signature] Date: 5/13 Time: 12:30
 Received by: [Signature] Date: 5/14/20 Time: 0800

Relinquished by: [Signature] Date: 5/15/20 Time: 0800
 Relinquished by: [Signature] Date: 5/15 Time: 1900

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



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

May 22, 2020

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

RE: DEVON Thistle 44H 1RP5372

OrderNo.: 2005734

Dear Bob Allen:

Hall Environmental Analysis Laboratory received 23 sample(s) on 5/16/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-1 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 8:45:00 AM

Lab ID: 2005734-001

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 2:32:54 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	25	D	mg/Kg	5	5/18/2020 2:33:42 PM	52507
Surr: BFB	98.9	70-130	D	%Rec	5	5/18/2020 2:33:42 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	11000	450		mg/Kg	50	5/19/2020 8:53:21 PM	52531
Motor Oil Range Organics (MRO)	5200	2300		mg/Kg	50	5/19/2020 8:53:21 PM	52531
Surr: DNOP	0	55.1-146	S	%Rec	50	5/19/2020 8:53:21 PM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.12	D	mg/Kg	5	5/18/2020 2:33:42 PM	52507
Toluene	ND	0.25	D	mg/Kg	5	5/18/2020 2:33:42 PM	52507
Ethylbenzene	ND	0.25	D	mg/Kg	5	5/18/2020 2:33:42 PM	52507
Xylenes, Total	ND	0.50	D	mg/Kg	5	5/18/2020 2:33:42 PM	52507
Surr: 1,2-Dichloroethane-d4	86.8	70-130	D	%Rec	5	5/18/2020 2:33:42 PM	52507
Surr: 4-Bromofluorobenzene	87.1	70-130	D	%Rec	5	5/18/2020 2:33:42 PM	52507
Surr: Dibromofluoromethane	101	70-130	D	%Rec	5	5/18/2020 2:33:42 PM	52507
Surr: Toluene-d8	96.6	70-130	D	%Rec	5	5/18/2020 2:33:42 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-1 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 9:00:00 AM

Lab ID: 2005734-002

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 3:34:37 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/18/2020 3:59:29 PM	52507
Surr: BFB	94.8	70-130		%Rec	1	5/18/2020 3:59:29 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/19/2020 9:17:42 PM	52531
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/19/2020 9:17:42 PM	52531
Surr: DNOP	141	55.1-146		%Rec	1	5/19/2020 9:17:42 PM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 3:59:29 PM	52507
Toluene	ND	0.050		mg/Kg	1	5/18/2020 3:59:29 PM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/18/2020 3:59:29 PM	52507
Xylenes, Total	ND	0.10		mg/Kg	1	5/18/2020 3:59:29 PM	52507
Surr: 1,2-Dichloroethane-d4	85.7	70-130		%Rec	1	5/18/2020 3:59:29 PM	52507
Surr: 4-Bromofluorobenzene	90.1	70-130		%Rec	1	5/18/2020 3:59:29 PM	52507
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/18/2020 3:59:29 PM	52507
Surr: Toluene-d8	96.5	70-130		%Rec	1	5/18/2020 3:59:29 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-1 2ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 9:10:00 AM

Lab ID: 2005734-003

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	81	60		mg/Kg	20	5/21/2020 3:46:58 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/18/2020 5:25:17 PM	52507
Surr: BFB	92.8	70-130		%Rec	1	5/18/2020 5:25:17 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/19/2020 9:42:24 PM	52531
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/19/2020 9:42:24 PM	52531
Surr: DNOP	194	55.1-146	S	%Rec	1	5/19/2020 9:42:24 PM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 5:25:17 PM	52507
Toluene	ND	0.050		mg/Kg	1	5/18/2020 5:25:17 PM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/18/2020 5:25:17 PM	52507
Xylenes, Total	ND	0.099		mg/Kg	1	5/18/2020 5:25:17 PM	52507
Surr: 1,2-Dichloroethane-d4	84.9	70-130		%Rec	1	5/18/2020 5:25:17 PM	52507
Surr: 4-Bromofluorobenzene	88.4	70-130		%Rec	1	5/18/2020 5:25:17 PM	52507
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/18/2020 5:25:17 PM	52507
Surr: Toluene-d8	97.2	70-130		%Rec	1	5/18/2020 5:25:17 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-2 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 9:25:00 AM

Lab ID: 2005734-004

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 3:59:19 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	220	5.0		mg/Kg	1	5/18/2020 5:53:58 PM	52507
Surr: BFB	117	70-130		%Rec	1	5/18/2020 5:53:58 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	11000	490		mg/Kg	50	5/20/2020 10:20:57 PM	52531
Motor Oil Range Organics (MRO)	4500	2400		mg/Kg	50	5/20/2020 10:20:57 PM	52531
Surr: DNOP	0	55.1-146	S	%Rec	50	5/20/2020 10:20:57 PM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 5:53:58 PM	52507
Toluene	0.19	0.050		mg/Kg	1	5/18/2020 5:53:58 PM	52507
Ethylbenzene	1.6	0.050		mg/Kg	1	5/18/2020 5:53:58 PM	52507
Xylenes, Total	9.3	0.10		mg/Kg	1	5/18/2020 5:53:58 PM	52507
Surr: 1,2-Dichloroethane-d4	93.0	70-130		%Rec	1	5/18/2020 5:53:58 PM	52507
Surr: 4-Bromofluorobenzene	37.8	70-130	S	%Rec	1	5/18/2020 5:53:58 PM	52507
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/18/2020 5:53:58 PM	52507
Surr: Toluene-d8	96.1	70-130		%Rec	1	5/18/2020 5:53:58 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-2 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 9:35:00 AM

Lab ID: 2005734-005

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	59		mg/Kg	20	5/21/2020 4:11:40 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/19/2020 4:26:12 AM	52507
Surr: BFB	95.1	70-130		%Rec	1	5/19/2020 4:26:12 AM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	16	10		mg/Kg	1	5/20/2020 10:45:14 PM	52531
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	5/20/2020 10:45:14 PM	52531
Surr: DNOP	98.1	55.1-146		%Rec	1	5/20/2020 10:45:14 PM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 6:22:36 PM	52507
Toluene	ND	0.049		mg/Kg	1	5/18/2020 6:22:36 PM	52507
Ethylbenzene	ND	0.049		mg/Kg	1	5/18/2020 6:22:36 PM	52507
Xylenes, Total	ND	0.098		mg/Kg	1	5/18/2020 6:22:36 PM	52507
Surr: 1,2-Dichloroethane-d4	87.3	70-130		%Rec	1	5/18/2020 6:22:36 PM	52507
Surr: 4-Bromofluorobenzene	85.0	70-130		%Rec	1	5/18/2020 6:22:36 PM	52507
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/18/2020 6:22:36 PM	52507
Surr: Toluene-d8	97.6	70-130		%Rec	1	5/18/2020 6:22:36 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-2 2ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 9:50:00 AM

Lab ID: 2005734-006

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 4:24:02 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/18/2020 6:51:13 PM	52507
Surr: BFB	93.9	70-130		%Rec	1	5/18/2020 6:51:13 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	5/20/2020 11:09:34 PM	52531
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	5/20/2020 11:09:34 PM	52531
Surr: DNOP	106	55.1-146		%Rec	1	5/20/2020 11:09:34 PM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 6:51:13 PM	52507
Toluene	ND	0.050		mg/Kg	1	5/18/2020 6:51:13 PM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/18/2020 6:51:13 PM	52507
Xylenes, Total	ND	0.099		mg/Kg	1	5/18/2020 6:51:13 PM	52507
Surr: 1,2-Dichloroethane-d4	87.5	70-130		%Rec	1	5/18/2020 6:51:13 PM	52507
Surr: 4-Bromofluorobenzene	92.0	70-130		%Rec	1	5/18/2020 6:51:13 PM	52507
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/18/2020 6:51:13 PM	52507
Surr: Toluene-d8	96.4	70-130		%Rec	1	5/18/2020 6:51:13 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-3 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 10:00:00 AM

Lab ID: 2005734-007

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 4:36:22 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/18/2020 7:19:47 PM	52507
Surr: BFB	94.7	70-130		%Rec	1	5/18/2020 7:19:47 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/20/2020 11:33:42 PM	52531
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/20/2020 11:33:42 PM	52531
Surr: DNOP	131	55.1-146		%Rec	1	5/20/2020 11:33:42 PM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 7:19:47 PM	52507
Toluene	ND	0.049		mg/Kg	1	5/18/2020 7:19:47 PM	52507
Ethylbenzene	ND	0.049		mg/Kg	1	5/18/2020 7:19:47 PM	52507
Xylenes, Total	ND	0.099		mg/Kg	1	5/18/2020 7:19:47 PM	52507
Surr: 1,2-Dichloroethane-d4	86.6	70-130		%Rec	1	5/18/2020 7:19:47 PM	52507
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	5/18/2020 7:19:47 PM	52507
Surr: Dibromofluoromethane	105	70-130		%Rec	1	5/18/2020 7:19:47 PM	52507
Surr: Toluene-d8	95.7	70-130		%Rec	1	5/18/2020 7:19:47 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-3 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 10:15:00 AM

Lab ID: 2005734-008

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	61		mg/Kg	20	5/21/2020 4:48:43 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/18/2020 7:48:21 PM	52507
Surr: BFB	94.8	70-130		%Rec	1	5/18/2020 7:48:21 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/20/2020 11:58:01 PM	52531
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/20/2020 11:58:01 PM	52531
Surr: DNOP	62.3	55.1-146		%Rec	1	5/20/2020 11:58:01 PM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 7:48:21 PM	52507
Toluene	ND	0.050		mg/Kg	1	5/18/2020 7:48:21 PM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/18/2020 7:48:21 PM	52507
Xylenes, Total	ND	0.10		mg/Kg	1	5/18/2020 7:48:21 PM	52507
Surr: 1,2-Dichloroethane-d4	85.6	70-130		%Rec	1	5/18/2020 7:48:21 PM	52507
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	5/18/2020 7:48:21 PM	52507
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/18/2020 7:48:21 PM	52507
Surr: Toluene-d8	96.8	70-130		%Rec	1	5/18/2020 7:48:21 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-4 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 10:25:00 AM

Lab ID: 2005734-009

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 5:01:03 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	25	D	mg/Kg	5	5/18/2020 8:17:00 PM	52507
Surr: BFB	97.2	70-130	D	%Rec	5	5/18/2020 8:17:00 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	9000	480		mg/Kg	50	5/21/2020 12:22:10 AM	52531
Motor Oil Range Organics (MRO)	4300	2400		mg/Kg	50	5/21/2020 12:22:10 AM	52531
Surr: DNOP	0	55.1-146	S	%Rec	50	5/21/2020 12:22:10 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.12	D	mg/Kg	5	5/18/2020 8:17:00 PM	52507
Toluene	ND	0.25	D	mg/Kg	5	5/18/2020 8:17:00 PM	52507
Ethylbenzene	ND	0.25	D	mg/Kg	5	5/18/2020 8:17:00 PM	52507
Xylenes, Total	ND	0.50	D	mg/Kg	5	5/18/2020 8:17:00 PM	52507
Surr: 1,2-Dichloroethane-d4	84.5	70-130	D	%Rec	5	5/18/2020 8:17:00 PM	52507
Surr: 4-Bromofluorobenzene	86.7	70-130	D	%Rec	5	5/18/2020 8:17:00 PM	52507
Surr: Dibromofluoromethane	102	70-130	D	%Rec	5	5/18/2020 8:17:00 PM	52507
Surr: Toluene-d8	94.0	70-130	D	%Rec	5	5/18/2020 8:17:00 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-4 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 10:35:00 AM

Lab ID: 2005734-010

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 5:38:04 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/18/2020 8:45:33 PM	52507
Surr: BFB	94.2	70-130		%Rec	1	5/18/2020 8:45:33 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	17	10		mg/Kg	1	5/21/2020 12:46:29 AM	52531
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	5/21/2020 12:46:29 AM	52531
Surr: DNOP	100	55.1-146		%Rec	1	5/21/2020 12:46:29 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 8:45:33 PM	52507
Toluene	ND	0.050		mg/Kg	1	5/18/2020 8:45:33 PM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/18/2020 8:45:33 PM	52507
Xylenes, Total	ND	0.10		mg/Kg	1	5/18/2020 8:45:33 PM	52507
Surr: 1,2-Dichloroethane-d4	85.3	70-130		%Rec	1	5/18/2020 8:45:33 PM	52507
Surr: 4-Bromofluorobenzene	88.9	70-130		%Rec	1	5/18/2020 8:45:33 PM	52507
Surr: Dibromofluoromethane	101	70-130		%Rec	1	5/18/2020 8:45:33 PM	52507
Surr: Toluene-d8	97.3	70-130		%Rec	1	5/18/2020 8:45:33 PM	52507

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 **2005734**

Date Reported: **5/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-4 2ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 10:45:00 AM

Lab ID: 2005734-011

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 5:50:25 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/18/2020 9:14:24 PM	52507
Surr: BFB	95.1	70-130		%Rec	1	5/18/2020 9:14:24 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	5/21/2020 1:10:38 AM	52531
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	5/21/2020 1:10:38 AM	52531
Surr: DNOP	101	55.1-146		%Rec	1	5/21/2020 1:10:38 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 9:14:24 PM	52507
Toluene	ND	0.050		mg/Kg	1	5/18/2020 9:14:24 PM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/18/2020 9:14:24 PM	52507
Xylenes, Total	ND	0.099		mg/Kg	1	5/18/2020 9:14:24 PM	52507
Surr: 1,2-Dichloroethane-d4	84.5	70-130		%Rec	1	5/18/2020 9:14:24 PM	52507
Surr: 4-Bromofluorobenzene	89.2	70-130		%Rec	1	5/18/2020 9:14:24 PM	52507
Surr: Dibromofluoromethane	105	70-130		%Rec	1	5/18/2020 9:14:24 PM	52507
Surr: Toluene-d8	97.9	70-130		%Rec	1	5/18/2020 9:14:24 PM	52507

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

Analytical Report

Lab Order 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-5 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 11:00:00 AM

Lab ID: 2005734-012

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 6:02:47 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/18/2020 9:43:09 PM	52507
Surr: BFB	95.5	70-130		%Rec	1	5/18/2020 9:43:09 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/21/2020 1:34:53 AM	52531
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/21/2020 1:34:53 AM	52531
Surr: DNOP	82.9	55.1-146		%Rec	1	5/21/2020 1:34:53 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 9:43:09 PM	52507
Toluene	ND	0.050		mg/Kg	1	5/18/2020 9:43:09 PM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/18/2020 9:43:09 PM	52507
Xylenes, Total	ND	0.10		mg/Kg	1	5/18/2020 9:43:09 PM	52507
Surr: 1,2-Dichloroethane-d4	86.0	70-130		%Rec	1	5/18/2020 9:43:09 PM	52507
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	5/18/2020 9:43:09 PM	52507
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/18/2020 9:43:09 PM	52507
Surr: Toluene-d8	97.0	70-130		%Rec	1	5/18/2020 9:43:09 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-5 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 11:15:00 AM

Lab ID: 2005734-013

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 6:15:08 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/18/2020 10:12:02 PM	52507
Surr: BFB	94.4	70-130		%Rec	1	5/18/2020 10:12:02 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	5/21/2020 1:59:03 AM	52531
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	5/21/2020 1:59:03 AM	52531
Surr: DNOP	71.4	55.1-146		%Rec	1	5/21/2020 1:59:03 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 10:12:02 PM	52507
Toluene	ND	0.050		mg/Kg	1	5/18/2020 10:12:02 PM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/18/2020 10:12:02 PM	52507
Xylenes, Total	ND	0.099		mg/Kg	1	5/18/2020 10:12:02 PM	52507
Surr: 1,2-Dichloroethane-d4	85.3	70-130		%Rec	1	5/18/2020 10:12:02 PM	52507
Surr: 4-Bromofluorobenzene	92.1	70-130		%Rec	1	5/18/2020 10:12:02 PM	52507
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/18/2020 10:12:02 PM	52507
Surr: Toluene-d8	96.7	70-130		%Rec	1	5/18/2020 10:12:02 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-6 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 11:40:00 AM

Lab ID: 2005734-014

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	270	60		mg/Kg	20	5/21/2020 6:27:29 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/18/2020 10:40:53 PM	52507
Surr: BFB	95.3	70-130		%Rec	1	5/18/2020 10:40:53 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	5/22/2020 10:34:55 AM	52531
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	5/22/2020 10:34:55 AM	52531
Surr: DNOP	61.0	55.1-146		%Rec	1	5/22/2020 10:34:55 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	5/18/2020 10:40:53 PM	52507
Toluene	ND	0.049		mg/Kg	1	5/18/2020 10:40:53 PM	52507
Ethylbenzene	ND	0.049		mg/Kg	1	5/18/2020 10:40:53 PM	52507
Xylenes, Total	ND	0.098		mg/Kg	1	5/18/2020 10:40:53 PM	52507
Surr: 1,2-Dichloroethane-d4	87.7	70-130		%Rec	1	5/18/2020 10:40:53 PM	52507
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	1	5/18/2020 10:40:53 PM	52507
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/18/2020 10:40:53 PM	52507
Surr: Toluene-d8	98.4	70-130		%Rec	1	5/18/2020 10:40:53 PM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-6 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 11:55:00 AM

Lab ID: 2005734-015

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 6:39:50 PM	52628
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/18/2020 11:09:31 PM	52507
Surr: BFB	94.8	70-130		%Rec	1	5/18/2020 11:09:31 PM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	5/21/2020 2:47:26 AM	52531
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	5/21/2020 2:47:26 AM	52531
Surr: DNOP	127	55.1-146		%Rec	1	5/21/2020 2:47:26 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/18/2020 11:09:31 PM	52507
Toluene	ND	0.049		mg/Kg	1	5/18/2020 11:09:31 PM	52507
Ethylbenzene	ND	0.049		mg/Kg	1	5/18/2020 11:09:31 PM	52507
Xylenes, Total	ND	0.098		mg/Kg	1	5/18/2020 11:09:31 PM	52507
Surr: 1,2-Dichloroethane-d4	83.0	70-130		%Rec	1	5/18/2020 11:09:31 PM	52507
Surr: 4-Bromofluorobenzene	91.3	70-130		%Rec	1	5/18/2020 11:09:31 PM	52507
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/18/2020 11:09:31 PM	52507
Surr: Toluene-d8	95.5	70-130		%Rec	1	5/18/2020 11:09:31 PM	52507

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 **2005734**

Date Reported: **5/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-7 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 12:00:00 PM

Lab ID: 2005734-016

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 8:06:14 PM	52637
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/19/2020 2:02:02 AM	52507
Surr: BFB	95.7	70-130		%Rec	1	5/19/2020 2:02:02 AM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/21/2020 3:11:41 AM	52531
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/21/2020 3:11:41 AM	52531
Surr: DNOP	98.0	55.1-146		%Rec	1	5/21/2020 3:11:41 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	5/19/2020 2:02:02 AM	52507
Toluene	ND	0.049		mg/Kg	1	5/19/2020 2:02:02 AM	52507
Ethylbenzene	ND	0.049		mg/Kg	1	5/19/2020 2:02:02 AM	52507
Xylenes, Total	ND	0.098		mg/Kg	1	5/19/2020 2:02:02 AM	52507
Surr: 1,2-Dichloroethane-d4	84.0	70-130		%Rec	1	5/19/2020 2:02:02 AM	52507
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	5/19/2020 2:02:02 AM	52507
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/19/2020 2:02:02 AM	52507
Surr: Toluene-d8	96.5	70-130		%Rec	1	5/19/2020 2:02:02 AM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-7 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 12:10:00 PM

Lab ID: 2005734-017

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	61		mg/Kg	20	5/21/2020 8:43:17 PM	52637
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/19/2020 2:30:49 AM	52507
Surr: BFB	92.4	70-130		%Rec	1	5/19/2020 2:30:49 AM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	13	9.0		mg/Kg	1	5/21/2020 3:35:37 AM	52531
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	5/21/2020 3:35:37 AM	52531
Surr: DNOP	93.5	55.1-146		%Rec	1	5/21/2020 3:35:37 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/19/2020 2:30:49 AM	52507
Toluene	ND	0.050		mg/Kg	1	5/19/2020 2:30:49 AM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/19/2020 2:30:49 AM	52507
Xylenes, Total	ND	0.099		mg/Kg	1	5/19/2020 2:30:49 AM	52507
Surr: 1,2-Dichloroethane-d4	87.0	70-130		%Rec	1	5/19/2020 2:30:49 AM	52507
Surr: 4-Bromofluorobenzene	91.5	70-130		%Rec	1	5/19/2020 2:30:49 AM	52507
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/19/2020 2:30:49 AM	52507
Surr: Toluene-d8	95.6	70-130		%Rec	1	5/19/2020 2:30:49 AM	52507

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 **2005734**

Date Reported: **5/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-8 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 12:20:00 PM

Lab ID: 2005734-018

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	270	60		mg/Kg	20	5/21/2020 8:55:37 PM	52637
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/19/2020 2:59:48 AM	52507
Surr: BFB	96.5	70-130		%Rec	1	5/19/2020 2:59:48 AM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/21/2020 3:59:47 AM	52531
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/21/2020 3:59:47 AM	52531
Surr: DNOP	93.3	55.1-146		%Rec	1	5/21/2020 3:59:47 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/19/2020 2:59:48 AM	52507
Toluene	ND	0.050		mg/Kg	1	5/19/2020 2:59:48 AM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/19/2020 2:59:48 AM	52507
Xylenes, Total	ND	0.099		mg/Kg	1	5/19/2020 2:59:48 AM	52507
Surr: 1,2-Dichloroethane-d4	85.6	70-130		%Rec	1	5/19/2020 2:59:48 AM	52507
Surr: 4-Bromofluorobenzene	92.7	70-130		%Rec	1	5/19/2020 2:59:48 AM	52507
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/19/2020 2:59:48 AM	52507
Surr: Toluene-d8	95.7	70-130		%Rec	1	5/19/2020 2:59:48 AM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-8 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 12:35:00 PM

Lab ID: 2005734-019

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	85	60		mg/Kg	20	5/21/2020 9:07:58 PM	52637
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/19/2020 3:28:45 AM	52507
Surr: BFB	94.7	70-130		%Rec	1	5/19/2020 3:28:45 AM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/21/2020 4:23:50 AM	52531
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/21/2020 4:23:50 AM	52531
Surr: DNOP	118	55.1-146		%Rec	1	5/21/2020 4:23:50 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/19/2020 3:28:45 AM	52507
Toluene	ND	0.049		mg/Kg	1	5/19/2020 3:28:45 AM	52507
Ethylbenzene	ND	0.049		mg/Kg	1	5/19/2020 3:28:45 AM	52507
Xylenes, Total	ND	0.099		mg/Kg	1	5/19/2020 3:28:45 AM	52507
Surr: 1,2-Dichloroethane-d4	87.9	70-130		%Rec	1	5/19/2020 3:28:45 AM	52507
Surr: 4-Bromofluorobenzene	89.6	70-130		%Rec	1	5/19/2020 3:28:45 AM	52507
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/19/2020 3:28:45 AM	52507
Surr: Toluene-d8	97.3	70-130		%Rec	1	5/19/2020 3:28:45 AM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-9 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 12:45:00 PM

Lab ID: 2005734-020

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 9:20:19 PM	52637
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/19/2020 3:57:29 AM	52507
Surr: BFB	95.0	70-130		%Rec	1	5/19/2020 3:57:29 AM	52507
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/21/2020 4:47:52 AM	52531
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/21/2020 4:47:52 AM	52531
Surr: DNOP	106	55.1-146		%Rec	1	5/21/2020 4:47:52 AM	52531
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/19/2020 3:57:29 AM	52507
Toluene	ND	0.050		mg/Kg	1	5/19/2020 3:57:29 AM	52507
Ethylbenzene	ND	0.050		mg/Kg	1	5/19/2020 3:57:29 AM	52507
Xylenes, Total	ND	0.099		mg/Kg	1	5/19/2020 3:57:29 AM	52507
Surr: 1,2-Dichloroethane-d4	84.9	70-130		%Rec	1	5/19/2020 3:57:29 AM	52507
Surr: 4-Bromofluorobenzene	90.8	70-130		%Rec	1	5/19/2020 3:57:29 AM	52507
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/19/2020 3:57:29 AM	52507
Surr: Toluene-d8	97.6	70-130		%Rec	1	5/19/2020 3:57:29 AM	52507

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-9 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 12:55:00 PM

Lab ID: 2005734-021

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 9:32:40 PM	52637
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/19/2020 12:18:44 AM	52508
Surr: BFB	99.2	70-130		%Rec	1	5/19/2020 12:18:44 AM	52508
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	12	9.5		mg/Kg	1	5/19/2020 10:45:36 PM	52538
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/19/2020 10:45:36 PM	52538
Surr: DNOP	69.2	55.1-146		%Rec	1	5/19/2020 10:45:36 PM	52538
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	5/19/2020 12:18:44 AM	52508
Toluene	ND	0.049		mg/Kg	1	5/19/2020 12:18:44 AM	52508
Ethylbenzene	ND	0.049		mg/Kg	1	5/19/2020 12:18:44 AM	52508
Xylenes, Total	ND	0.097		mg/Kg	1	5/19/2020 12:18:44 AM	52508
Surr: 1,2-Dichloroethane-d4	91.0	70-130		%Rec	1	5/19/2020 12:18:44 AM	52508
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	5/19/2020 12:18:44 AM	52508
Surr: Dibromofluoromethane	90.2	70-130		%Rec	1	5/19/2020 12:18:44 AM	52508
Surr: Toluene-d8	101	70-130		%Rec	1	5/19/2020 12:18:44 AM	52508

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 2005734

Date Reported: 5/22/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-10 Surface

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 1:05:00 PM

Lab ID: 2005734-022

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	290	60		mg/Kg	20	5/21/2020 9:45:01 PM	52637
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/19/2020 1:48:23 AM	52508
Surr: BFB	100	70-130		%Rec	1	5/19/2020 1:48:23 AM	52508
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/21/2020 5:17:04 AM	52538
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/21/2020 5:17:04 AM	52538
Surr: DNOP	82.7	55.1-146		%Rec	1	5/21/2020 5:17:04 AM	52538
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	5/19/2020 1:48:23 AM	52508
Toluene	ND	0.049		mg/Kg	1	5/19/2020 1:48:23 AM	52508
Ethylbenzene	ND	0.049		mg/Kg	1	5/19/2020 1:48:23 AM	52508
Xylenes, Total	ND	0.099		mg/Kg	1	5/19/2020 1:48:23 AM	52508
Surr: 1,2-Dichloroethane-d4	92.6	70-130		%Rec	1	5/19/2020 1:48:23 AM	52508
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	5/19/2020 1:48:23 AM	52508
Surr: Dibromofluoromethane	90.7	70-130		%Rec	1	5/19/2020 1:48:23 AM	52508
Surr: Toluene-d8	103	70-130		%Rec	1	5/19/2020 1:48:23 AM	52508

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 **2005734**

Date Reported: **5/22/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH-10 1ft

Project: DEVON Thistle 44H 1RP5372

Collection Date: 5/14/2020 1:20:00 PM

Lab ID: 2005734-023

Matrix: SOIL

Received Date: 5/16/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	5/21/2020 9:57:22 PM	52637
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/19/2020 3:17:30 AM	52508
Surr: BFB	103	70-130		%Rec	1	5/19/2020 3:17:30 AM	52508
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/19/2020 11:34:15 PM	52538
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/19/2020 11:34:15 PM	52538
Surr: DNOP	98.5	55.1-146		%Rec	1	5/19/2020 11:34:15 PM	52538
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	5/19/2020 3:17:30 AM	52508
Toluene	ND	0.048		mg/Kg	1	5/19/2020 3:17:30 AM	52508
Ethylbenzene	ND	0.048		mg/Kg	1	5/19/2020 3:17:30 AM	52508
Xylenes, Total	ND	0.096		mg/Kg	1	5/19/2020 3:17:30 AM	52508
Surr: 1,2-Dichloroethane-d4	91.6	70-130		%Rec	1	5/19/2020 3:17:30 AM	52508
Surr: 4-Bromofluorobenzene	92.8	70-130		%Rec	1	5/19/2020 3:17:30 AM	52508
Surr: Dibromofluoromethane	92.6	70-130		%Rec	1	5/19/2020 3:17:30 AM	52508
Surr: Toluene-d8	102	70-130		%Rec	1	5/19/2020 3:17:30 AM	52508

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2005734

22-May-20

Client: Safety & Environmental Solutions

Project: DEVON Thistle 44H 1RP5372

Sample ID: MB-52628	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 52628	RunNo: 69084								
Prep Date: 5/21/2020	Analysis Date: 5/21/2020	SeqNo: 2392566	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-52628	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 52628	RunNo: 69084								
Prep Date: 5/21/2020	Analysis Date: 5/21/2020	SeqNo: 2392567	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

Sample ID: MB-52637	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 52637	RunNo: 69084								
Prep Date: 5/21/2020	Analysis Date: 5/21/2020	SeqNo: 2392598	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-52637	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 52637	RunNo: 69084								
Prep Date: 5/21/2020	Analysis Date: 5/21/2020	SeqNo: 2392599	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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#: 2005734

22-May-20

Client: Safety & Environmental Solutions

Project: DEVON Thistle 44H 1RP5372

Sample ID: MB-52538	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 52538	RunNo: 68994								
Prep Date: 5/18/2020	Analysis Date: 5/19/2020	SeqNo: 2390222	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		110	55.1	146			

Sample ID: LCS-52538	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 52538	RunNo: 68994								
Prep Date: 5/18/2020	Analysis Date: 5/19/2020	SeqNo: 2390223	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	70	130			
Surr: DNOP	5.0		5.000		99.0	55.1	146			

Sample ID: LCS-52531	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 52531	RunNo: 69010								
Prep Date: 5/18/2020	Analysis Date: 5/19/2020	SeqNo: 2390295	Units: mg/Kg							
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	5.2		5.000		104	55.1	146			

Sample ID: MB-52531	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 52531	RunNo: 69010								
Prep Date: 5/18/2020	Analysis Date: 5/19/2020	SeqNo: 2390297	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	14		10.00		135	55.1	146			

Sample ID: MB-52569	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 52569	RunNo: 69027								
Prep Date: 5/19/2020	Analysis Date: 5/20/2020	SeqNo: 2390565	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0		10.00		89.8	55.1	146			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical 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#: 2005734

22-May-20

Client: Safety & Environmental Solutions**Project:** DEVON Thistle 44H 1RP5372

Sample ID: LCS-52569	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 52569		RunNo: 69027							
Prep Date: 5/19/2020	Analysis Date: 5/20/2020		SeqNo: 2390897		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.0	55.1	146			

Sample ID: MB-52598	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 52598		RunNo: 69068							
Prep Date: 5/20/2020	Analysis Date: 5/22/2020		SeqNo: 2392532		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		107	55.1	146			

Sample ID: MB-52605	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 52605		RunNo: 69068							
Prep Date: 5/20/2020	Analysis Date: 5/21/2020		SeqNo: 2392533		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		95.9	55.1	146			

Sample ID: LCS-52598	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 52598		RunNo: 69068							
Prep Date: 5/20/2020	Analysis Date: 5/22/2020		SeqNo: 2392534		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		5.000		83.8	55.1	146			

Sample ID: LCS-52605	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 52605		RunNo: 69068							
Prep Date: 5/20/2020	Analysis Date: 5/21/2020		SeqNo: 2392535		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		87.7	55.1	146			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical 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#: 2005734

22-May-20

Client: Safety & Environmental Solutions**Project:** DEVON Thistle 44H 1RP5372

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: mb-52507 SampType: MBLK TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: PBS Batch ID: 52507 RunNo: 68993										
Prep Date: 5/16/2020 Analysis Date: 5/18/2020 SeqNo: 2388436 Units: mg/Kg										
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		85.7	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		88.9	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.49		0.5000		99.0	70	130			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: ics-52507 SampType: LCS TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: LCSS Batch ID: 52507 RunNo: 68993										
Prep Date: 5/16/2020 Analysis Date: 5/18/2020 SeqNo: 2388437 Units: mg/Kg										
Benzene	1.0	0.025	1.000	0	104	70	130			
Toluene	1.0	0.050	1.000	0	103	70	130			
Ethylbenzene	1.1	0.050	1.000	0	111	70	130			
Xylenes, Total	3.2	0.10	3.000	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		85.5	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		89.0	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.49		0.5000		98.8	70	130			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: 2005734-001ams SampType: MS TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: AH-1 Surface Batch ID: 52507 RunNo: 68993										
Prep Date: 5/16/2020 Analysis Date: 5/18/2020 SeqNo: 2388439 Units: mg/Kg										
Benzene	0.78	0.12	0.9794	0	80.0	70	130			
Toluene	0.75	0.24	0.9794	0	76.9	70	130			
Ethylbenzene	0.76	0.24	0.9794	0	77.7	70	130			
Xylenes, Total	2.2	0.49	2.938	0	73.6	70	130			
Surr: 1,2-Dichloroethane-d4	2.1		2.449		84.6	70	130			
Surr: 4-Bromofluorobenzene	2.1		2.449		86.0	70	130			
Surr: Dibromofluoromethane	2.5		2.449		101	70	130			
Surr: Toluene-d8	2.4		2.449		96.0	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical 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#: 2005734

22-May-20

Client: Safety & Environmental Solutions**Project:** DEVON Thistle 44H 1RP5372

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: 2005734-001amsd SampType: MSD TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: AH-1 Surface Batch ID: 52507 RunNo: 68993										
Prep Date: 5/16/2020 Analysis Date: 5/18/2020 SeqNo: 2388440 Units: mg/Kg										
Benzene	0.92	0.12	0.9980	0	91.9	70	130	15.7	20	
Toluene	0.91	0.25	0.9980	0	91.0	70	130	18.7	20	
Ethylbenzene	0.97	0.25	0.9980	0	97.6	70	130	24.6	0	
Xylenes, Total	2.8	0.50	2.994	0	94.6	70	130	26.8	0	
Surr: 1,2-Dichloroethane-d4	2.1		2.495		84.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	2.2		2.495		89.4	70	130	0	0	
Surr: Dibromofluoromethane	2.5		2.495		101	70	130	0	0	
Surr: Toluene-d8	2.4		2.495		97.0	70	130	0	0	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: mb-52508 SampType: MBLK TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: PBS Batch ID: 52508 RunNo: 69005										
Prep Date: 5/16/2020 Analysis Date: 5/18/2020 SeqNo: 2389068 Units: mg/Kg										
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.46		0.5000		92.8	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.4	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		91.6	70	130			
Surr: Toluene-d8	0.50		0.5000		99.7	70	130			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: lcs-52508 SampType: LCS4 TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: BatchQC Batch ID: 52508 RunNo: 69005										
Prep Date: 5/16/2020 Analysis Date: 5/18/2020 SeqNo: 2389069 Units: mg/Kg										
Benzene	0.90	0.025	1.000	0	90.0	80	120			
Toluene	1.1	0.050	1.000	0	107	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	3.2	0.10	3.000	0	105	80	120			
Surr: 1,2-Dichloroethane-d4	0.46		0.5000		91.2	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.0	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		92.2	70	130			
Surr: Toluene-d8	0.50		0.5000		99.3	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical 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#: 2005734

22-May-20

Client: Safety & Environmental Solutions**Project:** DEVON Thistle 44H 1RP5372

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: 2005734-021ams SampType: MS4 TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: AH-9 1ft Batch ID: 52508 RunNo: 69005										
Prep Date: 5/16/2020 Analysis Date: 5/19/2020 SeqNo: 2389073 Units: mg/Kg										
Benzene	0.85	0.024	0.9597	0	88.5	71.1	115			
Toluene	0.98	0.048	0.9597	0	103	79.6	132			
Ethylbenzene	1.0	0.048	0.9597	0	107	83.8	134			
Xylenes, Total	3.0	0.096	2.879	0	103	82.4	132			
Surr: 1,2-Dichloroethane-d4	0.47		0.4798		97.5	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.4798		91.8	70	130			
Surr: Dibromofluoromethane	0.46		0.4798		95.6	70	130			
Surr: Toluene-d8	0.49		0.4798		103	70	130			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: 2005734-021amsd SampType: MSD4 TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: AH-9 1ft Batch ID: 52508 RunNo: 69005										
Prep Date: 5/16/2020 Analysis Date: 5/19/2020 SeqNo: 2389074 Units: mg/Kg										
Benzene	0.88	0.025	0.9881	0	88.7	71.1	115	3.11	20	
Toluene	1.1	0.049	0.9881	0	112	79.6	132	12.1	20	
Ethylbenzene	1.1	0.049	0.9881	0	116	83.8	134	10.5	20	
Xylenes, Total	3.4	0.099	2.964	0	113	82.4	132	12.2	20	
Surr: 1,2-Dichloroethane-d4	0.45		0.4941		91.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.46		0.4941		92.6	70	130	0	0	
Surr: Dibromofluoromethane	0.45		0.4941		91.1	70	130	0	0	
Surr: Toluene-d8	0.52		0.4941		105	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2005734

22-May-20

Client: Safety & Environmental Solutions

Project: DEVON Thistle 44H 1RP5372

Sample ID: mb-52507	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 52507	RunNo: 68993								
Prep Date: 5/16/2020	Analysis Date: 5/18/2020	SeqNo: 2388462	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	470		500.0		94.3	70	130			

Sample ID: ics-52507	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 52507	RunNo: 68993								
Prep Date: 5/16/2020	Analysis Date: 5/18/2020	SeqNo: 2388463	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	81.8	70	130			
Surr: BFB	470		500.0		93.3	70	130			

Sample ID: 2005734-002ams	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: AH-1 1ft	Batch ID: 52507	RunNo: 68993								
Prep Date: 5/16/2020	Analysis Date: 5/18/2020	SeqNo: 2388468	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	24.95	0	82.6	70	130			
Surr: BFB	470		499.0		94.9	70	130			

Sample ID: 2005734-002amsd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: AH-1 1ft	Batch ID: 52507	RunNo: 68993								
Prep Date: 5/16/2020	Analysis Date: 5/18/2020	SeqNo: 2388469	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	24.98	0	79.2	70	130	4.05	20	
Surr: BFB	240		249.8		97.2	70	130	0	0	

Sample ID: mb-52508	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 52508	RunNo: 69005								
Prep Date: 5/16/2020	Analysis Date: 5/18/2020	SeqNo: 2389081	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	490		500.0		98.7	70	130			

Sample ID: ics-52508	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 52508	RunNo: 69005								
Prep Date: 5/16/2020	Analysis Date: 5/18/2020	SeqNo: 2389082	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2005734

22-May-20

Client: Safety & Environmental Solutions

Project: DEVON Thistle 44H 1RP5372

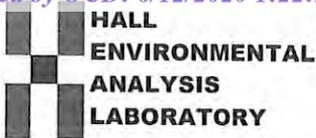
Sample ID: Ics-52508	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 52508	RunNo: 69005								
Prep Date: 5/16/2020	Analysis Date: 5/18/2020	SeqNo: 2389082	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.7	70	130			
Surr: BFB	500		500.0		99.0	70	130			

Sample ID: 2005734-022ams	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: AH-10 Surface	Batch ID: 52508	RunNo: 69005								
Prep Date: 5/16/2020	Analysis Date: 5/19/2020	SeqNo: 2389098	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.9	24.56	0	82.1	70	130			
Surr: BFB	490		491.2		99.3	70	130			

Sample ID: 2005734-022amsd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: AH-10 Surface	Batch ID: 52508	RunNo: 69005								
Prep Date: 5/16/2020	Analysis Date: 5/19/2020	SeqNo: 2389099	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	24.78	0	93.4	70	130	13.8	20	
Surr: BFB	490		495.5		98.2	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



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

Sample Log-In Check List

Client Name: **Safety Env Solutions**

Work Order Number: **2005734**

RcptNo: 1

Received By: **Leah Baca**

5/16/2020 8:00:00 AM

Leah Baca

Completed By: **Leah Baca**

5/16/2020 8:27:50 AM

Leah Baca

Reviewed By: **LB**

5/16/20

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

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *DAD 5/16/20*

Special Handling (if applicable)

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

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

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good				
2	1.6	Good				

Chain-of-Custody Record

Client: Safety & Environmental Solutions
 Mailing Address: 703 E Clinton
Mobile NM 88240
 Phone #: 575-397-0570

email or Fax#: _____
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: Az Compliance Other
 NELAC EDD (Type) _____

Date	Time	Matrix	Sample Name
05/14	0845	S	AH-1 Surber
	0900	S	AH-1 HF
	0910	S	AH-1 ZF
	0925	S	AH-2 Surber
	0935	S	AH-2 HF
	0950	S	AH-2 ZF
	1000	S	AH-3 Surber
	1015	S	AH-3 HF
	1025	S	AH-4 Surber
	1035	S	AH-4 HF
	1045	S	AH-4 ZF
05/14	1100	S	AH-5 Surber

Requisitioned by: Soss, Jerry
 Date: 05/15 Time: 0800
 Relinquished by: Jerry Soss
 Date: 05/15 Time: 1900

Turn-Around Time: 5 Day
 Standard Rush
 Project Name: DEV-19-009
THISTLE 44H
WGT20011857 1RP5372
 Project #: _____

Project Manager: Allen, Bob
 Sampler: Soss, Jerry
 On Ice: Yes No
 # of Coolers: (2)
 Cooler Temp (including CF): 0.2 0.2 -0.5 (°C)
1.2 0.2 -0.6 (°C)

Container Type and #	Preservative Type	HEAL No.
1	Free	2005734
1		-001
1		-002
1		-003
1		-004
1		-005
1		-006
1		-007
1		-008
1		-009
1		-010
1		-011
1		-012

Received by: Allen, Bob Date: 9/15/20
 Received by: Allen, Bob Date: 5/16/20



HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request	
<input checked="" type="checkbox"/>	BTEX / MTBE / TMB's (8021)
<input checked="" type="checkbox"/>	TPH:8015D(GRO / DRO / MRO)
<input type="checkbox"/>	8081 Pesticides/8082 PCB's
<input type="checkbox"/>	EDB (Method 504.1)
<input type="checkbox"/>	PAHs by 8310 or 8270SIMS
<input type="checkbox"/>	RCRA 8 Metals
<input type="checkbox"/>	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄
<input type="checkbox"/>	8260 (VOA)
<input type="checkbox"/>	8270 (Semi-VOA)
<input checked="" type="checkbox"/>	Total Coliform (Present/Absent)

Remarks: Chlorides

Chain-of-Custody Record

Client: Safety & Environmental Solutions
 Mailing Address: 703 E Clinton
Albany NM 88240
 Phone #: 575-397-0510

email or Fax#: _____
 QA/QC Package: Level 4 (Full Validation)
 Standard Az Compliance
 NELAC Other
 EDD (Type) _____

Turn-Around Time: 5 Day
 Standard Rush
 Project Name: DEVON WHISTLE 44H
WOT 20811857
 Project #: 1RP-5372
DEV-19-009

Project Manager: Allen, Bob
 Sampler: Sokalery
 On Ice: Yes No
 # of Coolers: 2
 Cooler Temp (including CF): 0.2 - 0.5 = 0.3
1.8 - 0.2 = 1.6 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
5/14	1115	S	Att-5 1ft	1	Tar	-013
	1140	S	Att-6 Surface	1		-014
	1155	S	Att-6 1ft	1		-015
	1200	S	Att-7 Surface	1		-016
	1210	S	Att-7 1ft	1		-017
	1220	S	Att-8 Surface	1		-018
	1235	S	Att-8 1ft	1		-019
	1245	S	Att-9 Surface	1		-020
	1255	S	Att-9 1ft	1		-021
	1305	S	Att-10 Surface	1		-022
5/14	1320	S	Att-10 1ft	1		-023

Date: 05/15 Time: 0800 Relinquished by: Sokalery
 Date: 5/15 Time: 1900 Relinquished by: Allen
 Received by: Allen Date: 5/16/20 Time: 1230
 Received by: Carroll Date: 5/16/20 Time: 0800



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

Analysis Request

BTEX / 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 ₂ , NO ₃ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
X	X								<u>Coliforms</u>

Remarks:



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

December 30, 2019

Bob Allen
Safety & Environmental Solutions
703 East Clinton
Hobbs, NM 88240

RE: DEV-19-009

Enclosed are the results of analyses for samples received by the laboratory on 12/20/19 9:30.

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.

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.

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:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 1 SURFACE (H904254-01)

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	12/26/2019	ND	1.64	82.0	2.00	14.7		
Toluene*	<0.050	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5		
Ethylbenzene*	<0.050	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5		
Total Xylenes*	<0.150	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0		
Total BTEX	<0.300	0.300	12/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	35600	16.0	12/23/2019	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	12/23/2019	ND	218	109	200	8.26		
DRO >C10-C28*	<10.0	10.0	12/23/2019	ND	220	110	200	6.72		
EXT DRO >C28-C36	<10.0	10.0	12/23/2019	ND						

Surrogate: 1-Chlorooctane 119 % 41-142

Surrogate: 1-Chlorooctadecane 129 % 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

Analytical Results For:

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

Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 2 SURFACE (H904254-02)

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	12/26/2019	ND	1.64	82.0	2.00	14.7	
Toluene*	<0.050	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5	
Ethylbenzene*	<0.050	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5	
Total Xylenes*	<0.150	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0	
Total BTEX	<0.300	0.300	12/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	12/23/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	57.0	10.0	12/23/2019	ND	218	109	200	8.26		
DRO >C10-C28*	3110	10.0	12/23/2019	ND	220	110	200	6.72		
EXT DRO >C28-C36	572	10.0	12/23/2019	ND						

Surrogate: 1-Chlorooctane 142 % 41-142

Surrogate: 1-Chlorooctadecane 228 % 37.6-147

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Analytical Results For:

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

Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 3 SURFACE (H904254-03)

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	12/26/2019	ND	1.64	82.0	2.00	14.7	
Toluene*	<0.050	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5	
Ethylbenzene*	<0.050	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5	
Total Xylenes*	<0.150	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0	
Total BTEX	<0.300	0.300	12/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	12/23/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	71.4	10.0	12/23/2019	ND	218	109	200	8.26		
DRO >C10-C28*	3730	10.0	12/23/2019	ND	220	110	200	6.72		
EXT DRO >C28-C36	687	10.0	12/23/2019	ND						

Surrogate: 1-Chlorooctane 150 % 41-142

Surrogate: 1-Chlorooctadecane 251 % 37.6-147

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Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 4 SURFACE (H904254-04)

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	12/26/2019	ND	1.64	82.0	2.00	14.7		
Toluene*	<0.050	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5		
Ethylbenzene*	<0.050	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5		
Total Xylenes*	<0.150	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0		
Total BTEX	<0.300	0.300	12/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	752	16.0	12/23/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS							S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10*	62.6	10.0	12/23/2019	ND	218	109	200	8.26			
DRO >C10-C28*	3270	10.0	12/23/2019	ND	220	110	200	6.72			
EXT DRO >C28-C36	566	10.0	12/23/2019	ND							

Surrogate: 1-Chlorooctane 147 % 41-142

Surrogate: 1-Chlorooctadecane 235 % 37.6-147

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Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 5 SURFACE (H904254-05)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/26/2019	ND	1.64	82.0	2.00	14.7	
Toluene*	0.387	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5	
Ethylbenzene*	2.91	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5	
Total Xylenes*	15.7	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0	
Total BTEX	18.9	0.300	12/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 164 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3240	16.0	12/23/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	521	10.0	12/23/2019	ND	218	109	200	8.26	
DRO >C10-C28*	8990	10.0	12/23/2019	ND	220	110	200	6.72	
EXT DRO >C28-C36	1480	10.0	12/23/2019	ND					

Surrogate: 1-Chlorooctane 214 % 41-142

Surrogate: 1-Chlorooctadecane 391 % 37.6-147

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Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 6 SURFACE (H904254-06)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/26/2019	ND	1.64	82.0	2.00	14.7	
Toluene*	0.269	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5	
Ethylbenzene*	2.29	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5	
Total Xylenes*	11.5	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0	
Total BTEX	14.0	0.300	12/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 155 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	12/23/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	545	10.0	12/23/2019	ND	218	109	200	8.26	
DRO >C10-C28*	10200	10.0	12/23/2019	ND	220	110	200	6.72	
EXT DRO >C28-C36	1590	10.0	12/23/2019	ND					

Surrogate: 1-Chlorooctane 229 % 41-142

Surrogate: 1-Chlorooctadecane 429 % 37.6-147

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Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 7 SURFACE (H904254-07)

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	12/26/2019	ND	1.64	82.0	2.00	14.7		
Toluene*	<0.050	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5		
Ethylbenzene*	<0.050	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5		
Total Xylenes*	<0.150	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0		
Total BTEX	<0.300	0.300	12/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	21600	16.0	12/23/2019	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	12/23/2019	ND	218	109	200	8.26		
DRO >C10-C28*	<10.0	10.0	12/23/2019	ND	220	110	200	6.72		
EXT DRO >C28-C36	<10.0	10.0	12/23/2019	ND						

Surrogate: 1-Chlorooctane 119 % 41-142

Surrogate: 1-Chlorooctadecane 128 % 37.6-147

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Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 8 SURFACE (H904254-08)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/26/2019	ND	1.64	82.0	2.00	14.7	
Toluene*	0.291	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5	
Ethylbenzene*	2.35	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5	
Total Xylenes*	11.6	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0	
Total BTEX	14.3	0.300	12/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 144 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3080	16.0	12/23/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	563	10.0	12/23/2019	ND	218	109	200	8.26	
DRO >C10-C28*	10300	10.0	12/23/2019	ND	220	110	200	6.72	
EXT DRO >C28-C36	1670	10.0	12/23/2019	ND					

Surrogate: 1-Chlorooctane 179 % 41-142

Surrogate: 1-Chlorooctadecane 438 % 37.6-147

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Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 9 SURFACE (H904254-09)

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	12/26/2019	ND	1.64	82.0	2.00	14.7		
Toluene*	<0.050	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5		
Ethylbenzene*	<0.050	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5		
Total Xylenes*	<0.150	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0		
Total BTEX	<0.300	0.300	12/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16400	16.0	12/23/2019	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	12/23/2019	ND	218	109	200	8.26		
DRO >C10-C28*	<10.0	10.0	12/23/2019	ND	220	110	200	6.72		
EXT DRO >C28-C36	<10.0	10.0	12/23/2019	ND						

Surrogate: 1-Chlorooctane 117 % 41-142

Surrogate: 1-Chlorooctadecane 129 % 37.6-147

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Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 10 SURFACE (H904254-10)

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	12/26/2019	ND	1.64	82.0	2.00	14.7		
Toluene*	<0.050	0.050	12/26/2019	ND	1.64	81.8	2.00	14.5		
Ethylbenzene*	<0.050	0.050	12/26/2019	ND	1.67	83.7	2.00	14.5		
Total Xylenes*	<0.150	0.150	12/26/2019	ND	4.86	81.0	6.00	15.0		
Total BTEX	<0.300	0.300	12/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14000	16.0	12/23/2019	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	12/23/2019	ND	218	109	200	8.26		
DRO >C10-C28*	<10.0	10.0	12/23/2019	ND	220	110	200	6.72		
EXT DRO >C28-C36	<10.0	10.0	12/23/2019	ND						

Surrogate: 1-Chlorooctane 117 % 41-142

Surrogate: 1-Chlorooctadecane 128 % 37.6-147

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Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 11 SURFACE (H904254-11)

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	12/23/2019	ND	1.64	82.2	2.00	16.6		
Toluene*	<0.050	0.050	12/23/2019	ND	1.65	82.4	2.00	17.3		
Ethylbenzene*	<0.050	0.050	12/23/2019	ND	1.65	82.6	2.00	13.1		
Total Xylenes*	<0.150	0.150	12/23/2019	ND	5.00	83.3	6.00	17.1		
Total BTEX	<0.300	0.300	12/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	20000	16.0	12/23/2019	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	12/23/2019	ND	218	109	200	8.26		
DRO >C10-C28*	<10.0	10.0	12/23/2019	ND	220	110	200	6.72		
EXT DRO >C28-C36	<10.0	10.0	12/23/2019	ND						

Surrogate: 1-Chlorooctane 118 % 41-142

Surrogate: 1-Chlorooctadecane 129 % 37.6-147

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Analytical Results For:

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

Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 12 SURFACE (H904254-12)

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	12/23/2019	ND	1.64	82.2	2.00	16.6		
Toluene*	<0.050	0.050	12/23/2019	ND	1.65	82.4	2.00	17.3		
Ethylbenzene*	<0.050	0.050	12/23/2019	ND	1.65	82.6	2.00	13.1		
Total Xylenes*	<0.150	0.150	12/23/2019	ND	5.00	83.3	6.00	17.1		
Total BTEX	<0.300	0.300	12/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	20800	16.0	12/23/2019	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	12/23/2019	ND	218	109	200	8.26		
DRO >C10-C28*	<10.0	10.0	12/23/2019	ND	220	110	200	6.72		
EXT DRO >C28-C36	<10.0	10.0	12/23/2019	ND						

Surrogate: 1-Chlorooctane 117 % 41-142

Surrogate: 1-Chlorooctadecane 128 % 37.6-147

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Analytical Results For:

Safety & Environmental Solutions
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 Fax To: (575) 393-4388

Received:	12/20/2019	Sampling Date:	12/19/2019
Reported:	12/30/2019	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: AH - 13 1' (H904254-13)

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	12/23/2019	ND	1.64	82.2	2.00	16.6	
Toluene*	<0.050	0.050	12/23/2019	ND	1.65	82.4	2.00	17.3	
Ethylbenzene*	<0.050	0.050	12/23/2019	ND	1.65	82.6	2.00	13.1	
Total Xylenes*	<0.150	0.150	12/23/2019	ND	5.00	83.3	6.00	17.1	
Total BTEX	<0.300	0.300	12/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3640	16.0	12/23/2019	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	12/23/2019	ND	218	109	200	8.26	
DRO >C10-C28*	<10.0	10.0	12/23/2019	ND	220	110	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	12/23/2019	ND					

Surrogate: 1-Chlorooctane 123 % 41-142

Surrogate: 1-Chlorooctadecane 133 % 37.6-147

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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.
QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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January 22, 2020

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: DEV-19-009

Enclosed are the results of analyses for samples received by the laboratory on 01/17/20 15:00.

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.

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' at the beginning.

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:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: SP - 1 1' (H000187-01)

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	01/20/2020	ND	1.82	91.2	2.00	14.1		
Toluene*	<0.050	0.050	01/20/2020	ND	1.89	94.5	2.00	14.3		
Ethylbenzene*	<0.050	0.050	01/20/2020	ND	1.88	94.2	2.00	13.7		
Total Xylenes*	<0.150	0.150	01/20/2020	ND	5.60	93.3	6.00	13.9		
Total BTEX	<0.300	0.300	01/20/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	01/22/2020	ND	400	100	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	01/21/2020	ND	213	106	200	0.170		
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69		
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND						

Surrogate: 1-Chlorooctane 98.7 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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 Fax To: (575) 393-4388

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: SP - 2 1' (H000187-02)

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	01/20/2020	ND	1.82	91.2	2.00	14.1		
Toluene*	<0.050	0.050	01/20/2020	ND	1.89	94.5	2.00	14.3		
Ethylbenzene*	<0.050	0.050	01/20/2020	ND	1.88	94.2	2.00	13.7		
Total Xylenes*	<0.150	0.150	01/20/2020	ND	5.60	93.3	6.00	13.9		
Total BTEX	<0.300	0.300	01/20/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1060	16.0	01/22/2020	ND	400	100	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	01/21/2020	ND	213	106	200	0.170		
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69		
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND						

Surrogate: 1-Chlorooctane 95.1 % 41-142

Surrogate: 1-Chlorooctadecane 96.2 % 37.6-147

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Analytical Results For:

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

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: SP - 3 1' (H000187-03)

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	01/20/2020	ND	1.82	91.2	2.00	14.1		
Toluene*	<0.050	0.050	01/20/2020	ND	1.89	94.5	2.00	14.3		
Ethylbenzene*	<0.050	0.050	01/20/2020	ND	1.88	94.2	2.00	13.7		
Total Xylenes*	<0.150	0.150	01/20/2020	ND	5.60	93.3	6.00	13.9		
Total BTEX	<0.300	0.300	01/20/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1090	16.0	01/22/2020	ND	400	100	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	01/21/2020	ND	213	106	200	0.170		
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69		
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND						

Surrogate: 1-Chlorooctane 97.6 % 41-142

Surrogate: 1-Chlorooctadecane 98.0 % 37.6-147

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Analytical Results For:

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

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 4 2' (H000187-04)

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	01/20/2020	ND	1.82	91.2	2.00	14.1		
Toluene*	<0.050	0.050	01/20/2020	ND	1.89	94.5	2.00	14.3		
Ethylbenzene*	<0.050	0.050	01/20/2020	ND	1.88	94.2	2.00	13.7		
Total Xylenes*	<0.150	0.150	01/20/2020	ND	5.60	93.3	6.00	13.9		
Total BTEX	<0.300	0.300	01/20/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	01/22/2020	ND	400	100	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	01/21/2020	ND	213	106	200	0.170		
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69		
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND						

Surrogate: 1-Chlorooctane 93.9 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

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Analytical Results For:

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

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 5 1' (H000187-05)

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	01/20/2020	ND	1.82	91.2	2.00	14.1		
Toluene*	<0.050	0.050	01/20/2020	ND	1.89	94.5	2.00	14.3		
Ethylbenzene*	<0.050	0.050	01/20/2020	ND	1.88	94.2	2.00	13.7		
Total Xylenes*	<0.150	0.150	01/20/2020	ND	5.60	93.3	6.00	13.9		
Total BTEX	<0.300	0.300	01/20/2020	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170		
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69		
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND						

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 89.7 % 37.6-147

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Analytical Results For:

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

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 6 1' (H000187-06)

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	01/21/2020	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	01/21/2020	ND	1.95	97.4	2.00	2.86	
Ethylbenzene*	<0.050	0.050	01/21/2020	ND	1.94	96.9	2.00	2.76	
Total Xylenes*	<0.150	0.150	01/21/2020	ND	5.76	96.0	6.00	2.53	
Total BTEX	<0.300	0.300	01/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170	
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND					

Surrogate: 1-Chlorooctane 94.0 % 41-142

Surrogate: 1-Chlorooctadecane 94.4 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 393-4388

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 7 1' (H000187-07)

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	01/21/2020	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	01/21/2020	ND	1.95	97.4	2.00	2.86	
Ethylbenzene*	<0.050	0.050	01/21/2020	ND	1.94	96.9	2.00	2.76	
Total Xylenes*	<0.150	0.150	01/21/2020	ND	5.76	96.0	6.00	2.53	
Total BTEX	<0.300	0.300	01/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4720	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170	
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND					

Surrogate: 1-Chlorooctane 95.1 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 393-4388

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 8 1' (H000187-08)

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	01/21/2020	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	01/21/2020	ND	1.95	97.4	2.00	2.86	
Ethylbenzene*	<0.050	0.050	01/21/2020	ND	1.94	96.9	2.00	2.76	
Total Xylenes*	<0.150	0.150	01/21/2020	ND	5.76	96.0	6.00	2.53	
Total BTEX	<0.300	0.300	01/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4720	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170	
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND					

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.1 % 37.6-147

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 Fax To: (575) 393-4388

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 9 1' (H000187-09)

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	01/21/2020	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	01/21/2020	ND	1.95	97.4	2.00	2.86	
Ethylbenzene*	<0.050	0.050	01/21/2020	ND	1.94	96.9	2.00	2.76	
Total Xylenes*	<0.150	0.150	01/21/2020	ND	5.76	96.0	6.00	2.53	
Total BTEX	<0.300	0.300	01/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170	
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 94.2 % 37.6-147

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 Fax To: (575) 393-4388

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 10 1' (H000187-10)

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	01/21/2020	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	01/21/2020	ND	1.95	97.4	2.00	2.86	
Ethylbenzene*	<0.050	0.050	01/21/2020	ND	1.94	96.9	2.00	2.76	
Total Xylenes*	<0.150	0.150	01/21/2020	ND	5.76	96.0	6.00	2.53	
Total BTEX	<0.300	0.300	01/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5040	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170	
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND					

Surrogate: 1-Chlorooctane 98.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.2 % 37.6-147

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 Bob Allen
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 Hobbs NM, 88240
 Fax To: (575) 393-4388

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 11 1' (H000187-11)

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	01/21/2020	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	01/21/2020	ND	1.95	97.4	2.00	2.86	
Ethylbenzene*	<0.050	0.050	01/21/2020	ND	1.94	96.9	2.00	2.76	
Total Xylenes*	<0.150	0.150	01/21/2020	ND	5.76	96.0	6.00	2.53	
Total BTEX	<0.300	0.300	01/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1460	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170	
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 97.3 % 37.6-147

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 Hobbs NM, 88240
 Fax To: (575) 393-4388

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 12 1' (H000187-12)

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	01/21/2020	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	01/21/2020	ND	1.95	97.4	2.00	2.86	
Ethylbenzene*	<0.050	0.050	01/21/2020	ND	1.94	96.9	2.00	2.76	
Total Xylenes*	<0.150	0.150	01/21/2020	ND	5.76	96.0	6.00	2.53	
Total BTEX	<0.300	0.300	01/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4640	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170	
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND					

Surrogate: 1-Chlorooctane 98.5 % 41-142

Surrogate: 1-Chlorooctadecane 97.8 % 37.6-147

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 Hobbs NM, 88240
 Fax To: (575) 393-4388

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 13 1' (H000187-13)

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	01/21/2020	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	01/21/2020	ND	1.95	97.4	2.00	2.86	
Ethylbenzene*	<0.050	0.050	01/21/2020	ND	1.94	96.9	2.00	2.76	
Total Xylenes*	<0.150	0.150	01/21/2020	ND	5.76	96.0	6.00	2.53	
Total BTEX	<0.300	0.300	01/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1100	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170	
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND					

Surrogate: 1-Chlorooctane 95.0 % 41-142

Surrogate: 1-Chlorooctadecane 96.2 % 37.6-147

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Analytical Results For:

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 Hobbs NM, 88240
 Fax To: (575) 393-4388

Received:	01/17/2020	Sampling Date:	01/17/2020
Reported:	01/22/2020	Sampling Type:	Soil
Project Name:	DEV-19-009	Sampling Condition:	Cool & Intact
Project Number:	DEVON - THISTLE 44	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: TT - 13 2' (H000187-14)

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	01/21/2020	ND	1.88	94.2	2.00	3.12	
Toluene*	<0.050	0.050	01/21/2020	ND	1.95	97.4	2.00	2.86	
Ethylbenzene*	<0.050	0.050	01/21/2020	ND	1.94	96.9	2.00	2.76	
Total Xylenes*	<0.150	0.150	01/21/2020	ND	5.76	96.0	6.00	2.53	
Total BTEX	<0.300	0.300	01/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	01/22/2020	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	01/21/2020	ND	213	106	200	0.170	
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	201	100	200	2.69	
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND					

Surrogate: 1-Chlorooctane 94.5 % 41-142

Surrogate: 1-Chlorooctadecane 94.1 % 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

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

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 #: Dev-19-009 Project Owner: Devon Thistle 44
 Project Location:
 P.O. #:
 Company: Same
 Attn:
 Address:
 City:
 State: Zip:
 Phone #:
 Fax #:

Sampler Name:
 FOR LAB USE ONLY
 Lab I.D. Sample I.D.
 (G)RAB OR (C)OMP. # CONTAINERS
 MATRIX: GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER:
 PRESERV. ACID/BASE: ICE / COOL OTHER:
 SAMPLING DATE TIME

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	ANALYSIS REQUEST
H000187	SP-1	1	1	X			01/17	1315	TPH 8015 EPA
	SP-2	1	1	X			1340		BTCL
	SP-3	1	1	X			1401		Chloride
	SP-4	2	1	X			0930	0950	
	SP-5	1	1	X			1015		
	SP-6	1	1	X			1035		
	SP-7	1	1	X			1050		
	SP-8	1	1	X			1110		
	SP-9	1	1	X			1135		
	SP-10	1	1	X					

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Relinquished By: *[Signature]* Date: 01/17/20 Time: 1500
 Relinquished By: *[Signature]* Date:
 Time:
 Received By: *[Signature]*
 Delivered By: (Circle One) UPS Bus Other: 3.6e #113
 Sample Condition: Cool Intact Yes No
 CHECKED BY: *[Signature]*
 Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 REMARKS:



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BIETO

ANALYSIS REQUEST

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 #: Dev-14-009 Project Owner:
 Project Name:
 Project Location:
 Sampler Name:
 FOR LAB USE ONLY

P.O. #: _____ Company: Same
 Attn: _____ Address: _____
 City: _____ State: _____ Zip: _____
 Phone #: _____ Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
H000187												
	11	7-11	1						01/17	1215	X	TPH (8015 G/L)
	12	7-12	1						01/17	1245	X	BIEX
	13	7-13	1						01/17	1300	X	Cloudy
	14	7-13	2									

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Relinquished By: son Date: 01/17/20
 Relinquished By: son Time: 15:00
 Received By: Shirley Blalock
 Date: _____ Time: _____

Delivered By: (Circle One) UPS Bus Other
 Sample Condition: Cool Intact
 Checked By: AB
 Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 REMARKS:

Analytical Report

Lab Order 2006158

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-2-V 2'

Project: Devon Thistle 44H 20811857

Collection Date: 6/1/2020 1:20:00 PM

Lab ID: 2006158-001

Matrix: SOIL

Received Date: 6/3/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	200	60		mg/Kg	20	6/11/2020 1:26:56 AM	53015
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	6/6/2020 5:04:12 AM	52871
Surr: BFB	100	70-130		%Rec	1	6/6/2020 5:04:12 AM	52871
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/5/2020 6:51:58 PM	52874
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/5/2020 6:51:58 PM	52874
Surr: DNOP	87.0	55.1-146		%Rec	1	6/5/2020 6:51:58 PM	52874
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.023		mg/Kg	1	6/6/2020 5:04:12 AM	52871
Toluene	ND	0.046		mg/Kg	1	6/6/2020 5:04:12 AM	52871
Ethylbenzene	ND	0.046		mg/Kg	1	6/6/2020 5:04:12 AM	52871
Xylenes, Total	ND	0.092		mg/Kg	1	6/6/2020 5:04:12 AM	52871
Surr: 1,2-Dichloroethane-d4	98.9	70-130		%Rec	1	6/6/2020 5:04:12 AM	52871
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	6/6/2020 5:04:12 AM	52871
Surr: Dibromofluoromethane	99.3	70-130		%Rec	1	6/6/2020 5:04:12 AM	52871
Surr: Toluene-d8	102	70-130		%Rec	1	6/6/2020 5:04:12 AM	52871

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 2006158

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-3-V 2'

Project: Devon Thistle 44H 20811857

Collection Date: 6/1/2020 2:00:00 PM

Lab ID: 2006158-002

Matrix: SOIL

Received Date: 6/3/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	6/11/2020 11:39:00 AM	53020
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/6/2020 5:33:28 AM	52871
Surr: BFB	103	70-130		%Rec	1	6/6/2020 5:33:28 AM	52871
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/5/2020 7:16:41 PM	52874
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/5/2020 7:16:41 PM	52874
Surr: DNOP	87.1	55.1-146		%Rec	1	6/5/2020 7:16:41 PM	52874
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.024		mg/Kg	1	6/6/2020 5:33:28 AM	52871
Toluene	ND	0.049		mg/Kg	1	6/6/2020 5:33:28 AM	52871
Ethylbenzene	ND	0.049		mg/Kg	1	6/6/2020 5:33:28 AM	52871
Xylenes, Total	ND	0.098		mg/Kg	1	6/6/2020 5:33:28 AM	52871
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	1	6/6/2020 5:33:28 AM	52871
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	6/6/2020 5:33:28 AM	52871
Surr: Dibromofluoromethane	95.5	70-130		%Rec	1	6/6/2020 5:33:28 AM	52871
Surr: Toluene-d8	103	70-130		%Rec	1	6/6/2020 5:33:28 AM	52871

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 **2006158**

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-6-V 2'

Project: Devon Thistle 44H 20811857

Collection Date: 6/1/2020 9:55:00 AM

Lab ID: 2006158-003

Matrix: SOIL

Received Date: 6/3/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	150	60		mg/Kg	20	6/11/2020 11:52:00 AM	53020
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/6/2020 6:02:57 AM	52871
Surr: BFB	99.3	70-130		%Rec	1	6/6/2020 6:02:57 AM	52871
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/5/2020 7:41:16 PM	52874
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/5/2020 7:41:16 PM	52874
Surr: DNOP	86.3	55.1-146		%Rec	1	6/5/2020 7:41:16 PM	52874
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.024		mg/Kg	1	6/6/2020 6:02:57 AM	52871
Toluene	ND	0.048		mg/Kg	1	6/6/2020 6:02:57 AM	52871
Ethylbenzene	ND	0.048		mg/Kg	1	6/6/2020 6:02:57 AM	52871
Xylenes, Total	ND	0.097		mg/Kg	1	6/6/2020 6:02:57 AM	52871
Surr: 1,2-Dichloroethane-d4	97.8	70-130		%Rec	1	6/6/2020 6:02:57 AM	52871
Surr: 4-Bromofluorobenzene	92.5	70-130		%Rec	1	6/6/2020 6:02:57 AM	52871
Surr: Dibromofluoromethane	93.2	70-130		%Rec	1	6/6/2020 6:02:57 AM	52871
Surr: Toluene-d8	100	70-130		%Rec	1	6/6/2020 6:02:57 AM	52871

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 **2006158**

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-7-V 2'

Project: Devon Thistle 44H 20811857

Collection Date: 6/1/2020 10:15:00 AM

Lab ID: 2006158-004

Matrix: SOIL

Received Date: 6/3/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	150	60		mg/Kg	20	6/11/2020 12:04:00 PM	53020
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/6/2020 6:32:09 AM	52871
Surr: BFB	97.8	70-130		%Rec	1	6/6/2020 6:32:09 AM	52871
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/5/2020 8:05:46 PM	52874
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/5/2020 8:05:46 PM	52874
Surr: DNOP	87.9	55.1-146		%Rec	1	6/5/2020 8:05:46 PM	52874
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.024		mg/Kg	1	6/6/2020 6:32:09 AM	52871
Toluene	ND	0.048		mg/Kg	1	6/6/2020 6:32:09 AM	52871
Ethylbenzene	ND	0.048		mg/Kg	1	6/6/2020 6:32:09 AM	52871
Xylenes, Total	ND	0.095		mg/Kg	1	6/6/2020 6:32:09 AM	52871
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	6/6/2020 6:32:09 AM	52871
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	6/6/2020 6:32:09 AM	52871
Surr: Dibromofluoromethane	102	70-130		%Rec	1	6/6/2020 6:32:09 AM	52871
Surr: Toluene-d8	103	70-130		%Rec	1	6/6/2020 6:32:09 AM	52871

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 **2006158**

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-8-V 2'

Project: Devon Thistle 44H 20811857

Collection Date: 6/1/2020 10:35:00 AM

Lab ID: 2006158-005

Matrix: SOIL

Received Date: 6/3/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	6/11/2020 12:17:00 PM	53020
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/6/2020 7:01:38 AM	52871
Surr: BFB	101	70-130		%Rec	1	6/6/2020 7:01:38 AM	52871
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/5/2020 8:30:11 PM	52874
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/5/2020 8:30:11 PM	52874
Surr: DNOP	87.8	55.1-146		%Rec	1	6/5/2020 8:30:11 PM	52874
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.023		mg/Kg	1	6/6/2020 7:01:38 AM	52871
Toluene	ND	0.047		mg/Kg	1	6/6/2020 7:01:38 AM	52871
Ethylbenzene	ND	0.047		mg/Kg	1	6/6/2020 7:01:38 AM	52871
Xylenes, Total	ND	0.093		mg/Kg	1	6/6/2020 7:01:38 AM	52871
Surr: 1,2-Dichloroethane-d4	98.6	70-130		%Rec	1	6/6/2020 7:01:38 AM	52871
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	6/6/2020 7:01:38 AM	52871
Surr: Dibromofluoromethane	97.3	70-130		%Rec	1	6/6/2020 7:01:38 AM	52871
Surr: Toluene-d8	105	70-130		%Rec	1	6/6/2020 7:01:38 AM	52871

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 **2006158**

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-9-V 2'

Project: Devon Thistle 44H 20811857

Collection Date: 6/1/2020 11:10:00 AM

Lab ID: 2006158-006

Matrix: SOIL

Received Date: 6/3/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	150	60		mg/Kg	20	6/11/2020 12:29:00 PM	53020
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/6/2020 7:30:57 AM	52871
Surr: BFB	100	70-130		%Rec	1	6/6/2020 7:30:57 AM	52871
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/6/2020 8:22:23 AM	52911
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/6/2020 8:22:23 AM	52911
Surr: DNOP	84.4	55.1-146		%Rec	1	6/6/2020 8:22:23 AM	52911
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	6/6/2020 7:30:57 AM	52871
Toluene	ND	0.050		mg/Kg	1	6/6/2020 7:30:57 AM	52871
Ethylbenzene	ND	0.050		mg/Kg	1	6/6/2020 7:30:57 AM	52871
Xylenes, Total	ND	0.099		mg/Kg	1	6/6/2020 7:30:57 AM	52871
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	6/6/2020 7:30:57 AM	52871
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	6/6/2020 7:30:57 AM	52871
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	6/6/2020 7:30:57 AM	52871
Surr: Toluene-d8	104	70-130		%Rec	1	6/6/2020 7:30:57 AM	52871

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 2006158

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-10-V 2'

Project: Devon Thistle 44H 20811857

Collection Date: 6/1/2020 12:00:00 PM

Lab ID: 2006158-007

Matrix: SOIL

Received Date: 6/3/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	200	60		mg/Kg	20	6/11/2020 12:41:00 PM	53020
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/6/2020 3:32:29 PM	52871
Surr: BFB	103	70-130		%Rec	1	6/6/2020 3:32:29 PM	52871
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/6/2020 9:34:36 AM	52911
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/6/2020 9:34:36 AM	52911
Surr: DNOP	94.2	55.1-146		%Rec	1	6/6/2020 9:34:36 AM	52911
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.024		mg/Kg	1	6/6/2020 3:32:29 PM	52871
Toluene	ND	0.048		mg/Kg	1	6/6/2020 3:32:29 PM	52871
Ethylbenzene	ND	0.048		mg/Kg	1	6/6/2020 3:32:29 PM	52871
Xylenes, Total	ND	0.096		mg/Kg	1	6/6/2020 3:32:29 PM	52871
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%Rec	1	6/6/2020 3:32:29 PM	52871
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	6/6/2020 3:32:29 PM	52871
Surr: Dibromofluoromethane	93.0	70-130		%Rec	1	6/6/2020 3:32:29 PM	52871
Surr: Toluene-d8	107	70-130		%Rec	1	6/6/2020 3:32:29 PM	52871

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 2006158

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-11-V 2'

Project: Devon Thistle 44H 20811857

Collection Date: 6/1/2020 12:15:00 PM

Lab ID: 2006158-008

Matrix: SOIL

Received Date: 6/3/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	6/11/2020 12:54:00 PM	53020
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/6/2020 4:02:16 PM	52871
Surr: BFB	102	70-130		%Rec	1	6/6/2020 4:02:16 PM	52871
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/6/2020 9:58:40 AM	52911
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/6/2020 9:58:40 AM	52911
Surr: DNOP	126	55.1-146		%Rec	1	6/6/2020 9:58:40 AM	52911
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.023		mg/Kg	1	6/6/2020 4:02:16 PM	52871
Toluene	ND	0.047		mg/Kg	1	6/6/2020 4:02:16 PM	52871
Ethylbenzene	ND	0.047		mg/Kg	1	6/6/2020 4:02:16 PM	52871
Xylenes, Total	ND	0.094		mg/Kg	1	6/6/2020 4:02:16 PM	52871
Surr: 1,2-Dichloroethane-d4	95.9	70-130		%Rec	1	6/6/2020 4:02:16 PM	52871
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	6/6/2020 4:02:16 PM	52871
Surr: Dibromofluoromethane	95.9	70-130		%Rec	1	6/6/2020 4:02:16 PM	52871
Surr: Toluene-d8	108	70-130		%Rec	1	6/6/2020 4:02:16 PM	52871

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 2006158

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: TT-12-V 2'

Project: Devon Thistle 44H 20811857

Collection Date: 6/1/2020 1:00:00 PM

Lab ID: 2006158-009

Matrix: SOIL

Received Date: 6/3/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	61		mg/Kg	20	6/11/2020 1:06:00 PM	53020
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/6/2020 4:32:12 PM	52871
Surr: BFB	106	70-130		%Rec	1	6/6/2020 4:32:12 PM	52871
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/6/2020 10:22:49 AM	52911
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/6/2020 10:22:49 AM	52911
Surr: DNOP	101	55.1-146		%Rec	1	6/6/2020 10:22:49 AM	52911
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.023		mg/Kg	1	6/6/2020 4:32:12 PM	52871
Toluene	ND	0.047		mg/Kg	1	6/6/2020 4:32:12 PM	52871
Ethylbenzene	ND	0.047		mg/Kg	1	6/6/2020 4:32:12 PM	52871
Xylenes, Total	ND	0.094		mg/Kg	1	6/6/2020 4:32:12 PM	52871
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	6/6/2020 4:32:12 PM	52871
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	6/6/2020 4:32:12 PM	52871
Surr: Dibromofluoromethane	98.6	70-130		%Rec	1	6/6/2020 4:32:12 PM	52871
Surr: Toluene-d8	110	70-130		%Rec	1	6/6/2020 4:32:12 PM	52871

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		



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

May 11, 2020

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

RE: Devon Thistle 44H

OrderNo.: 2005118

Dear Dave Boyer:

Hall Environmental Analysis Laboratory received 22 sample(s) on 5/5/2020 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 14 Surface North Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 10:00:00 AM

Lab ID: 2005118-001

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	5/7/2020 6:29:03 PM	52330

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 2005118

Date Reported: 5/11/2020

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Safety & Environmental Solutions**Client Sample ID:** AH- 14 1' North Wall**Project:** Devon Thistle 44H**Collection Date:** 4/24/2020 10:10:00 AM**Lab ID:** 2005118-002**Matrix:** SOIL**Received Date:** 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	5/7/2020 8:57:59 PM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 15 Surface North Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 10:15:00 AM

Lab ID: 2005118-003

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	220	60		mg/Kg	20	5/7/2020 10:00:00 PM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 15 1' North Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 10:25:00 AM

Lab ID: 2005118-004

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	5/7/2020 10:37:14 PM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 16 Surface North Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 10:30:00 AM

Lab ID: 2005118-005

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	260	60		mg/Kg	20	5/7/2020 10:49:38 PM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 16 1' North Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 10:45:00 AM

Lab ID: 2005118-006

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	5/7/2020 11:02:03 PM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 17 Surface North Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 10:55:00 AM

Lab ID: 2005118-007

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	61	60		mg/Kg	20	5/7/2020 11:14:28 PM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 17 1' North Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 11:00:00 AM

Lab ID: 2005118-008

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	180	60		mg/Kg	20	5/7/2020 11:26:53 PM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 18 Surface South Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 11:10:00 AM

Lab ID: 2005118-009

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	5/8/2020 12:04:06 AM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 18 1' South wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 11:20:00 AM

Lab ID: 2005118-010

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	5/8/2020 12:16:31 AM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 19 Surface South Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 11:25:00 AM

Lab ID: 2005118-011

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	440	60		mg/Kg	20	5/8/2020 12:28:55 AM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 19 1' South Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 11:35:00 AM

Lab ID: 2005118-012

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	180	59		mg/Kg	20	5/8/2020 12:41:20 AM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 20 Surface South Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 11:40:00 AM

Lab ID: 2005118-013

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	440	60		mg/Kg	20	5/8/2020 12:53:44 AM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 20 1' South Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 11:55:00 AM

Lab ID: 2005118-014

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	170	60		mg/Kg	20	5/8/2020 1:06:08 AM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 21 Surface South Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 12:05:00 PM

Lab ID: 2005118-015

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	60	60		mg/Kg	20	5/8/2020 1:18:33 AM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 21 1' South Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 12:10:00 PM

Lab ID: 2005118-016

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	180	60		mg/Kg	20	5/8/2020 1:30:57 AM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 22 Surface West Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 12:20:00 PM

Lab ID: 2005118-017

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	440	60		mg/Kg	20	5/8/2020 1:43:22 AM	52340

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 22 1' West Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 12:35:00 PM

Lab ID: 2005118-018

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	5/8/2020 1:55:47 AM	52340

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

Analytical Report

Lab Order **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 23 Surface North Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 12:40:00 PM

Lab ID: 2005118-019

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	59		mg/Kg	20	5/8/2020 1:33:51 PM	52349

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 23 1' North Wall

Project: Devon Thistle 44H

Collection Date: 4/24/2020 12:55:00 PM

Lab ID: 2005118-020

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	190	60		mg/Kg	20	5/8/2020 2:10:53 PM	52349

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 **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 24 Surface B/G

Project: Devon Thistle 44H

Collection Date: 4/24/2020 2:30:00 PM

Lab ID: 2005118-021

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	5/8/2020 2:23:14 PM	52349

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

Analytical Report

Lab Order **2005118**

Date Reported: **5/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: AH- 24 1' B/G

Project: Devon Thistle 44H

Collection Date: 4/24/2020 2:35:00 PM

Lab ID: 2005118-022

Matrix: SOIL

Received Date: 5/5/2020 8:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	5/8/2020 2:35:35 PM	52349

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

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

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

WO#: 2005118

11-May-20

Client: Safety & Environmental Solutions**Project:** Devon Thistle 44H

Sample ID: MB-52330	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 52330	RunNo: 68738								
Prep Date: 5/7/2020	Analysis Date: 5/7/2020	SeqNo: 2378180	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-52330	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 52330	RunNo: 68738								
Prep Date: 5/7/2020	Analysis Date: 5/7/2020	SeqNo: 2378181	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.7	90	110			

Sample ID: MB-52340	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 52340	RunNo: 68738								
Prep Date: 5/7/2020	Analysis Date: 5/7/2020	SeqNo: 2378215	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-52340	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 52340	RunNo: 68738								
Prep Date: 5/7/2020	Analysis Date: 5/7/2020	SeqNo: 2378216	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

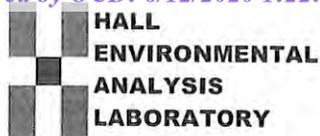
Sample ID: MB-52349	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 52349	RunNo: 68767								
Prep Date: 5/8/2020	Analysis Date: 5/8/2020	SeqNo: 2379373	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-52349	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 52349	RunNo: 68767								
Prep Date: 5/8/2020	Analysis Date: 5/8/2020	SeqNo: 2379374	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Qualifiers:

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

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



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

Sample Log-In Check List

Client Name: **Safety Env Solutions** Work Order Number: **2005118** RcptNo: 1

Received By: **Emily Mocho** 5/5/2020 8:59:00 AM
 Completed By: **Desiree Dominguez** 5/5/2020 10:16:24 AM
 Reviewed By: *LB* *5/5/20* *DD*

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No NA
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

IO
 # of preserved bottles checked for pH: *5/5/20*
 (<2 or >12 unless noted)
 Adjusted?
 Checked by:

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Not Present			

Chain-of-Custody Record

Client: Safety & Construction
Solution
 Mailing Address: 703 E. Clinton
Albuquerque, NM 88240
 Phone #: 575-397-0510
 email or Fax#: _____
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: AZ Compliance Other
 NELAC Other
 EDD (Type) _____

Turn-Around Time: 5 days
 Standard Rush
 Project Name: Dev
Thru site #44 H
 Project #: DEV-19-009
 Project Manager: Allen Bob
 Sampler: Sam Jung
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including cp): 1.9-0.1 = 1.8 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
07/24	1000	S	AAH-14 ^{Surface} North Wall	1	Ice	2005118 -001
	1010	S	AAH-14 ^{Surface} North Wall	1		-002
	1015	S	AAH-15 ^{Surface} North Wall	1		-003
	1025	S	AAH-15 ^{Surface} North Wall	1		-004
	1030	S	AAH-16 ^{Surface} North Wall	1		-005
	1045	S	AAH-16 ^{Surface} North Wall	1		-006
	1055	S	AAH-17 ^{Surface} North Wall	1		-007
	1100	S	AAH-17 ^{Surface} North Wall	1		-008
	1110	S	AAH-18 ^{Surface} North Wall	1		-009
	1120	S	AAH-18 ^{Surface} North Wall	1		-010
	1125	S	AAH-19 ^{Surface} North Wall	1		-011
07/24	1135	S	AAH-19 ^{Surface} North Wall	1		-012

Relinquished by: Sam Jung Date: 07/04 0800
 Relinquished by: Sam Jung Date: 07/04 1900
 Received by: Sam Jung Date: 5/4/20 1500
 Received by: Sam Jung Date: 5/4/20 1500
 Via: Sam Jung
 Received by: Sam Jung Date: 5/5/20 8:59
 Received by: Sam Jung Date: 5/5/20 8:59
 Via: Sam Jung

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
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Remarks: Samples are numbered Dev
AAH-14 thru AAH-23
Number are hard to read
had to go over the other Number

Chain-of-Custody Record

Client: Safety & Environmental Solutions
 Mailing Address: 703 E. Clinton
Debbie NM 88200
 Phone #: 575-397-0510

email or Fax#: _____
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: Az Compliance Other
 NELAC Other
 EDD (Type) _____

Turn-Around Time: 5 days
 Standard Rush

Project Name: Devon Thruster #4 A

Project #: DEV-19-009

Project Manager: Allen Rob

Sampler: Sax
 On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 1.9-0.1 = 1.8 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
04/29	1140	S	AH-20 <u>Surface South West</u>	1	<u>Flu</u>	2005118 -013
	1155	S	AH-20 <u>1st South West</u>	1		-014
	1205	S	AH-21 <u>Surface South West</u>	1		-015
	1210	S	AH-21 <u>1st South West</u>	1		-016
	1220	S	AH-22 <u>Surface South West</u>	1		-017
	1230	S	AH-22 <u>1st South West</u>	1		-018
	1240	S	AH-23 <u>Surface South West</u>	1		-019
	1255	S	AH-23 <u>1st South West</u>	1		-020
	1430	S	AH-24 <u>Surface B/G</u>	1		-021
05/24	1435	S	AH-24 <u>1st B/G</u>	1		-022

Date: 05/04 Time: 0800 Relinquished by: Sax
 Date: 5/4/20 Time: 1900 Relinquished by: [Signature]

Received by: Sax Date: 5/4/20 Time: 1500
 Received by: UKM Courier Date: 5/12/20 Time: 8:59

Remarks: Devon



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTEX / 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 ₃ , NO ₂ , PO ₄ , SO ₄	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	<u>[Signature]</u>

From: [Bratcher, Mike, EMNRD](#)
To: [Bynum, Tom \(Contract\)](#); [Venegas, Victoria, EMNRD](#); [Hamlet, Robert, EMNRD](#); [Billings, Bradford, EMNRD](#); [Griswold, Jim, EMNRD](#); [Eads, Cristina, EMNRD](#); [Marcus, Ramona, EMNRD](#)
Cc: [Robison, Jason](#); [Davis, Amanda](#); [Mathews, Wesley](#); [Carrasco, Lupe](#); [DeHoyos, Kendra](#); [Bob Allen](#); [Kathy Purvis](#)
Subject: RE: [EXTERNAL] RE: Rejection for work plan on incidents NRM2003159278 & NAB1905153070
Date: Tuesday, May 12, 2020 7:43:49 AM
Attachments: [Procedures For Implementation of the Spill Rule.pdf](#)

RE: Devon Thistle Unit 44H * 30-025-41032 * N-33-23s-33e

Release 1 ID: nAB1905153070 * DOR: 02/05/2019

Release 2 ID: nRM2003159278* DOR: 11/24/2019

Mr. Bynum,

I would like to preface this response by saying, one of the Division's goals is to bring some much needed consistency to the entire remedial process. The idea is to allow industry to know what is expected for remedial projects and provide a road map for regulatory reviewers to follow during the review process. A proposal submitted to the state and reviewed by any regulatory reviewer in the state, should yield the same response.

This project encompasses two releases at this well site. The incident numbers and dates of release have been listed above.

- **Please note both of these release incidents are currently in violation of 19.15.29.11 A.**

This portion of the spill rule requires site characterization and a remediation proposal be submitted to the Division within 90 days of the discovery of the release, or site characterization with a closure report be submitted to the Division within 90 days of discovery of the release. The first release is well over one year out of compliance, with the second release almost 90 days past compliance requirements. Provisions are available to request extensions to these time frames, for good cause, but Devon chose not to exercise this option with either release.

Aside from the compliance issues, it is important to note here that a site characterization is required for either option chosen (site characterization with remediation proposal, or site characterization with closure report).

Site characterization includes horizontal definition of the impacted soil. Devon has proposed using "visual identification" to determine the horizontal extent of impact. This is not a method that the Division will accept for making this determination. This method is especially not adequate in this instance since there are two releases being investigated and one of them is over a year old. There is no indication in the proposal as to whether both releases followed the same flow path or not. If both releases followed the same flow path, and this flow path is what has been outlined in yellow on the drone image of the well site, based on this image, the Division requests Devon investigate the area directly adjacent to the tank battery on the east side. The staining visible in this area looks much the same as the area that has been outlined in yellow, and identified as the area of concern. Devon has also proposed determining horizontal characterization by comparing sample data from outside the visually identified area of impact, to sample data from inside the visually identified area of impact.

This method is also not acceptable for reasons including but not limited to, it's reliance on visual identification of the impact.

The acceptable method for determining horizontal extent is with data. Visual identification may be viable in estimating the release volume for initial reporting purposes, but for characterization, data will be required. To determine the horizontal extent, a "clean" sample is required. For the sake of consistency, the Division will consider a sample "clean" if it meets the more stringent requirements listed in Table 1. For chloride values, natural background levels will be considered. Also, for the initial horizontal characterization, these samples are typically obtained in upper portion of the soil profile. Side wall samples are utilized during the remediation phase of the project to insure adequate excavation has been performed, and, to insure horizontal definition has been defined at depth.

Mr. Allen has argued that delineation outside of the visually identified area of concern may lead to discovery of impacted materials not associated with the release being investigated. In the event this does occur, the responsible party is also responsible for remediation of these impacts. This is especially applicable here, since Devon has been the sole operator of this well site.

Depth to groundwater at this site has not been determined:

The remediation proposal contains one sentence in defining depth to groundwater. It states:

"Based on the trend map and the USGS web interface, depth to groundwater in this area is over 100 feet."

The proposal contains a screen shot of the Chevron/Texaco Trend Map and a USGS data sheet on one water well that is approximately 2.5 miles from the release site, to the north east. The distance to this water well from the release site should have been clearly stated in the proposal. It was not. The trend map (Chevron/Texaco 2004) is not an acceptable means for determining depth to groundwater. It is a tool that may have some value as a quick reference guide, however, the Division does not consider it factual evidence of depth to ground water. The Division also notes that there exists USGS and OSE data on water wells approximately 1.5 miles from the release site to the south east. This data indicates groundwater may be encountered at less than 50' from surface, with the potential to be less than 25' from surface. Why was this data not considered or at least referenced, since it is closer to the release site?

19.15.29.11 NMAC is the portion of the spill rule that requires site assessment/characterization. In regard to depth to ground water, if the exact depth to ground water is unknown, the responsible party must provide a reasonable determination of probable depth to ground water. The rule lists several methods to be utilized in making this determination, but the method used must be as approved by the appropriate division district office. The rule also requires the responsible party to identify all known water sources within one half mile of the release.

The Division would prefer to have some standardization, again for the sake of consistency, as to what is expected when determining depth to ground water. Industry will know what is expected and reviewers will know what to look for. This eliminates leaving this type decision up to each reviewer. If a single water well is going to be used to make this determination, the Division will require that well be within one half mile of the release, otherwise, an alternative method will be required. The

only way to make an exact determination in the event data is severely lacking, will be to advance an exploratory boring. The responsible party may choose to remediate to the more stringent levels listed in Table 1 in lieu of determining depth to groundwater.

This remediation proposal has been denied due to an incomplete characterization of impact, and an inadequate investigation into the potential depth to ground water at the release site.

This denial remains in effect. At this time, the Division requests that Devon resubmit a complete site characterization, along with either a remediation proposal, or a closure request, based on site characterization criteria, which includes a determination of the depth to ground water at this site. This submittal is due not later than thirty (30) days from the date of this correspondence.

Please review the applicable portions of 19.15.29 NMAC as well as OCD guidance document titled "Procedures for Implementation of the Spill Rule". Both documents are available on the OCD web site. I have attached the guidance document for convenience. Please see paragraph IX of this document regarding determining depth to ground water.

Devon's cooperation in this matter is greatly appreciated.

Best Regards,

Mike Bratcher
NMOCD NM South
811 South First Street
Artesia, NM 88210
575-748-1283 Ext 108
575-626-0857 Cell

Hobbs Office:
1625 North French Drive
Hobbs NM 88240
575-393-6161

From: Bynum, Tom (Contract) <Tom.Bynum@dvn.com>

Sent: Friday, May 1, 2020 3:04 PM

To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>; Marcus, Ramona, EMNRD <Ramona.Marcus@state.nm.us>

Cc: Robison, Jason <Jason.Robison@dvn.com>; Davis, Amanda <Amanda.Davis@dvn.com>; Mathews, Wesley <Wesley.Mathews@dvn.com>; Carrasco, Lupe <Lupe.Carrasco@dvn.com>; DeHoyos, Kendra <Kendra.DeHoyos@dvn.com>; Bob Allen <ballen@sesi-nm.com>; Kathy Purvis <office2@sesi-nm.com>

Subject: [EXT] Re: [EXTERNAL] RE: Rejection for work plan on incidents NRM2003159278 & NAB1905153070

Mr. Bratcher,

Thanks to you and your team for your time and consideration, we look forward to the Division's response and guidance.

Thank you,

Tom Bynum
580-748-1613

From: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>

Sent: Friday, May 1, 2020 2:58:28 PM

To: Bynum, Tom (Contract) <Tom.Bynum@dmv.com>; Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>; Marcus, Ramona, EMNRD <Ramona.Marcus@state.nm.us>

Cc: Robison, Jason <Jason.Robison@dmv.com>; Davis, Amanda <Amanda.Davis@dmv.com>; Mathews, Wesley <Wesley.Mathews@dmv.com>; Carrasco, Lupe <Lupe.Carrasco@dmv.com>; DeHoyos, Kendra <Kendra.DeHoyos@dmv.com>; Bob Allen <ballen@sesi-nm.com>; Kathy Purvis <office2@sesi-nm.com>

Subject: [EXTERNAL] RE: Rejection for work plan on incidents NRM2003159278 & NAB1905153070

Mr. Bynum,

The Division will consider the issues Devon has presented and will be in touch once we have had time to evaluate the concerns Devon has expressed. I would not expect to have a determination until sometime next week at the earliest.

Devon's patience in this matter is greatly appreciated.

Best Regards,

Mike Bratcher
NMOCD NM South
811 South First Street
Artesia, NM 88210
575-748-1283 Ext 108
575-626-0857 Mobile

1625 North French Drive
Hobbs, NM 88240
575-393-6161

AMERICA STRONG

From: Bynum, Tom (Contract) <Tom.Bynum@dvn.com>
Sent: Friday, May 1, 2020 12:30 PM
To: Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>; Marcus, Ramona, EMNRD <Ramona.Marcus@state.nm.us>
Cc: Robison, Jason <Jason.Robison@dvn.com>; Davis, Amanda <Amanda.Davis@dvn.com>; Mathews, Wesley <Wesley.Mathews@dvn.com>; Carrasco, Lupe <Lupe.Carrasco@dvn.com>; DeHoyos, Kendra <Kendra.DeHoyos@dvn.com>; Bob Allen <ballen@sesi-nm.com>; Kathy Purvis <office2@sesi-nm.com>
Subject: [EXT] Rejection for work plan on incidents NRM2003159278 & NAB1905153070

Dear Victoria,

After much discussion within our team and with our consulting firm, we would like to express a couple more concerns regarding the rejection of the remediation plan for the incidents on the Thistle Unit 44H. Incident #s are NRM2003159278 and NAB1905153070.

In the matter of the “depth to ground water determination:”

- [19.15.29.11](#) does not mention water wells no further than ½ mile from the site, and data no more than 25 years old, and providing well construction information. Devon strives to stay compliant with regulations, however, those are prescriptive protocols that are not listed in the regulation for the general public to follow. The consultant on this project used a reasonable determination based on published well data from the US Geological Service.

Copied from your response in the previous email:

- **Please, see [19.15.29.11](#) SITE ASSESSMENT/CHARACTERIZATION: Depth to ground water. The responsible party must determine the depth to ground water where the release occurred. If the exact depth to ground water is unknown, the responsible party must provide a reasonable determination of probable ground water depth using data generated by numeric models, cathodic well lithology, water well data, published information or other tools as approved by the appropriate division district office. If the responsible party uses water well data, the responsible party must provide all pertinent well information.**

If the OCD still does not agree with our initial determination, then we would like to utilize a method of “triangulation” in order to determine our depth to ground water in this case. We would do this by combining water well data from wells that surround this incident’s location. This would provide more than a reasonable determination of the ground water depth in the area of these releases. Would the OCD agree with this method?

In the matter of “horizontal delineation:”

- We’re confused in the ambiguity of the recommended remediation action level for horizontal delineation. Horizontal and vertical delineation are specifically addressed in [19.15.29.11](#) (A)(5) (b) “the responsible party must delineate the release horizontally and vertically using Table I of [19.15.29.12](#) NMAC constituents”... The remediation plan clearly shows vertical delineation on pad to less than 20,000 mg/kg however it does not indicate a clear sidewall sample. It is

hard to make the argument for approval without a sidewall sample however based on the citation the sample should meet the constraints of Table 1.

Copied from your response in the previous email:

- **Samples can be collected during the remediation process. In respect to horizontal delineation, it has not been completed. While vertical definition of contamination that may be acceptable is almost exclusively driven by depth to water, as determined, and as driven by Table I in the spill rule, horizontal definition is different. The edges (horizontal definition) of a liquid release must be determined as well. The only value for determination of horizontal impact are derived by either "background" value as determined appropriate to Rule 29, or, for chloride, 600 mg/Kg in soils. Therefore, horizontal soils delineation for chloride should be 600 mg/kg (again, or background) for all liquid releases, either on or off production pad. It is conceivable that in determining the horizontal extent of chloride that the edge of the production pad may be encountered, if last sample taken on pad limit, sample(s) must be obtained off pad to determine extent of release. If horizontal delineation samples on pad eventually reach a mechanical barrier, (such as pipeline or battery) sample(s) should be obtained as near as possible on the linear opposite side of said barrier and as close as possible to the barrier.**

It is conceivable that a liquid release may occur with, for example, a surface soil chloride of 19,000 mg/Kg, and if it is reliably determined that groundwater is over 101 feet below ground surface, then that value may stand as a vertical definition, but nonetheless, the horizontal value(s) for lateral extent of liquid release would still, of Rule 29 necessity, be 600 mg/Kg chloride or less. This would be inclusive of both "on-pad" of "off-pad" release area. The above is laboratory data driven, not just reported visual extent of a liquid release or calculated and reported release volumes. As indicated in the spill rule, a scaled map with horizontal and vertical definition of actual laboratory values is required.

Generally, the top one foot sample suffices for immediate horizontal evaluation and deeper contamination would likely be identified during actual remediation.

We would have no problem at all giving you the full horizontal delineation of these releases if we could be granted approval to start on the remediation. This would allow us to gather sidewall samples during the excavation process that would be the most accurate in obtaining the true horizontal extent of these releases. We are currently working on gathering more samples here for the purpose of having full delineation, as well as gathering a background sample or two to help us be as accurate as possible to what our closure criteria will be.

Thank you,

**TOM BYNUM
EHS CONTRACTOR
580-748-1613**

Devon - Internal

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recipient(s), are confidential, and may be privileged. If you are not the intended recipient, you are hereby notified that any review, retransmission, conversion to hard copy, copying, circulation or other use of all or any portion of this message and any attachments is strictly prohibited. If you are not the intended recipient, please notify the sender immediately by return e-mail, and delete this message and any attachments from your system. This message was sent by a contractor of Devon Energy Corporation or one of its affiliate or subsidiaries ("Devon") and does not convey that contractor has the actual, implied, or apparent authority to contract on behalf of Devon. No agreement with Devon shall be of any force or effect unless it is signed by a duly authorized representative of Devon.

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District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

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

Incident ID	nAB1905153070
District RP	1RP-5372
Facility ID	
Application ID	pAB1905151532

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<b style="color: red;">UNDETERMINED <u>124</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

Incident ID	nAB1905153070
District RP	1RP-5372
Facility ID	
Application ID	pAB1905151532

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

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

Printed Name: Tom Bynum Title: EHS Consultant

Signature: *Tom Bynum* Date: 6/12/2020

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

OCD Only

Received by: _____ Date: _____

Incident ID	nAB1905153070
District RP	1RP-5372
Facility ID	
Application ID	pAB1905151532

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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Received by: _____ Date: _____

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

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

Incident ID	NRM2003159278
District RP	
Facility ID	
Application ID	

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Incident ID	NRM2003159278
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Received by: _____ Date: _____

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____