Incident Number:
nOY1814156697, 1RP-5064

Release Assessment and Deferral Request

Mesa Verde 7 Federal #002

Section 07, Township 24 South, Range 32 East
API: 30-025-32399
County: Lea
Vertex File Number: 25A-01341

Prepared for:
Devon Energy Production Company, LP

Prepared by:
Vertex Resource Services Inc.

Date:
October 2025

Release Assessment and Deferral Request
Mesa Verde 7 Federal #002
Section 07, Township 24 South, Range 32 East
API: 30-025-32399
County: Lea

Prepared for:
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October 20, 2025
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PROJECT MANAGER, REPORT REVIEWER

October 20, 2025
Date

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1.0 Introduction

Devon Energy Production Company, LP (Devon Energy) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for a crude oil release that occurred on May 2, 2018, at Mesa Verde 7 Federal #002, API: 30-025-32399 (hereafter referred to as the "site"). Devon submitted an initial C-141 Release Notifications to New Mexico Oil Conservation Division (NMOCD) District 1 on May 16, 2018. Incident ID number nOY1814156697, was assigned to this incident.

This report provides a description of the release assessment and remediation activities associated with the site. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of the *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) related to NMOCD has been met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NMOCD for deferral of this release, with the understanding that restoration of the release site will be completed following remediation activities and deferred until such time as all oil and gas activities are terminated and the site is reclaimed as per NMAC 19.15.29.13.

2.0 Incident Description

The release occurred on May 2, 2018, when an oil tank overflowed and released approximately 14.48 barrels (bbl.) of crude oil into the unlined earthen berm containment. Approximately 8 bbl. of free fluid was removed during initial clean-up. Additional details relevant to the release are presented in the C-141 Report. Daily Field Report (DFRs) and site photographs are included in Appendix B.

3.0 Site Characteristics

The site is located approximately 21.15 miles east of Malaga, New Mexico (Google Inc., 2025). The legal location for the site is Unit C, Section 07, Township 24 South and Range 32 East in Lea County, New Mexico. The release area is located on Bureau of Land Management property. An aerial photograph and site schematic are presented on Figure 1.

The location is typical of oil and gas exploration and production sites in the Permian Basin and is currently used for oil and gas production and storage. The following sections specifically describe the release area on the constructed pad west, north, and east of the tank battery and the pasture south of the constructed pad (Figure 1).

The surrounding landscape is associated with plains with elevations ranging between 3,000 and 3,900 feet. The climate is semiarid with average annual precipitation ranging between 10 and 12 inches. The dominant vegetation was determined to be grasses with shrubs (United States Department of Agriculture, Natural Resources Conservation Service, 2023). Limited to no vegetation is allowed to grow on the compacted production pad, right-of-way and access road. The surface geology at the site primarily comprises Qep – Eolian and piedmont deposits from the Holocene to middle Pleistocene ages (New Mexico Bureau of Geology and Mineral Resources, 2025) and the soil at the site is characterized as PU – Pyote and Maljamar fine sands. The soils tend to be well drained with very low potential for runoff (United States Department of Agriculture, Natural Resources Conservation Service, 2025). The karst geology potential for the site low (United States Department of the Interior, Bureau of Land Management, 2018).

4.0 Closure Criteria Determination

The depth to groundwater was determined by drilling a borehole permitted by the New Mexico Office of the State Engineer (NMOSE) within a 0.5-mile radius, 0.37 miles northeast, of the site. The borehole was advanced to a depth of 105 feet on December 14, 2023. No water was found to be present at that time. Documentation related to the exploratory borehole is included in Appendix A and Appendix B.

There is no surface water is present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is an intermittent stream located approximately 5.78 miles west of the site (United States Fish and Wildlife Service, 2025). At the site, there are no lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. Information pertaining to the closure criteria determination is summarized in Table 1 and references are included in Appendix A.

Table 1. Closure Criteria Determination			
Site Name: Mesa Verde 7 Federal #002			
Spill Coordinates: 32.23701,-103.71170		**X: 621377**	**Y: 3567435**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater (nearest reference)	**105'**	feet
	Distance between release and nearest DTGW reference	**1,950**	feet
		0.37	miles
	Date of nearest DTGW reference measurement	**December 14, 2023**	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	30,492	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	38,945	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	15,486	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	4,299	feet
	ii) Within 1000 feet of any fresh water well or spring	4,491	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	4,188	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	68,277	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	47,898	feet
10	Within a 100-year Floodplain	Undetermined	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	36,036	feet
11	Soil Type	Fine Sand, fine sandy loam	
12	Ecological Classification	Loamy Sand	
13	Geology	Eolian and piedmont deposits	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	>100'	<50' 51-100' >100'

The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 2.

Table 2. Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
> 100 feet	Chloride	20,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – total dissolved solids
TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics
BTEX – benzene, toluene, ethylbenzene and xylenes

5.0 Remedial Actions Taken

Site characterization was conducted between February 22, 2023, and April 12, 2023, which identified the area of the release specified in the initial C-141 Report and estimated the approximate volume of the release. The impacted area was determined to be approximately 38 feet long and 71 feet wide; with the total release extent approximately 1,972 square feet in size. The DFRs associated with the site inspection is included in Appendix B.

Remediation efforts began on September 3, 2025, and was finalized on September 10, 2025. Vertex personnel supervised the excavation of impacted soils. Field screening was completed on a total of 16 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and silver nitrate/electro conductivity meter (chlorides). Field screening results were used to identify areas requiring further remediation. Soils were removed to a depth of 2 to 2.5 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. DFRs documenting various phases of the remediation are presented in Appendix B.

Notification that confirmatory samples were being collected was provided to the NMOCD on August 5, 2025. Confirmation composite samples were collected from the release area in increments of no larger than 200 square feet from the base and walls of the excavations. On September 9 and 10, 2025, Vertex personnel collected 16 confirmation samples and 1 backfill samples for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Eurofins Environment Testing and Envirotech under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Laboratory results are presented in Table 4, and the laboratory data reports are included in Appendix C. All confirmatory samples collected and analyzed were below closure criteria for the site, except for WS25-04 and -05.

6.0 Deferral Request

Vertex recommends no additional remediation action to address the release at Mesa Verde 7 Federal #002 at this time until the equipment on-site is decommissioned and removed. Laboratory analyses of the confirmation samples collected from the accessible portions of the release area showed constituent of concern concentration levels below NMOCD closure criteria for areas where depth to groundwater is greater than 100 feet bgs as shown in Table 2. The accessible areas of the release area were fully remediated and backfilled with local soils. There are no anticipated risks to human, ecological or hydrological receptors associated with the release site.

Vertex, on behalf of Devon Energy Production Company, LP, requests the deferral within the containment area as it is in proximity to tank batteries and associated infrastructure. Site deconstruction will be required to complete remediation of the release. The release has been delineated with the understanding that final remediation and restoration of locations WS25-04 and WS25-05 will result in excavation of the containment area. The proposed deferral area consists of 954 square feet encompassing below the tank batteries and associated equipment. The remainder of the release will be deferred until such time as all oil and gas activities are terminated as per NMAC 19.15.29.12 and 19.15.29.13.

Vertex respectfully requests that incident (nOY1814156697) be deferred until the production equipment is retired and removed prior to reclamation. Devon certifies that all information in this report and the attachments is correct, and that they have complied with all applicable requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain deferral on the May 16, 2018, release at Mesa Verde 7 Federal #002.

Should you have any questions or concerns, please do not hesitate to contact Kent Stallings at 346.814.1413 or kstallings@vertexresource.com.

7.0 References

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8.0 Limitations

This report has been prepared for the sole benefit of Devon Energy Production Company, LP. This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division and the Bureau of Land Management, without the express written consent of Vertex Resource Services Inc. (Vertex) and Devon Energy Production Company, LP. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

FIGURES

Client Name: Devon Energy Production Company, LP
Site Name: Mesa Verde 7 Federal #002
NM OCD Tracking #: nOY1814156697
Project #: 25A-01341
Lab Reports: 2302A64, 2302B05, 2302B49, 2303177, and 2304661

Table 3. Initial Characterization Laboratory Results - Depth to Groundwater >100 feet bgs

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater >100 feet bgs							
Borehole Samples										
BH23-01	0	February 22, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	February 22, 2023	ND	ND	ND	ND	ND	ND	ND	83
	4	February 22, 2023	ND	ND	ND	ND	ND	ND	ND	130
BH23-02	0	February 22, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	February 22, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	4	February 22, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-03	0	February 22, 2023	ND	ND	ND	380	780	380	1160	ND
	2	February 22, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	4	February 22, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-04	0	February 22, 2023	ND	ND	ND	170	480	170	650	ND
	2	February 22, 2023	ND	ND	ND	2700	2200	**2700**	**4900**	ND
	4	February 22, 2023	ND	ND	ND	330	630	330	960	ND
	6	February 23, 2023	ND	ND	ND	ND	ND	ND	ND	170
	8	February 23, 2023	ND	ND	ND	25	ND	25	25	110
BH23-05	0	February 23, 2023	ND	2.64	60	930	930	990	1920	ND
	2	February 23, 2023	0.028	0.928	21	1900	2400	**1921**	**4321**	ND
	4	February 23, 2023	ND	0.16	5.2	810	1400	815.2	2215.2	ND
	6	February 23, 2023	ND	0.13	ND	350	650	350	1000	ND
	8	February 23, 2023	ND	ND	ND	290	550	290	840	ND
	10	February 24, 2023	ND	ND	ND	25	ND	25	25	88
	12	February 24, 2023	ND	ND	ND	ND	ND	ND	ND	97
BH23-06	0	February 23, 2023	ND	ND	ND	8200	5300	**8200**	**13500**	260
	2	February 23, 2023	ND	ND	ND	1500	1700	**1500**	**3200**	ND
	4	February 23, 2023	ND	ND	ND	1700	2100	**1700**	**3800**	ND
BH23-07	0	February 24, 2023	1.2	**176.2**	2300	13000	4900	**15300**	**20200**	ND
	2	February 24, 2023	ND	ND	11	370	180	381	561	ND
	4	February 24, 2023	ND	ND	ND	22	ND	22	22	ND
	6	February 24, 2023	ND	ND	ND	55	ND	55	55	ND
	7	February 24, 2023	ND	ND	ND	21	ND	21	21	ND
BH23-08	0	March 1, 2023	ND	ND	ND	91	210	91	301	ND
	2	March 1, 2023	ND	ND	ND	1300	1600	**1300**	**2900**	ND
	4	March 1, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-09	0	March 1, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 1, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	4	March 1, 2023	ND	ND	ND	ND	ND	ND	ND	ND

Client Name: Devon Energy Production Company, LP
Site Name: Mesa Verde 7 Federal #002
NM OCD Tracking #: nOY1814156697
Project #: 25A-01341
Lab Reports: 2302A64, 2302B05, 2302B49, 2303177, and 2304661

Table 3. Initial Characterization Laboratory Results - Depth to Groundwater >100 feet bgs

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater >100 feet bgs							
BH23-10	0	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	4	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-11	0	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	4	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	120
BH23-12	0	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	4	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-13	0	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	4	April 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria

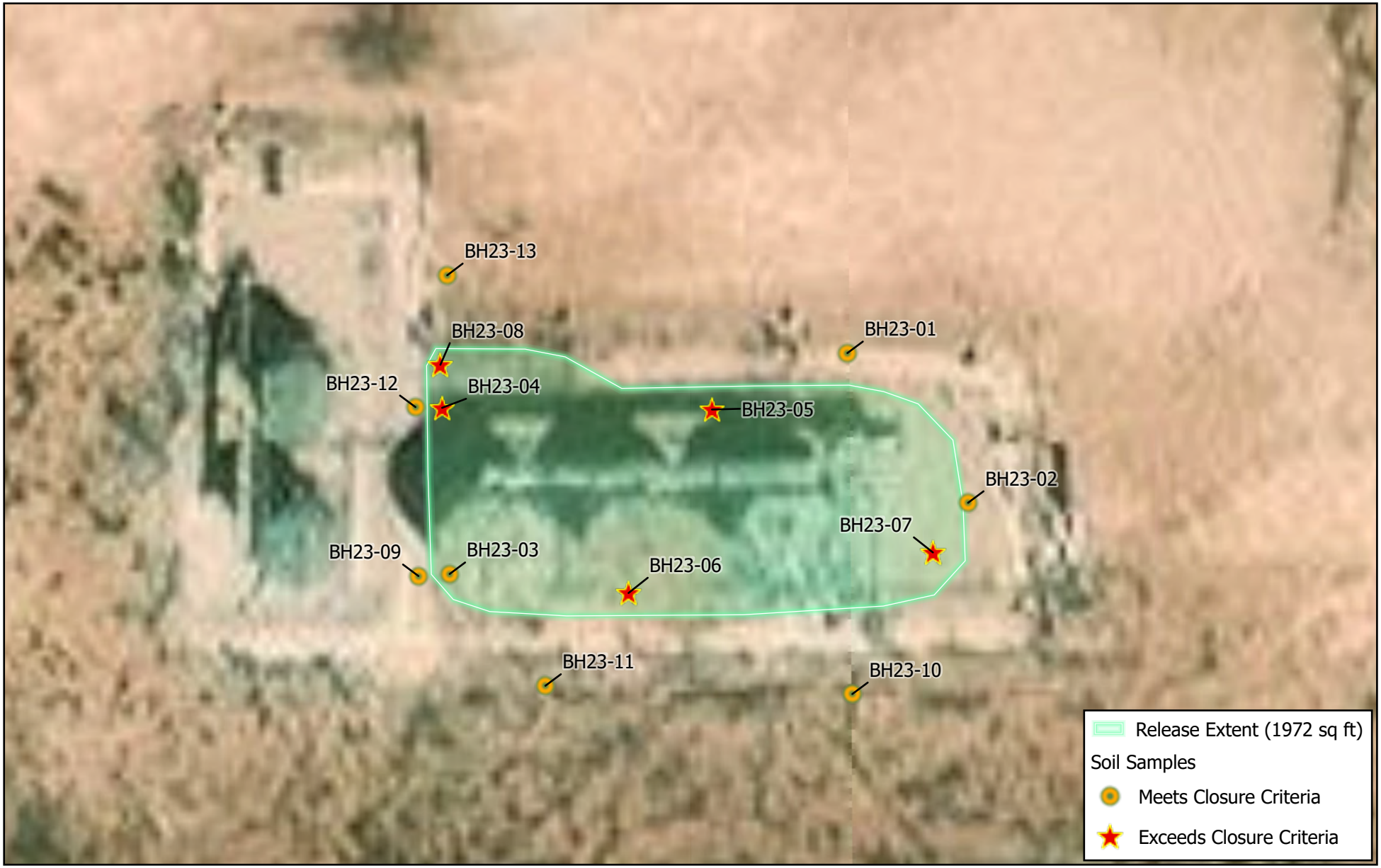
Client Name: Devon Energy Production Company, LP
Site Name: Mesa Verde 7 Federal #002
NM OCD Tracking #: nOY1814156697
Project #: 25A-01341
Lab Reports: 885-33153-1, 885-33151-1, 885-33156-1, and E509289

Table 4. Confirmatory Sample Field Screen and Laboratory Results– Depth to Groundwater > 100 feet bgs

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater >100 feet bgs										
Base Samples													
BS25-01	2.5	September 9, 2025	0	912	533	ND	ND	ND	260	370	260	630	450
BS25-02	2	September 9, 2025	0	758	626	ND	ND	ND	130	200	130	330	610
BS25-03	2	September 9, 2025	0	7	139	ND	ND	ND	ND	ND	ND	ND	140
BS25-04	2	September 9, 2025	0	858	209	ND	ND	ND	22	ND	22	22	140
BS25-05	2	September 9, 2025	0	27	59	ND	ND	ND	ND	ND	ND	ND	ND
BS25-06	2	September 9, 2025	0	618	30	ND	ND	ND	17	ND	17	17	68
BS25-07	2	September 10, 2025	0	12	125	ND	ND	ND	ND	ND	ND	ND	ND
BS25-08	2	September 10, 2025	0	27	142	ND	ND	ND	ND	ND	ND	ND	1,200
Wall Samples													
WS25-01	0-2.5	September 9, 2025	0	100	890	ND	ND	ND	36	ND	36	36	990
WS25-02	0-2	September 9, 2025	0	12	342	ND	ND	ND	ND	ND	ND	ND	190
WS25-03	0-2	September 9, 2025	0	40	150	ND	ND	ND	ND	ND	ND	ND	100
WS25-04	0-2	September 9, 2025	-	-	-	ND	ND	7.3	2,900	1,500	**2,907**	**4,407**	1,100
WS25-05	0-2	September 9, 2025	-	-	-	ND	ND	17	7,800	5,000	**7,817**	**12,817**	2,000
WS25-06	0-2	September 9, 2025	-	-	-	ND	ND	ND	190	580	190	770	200
WS25-07	0-2	September 10, 2025	-	34	200	ND	ND	ND	ND	ND	ND	ND	1,900
WS25-08	0-2	September 10, 2025	-	12	145	ND	ND	ND	ND	ND	ND	ND	330
Backfill Sample													
Backfill-01	-	September 24, 2025	-	-	-	ND	ND	ND	ND	ND	ND	ND	160

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NM OCD Closure Criteria (on-pad)
Bold and green shaded indicates exceedance outside of NM OCD Reclamation Criteria (off-pad)

TABLES



VERTEX

0 10 20 ft

NAD 1983 StatePlane New Mexico East FIPS 3001 Feet

Map Center:
Lat/Long: 32.23704°N, 103.711681°W

Date: May 16/25

N

Characterization Sampling Site Schematic
Mesa Verde 7 Federal #002

FIGURE: 1

devon

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2025. Site features from GPS, Vertex, 2025.

VERSATILITY. EXPERTISE.

VERTEX

Map Center:
Lat/Long: 32.237003°N, 103.711683°W

0 10 20 ft

NAD 1983 StatePlane New Mexico East FIPS 3001 Feet

Date: Oct 02/25

N

Confirmation Sampling Site Schematic
Mesa Verde 7 Federal #002

FIGURE: **2**

devon

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2025. Site features from GPS, Vertex, 2025.

VERSATILITY. EXPERTISE.

APPENDIX A – Closure Criteria Research Documentation

Closure Criteria Determination			
Site Name: Mesa Verde 7 Federal #002			
Spill Coordinates: 32.23701,-103.71170		**X: 621377**	**Y: 3567435**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater (nearest reference)	**105'**	feet
	Distance between release and nearest DTGW reference	**1,950**	feet
		0.37	miles
	Date of nearest DTGW reference measurement	**December 14, 2023**	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	30,492	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	38,945	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	15,486	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	4,299	feet
	ii) Within 1000 feet of any fresh water well or spring	4,491	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	4,188	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	68,277	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	47,898	feet
10	Within a 100-year Floodplain	Undetermined	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	36,036	feet
11	Soil Type	Fine Sand, fine sandy loam	
12	Ecological Classification	Loamy Sand	
13	Geology	Eolian and piedmont deposits	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	>100'	<50' 51-100' >100'

Mesa Verde 7 Federal 2 - 1,950 ft from DTGW reference

1/26/2024, 12:12:37 PM

1:14,623

0 0.1 0.2 0.4 mi

0 0.15 0.3 0.6 km

Esri, HERE, iPC, Esri, HERE, Garmin, iPC, Maxar

Online web user

This is an unofficial map from the OSE's online application.

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

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 04775 POD1		CUB	LE	4	4	4	06	24S	32E	621789	3567860	577	105		
C 04672 POD 1		CUB	ED	2	1	4	01	24S	31E	619762	3568286	1611	110		
C 03555 POD1		C	LE	2	2	1	05	24S	32E	622748	3569233	1684	600	380	220
C 04712 POD1		CUB	LE	1	4	1	31	23S	32E	620917	3570289	2078	55		
C 03530 POD1		C	LE	3	4	3	07	24S	32E	620886	3566156	2159	550		
C 04746 POD1		CUB	ED	3	4	3	36	23S	31E	619226	3569417	2439	105		
C 04687 POD1		CUB	ED	4	2	3	12	24S	31E	619481	3566450	2618	110		
C 03529 POD1		C	LE	2	4	3	29	23S	32E	622651	3571212	3216	550		
C 02405		CUB	ED		4	1	02	24S	31E	617690	3568631*	3701	275	160	115
C 02464		C	ED	2	3	1	02	24S	31E	617645	3568581	3742	320	205	115
C 02460		C	ED			3	02	24S	31E	617496	3568022*	3884	320		
C 02460 POD2		C	ED			3	02	24S	31E	617496	3568022*	3884	320		
C 03527 POD1		C	LE	1	2	3	03	24S	32E	625770	3568487	4402	500		
C 04780 POD1		CUB	LE	1	3	1	34	23S	32E	625364	3570521	4586	80		
C 03851 POD1		CUB	LE	3	3	4	20	23S	32E	622880	3572660	4649	1392	713	679
C 02348		C	ED	1	4	3	26	23S	31E	617648	3571068	4664	700	430	270
C 02350		CUB	ED		4	3	10	24S	32E	625826	3566333*	4852	60		
C 02258		C	ED		3	2	26	23S	31E	618055	3571853*	4889	662		

Average Depth to Water: **377 feet**
Minimum Depth: **160 feet**
Maximum Depth: **713 feet**

Record Count: 18

UTMNAD83 Radius Search (in meters):

Easting (X): 621373 **Northing (Y):** 3568261 **Radius:** 5000

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

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04775 POD1	4	4	4	06	24S	32E	621789	3567860

Driller License: 1833 **Driller Company:** VISION RESOURCES, INC

Driller Name: JASON MALEY

Drill Start Date:	12/14/2023	**Drill Finish Date:**	12/14/2023	**Plug Date:**	12/21/2023
Log File Date:	01/12/2024	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	105 feet	**Depth Water:**	

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 04775 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: DEVON ENERGY RESOURCES

Contact: DALE WOODALL

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	751179	EXPL	2023-09-19	PMT	APR	C-4775 POD1	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 04775 POD1	NA		4	4	4	06	24S	32E	621789	3567860	

Source

Acres	Diversion	CU	Use	Priority	Source	Description
0	0		MON		GW	

WELL RECORD & LOG

Mesa Verde 6F

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
C-4775 POD1		C04775

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Devon Energy Resources	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
205 E. Bender Road # 150	Hobbs	NM	88240

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	14	26.8944	N
	LONGITUDE	-103	42	26.1864	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1833	Jason Maley	Vision Resources

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12-14-23	12-14-23	105'	105'	Dry

COMPLETED WELL IS: ☐ ARTESIAN *add Centralizer info below ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): Dry

DATE STATIC MEASURED: 12-18-23

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	95'	6"	2" PVC SCH40	Thread	2"	SCH40	N/A
95'	105'	6"	2" PVC SCH40	Thread	2"	SCH40	.05

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL *(if using Centralizers for Artesian wells- indicate the spacing below)	AMOUNT (cubic feet)	METHOD OF PLACEMENT
			None Pulled and Plugged		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES **(attach supplemental sheets to fully describe all units)**	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	10'	10'	Red coarse sand	Y ✓ N	
10'	30'	20'	Tan Fine sand wih coarse rock	Y ✓ N	
30'	40'	10'	Red sand with white caliche	Y ✓ N	
40'	60'	20'	Tan sand with white caliche	Y ✓ N	
60'	80'	20'	Red sand with small rock	Y ✓ N	
80'	105'	25'	Tan fine sand with caliche	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY: Dry

TOTAL ESTIMATED WELL YIELD (gpm): 0

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jason Maley — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

1/10/24 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: c-4775 Pod1

Well owner: Devon Energy Resources Phone No.: _____

Mailing address: 205 E. Bender Road # 150

City: Hobbs State: NM Zip code: 88240

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Vision Resources

2) New Mexico Well Driller License No.: 1833 Expiration Date: 10-7-25

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Jason Maley

4) Date well plugging began: 12-21-23 Date well plugging concluded: 12-21-23

5) GPS Well Location: Latitude: 32 deg, 14 min, 26.8944 sec
Longitude: -103 deg, 42 min, 26.1864 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 105 ft below ground level (bgl), by the following manner: Tape

7) Static water level measured at initiation of plugging: Dry ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 9-21-23

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0		155	155	Tremie pipe Open Hole	
	Wyoming Bentonite				
105'					

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Jason Maley, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller — Date: 1/10/24

Version: September 8, 2009
Page 2 of 2

U.S. Fish and Wildlife Service
National Wetlands Inventory

Mesa Verde 7 Federal #002
Watercourse 30,492 feet

January 26, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service
National Wetlands Inventory

Mesa Verde 7 Federal #002 Pond 38,945ft

May 16, 2025

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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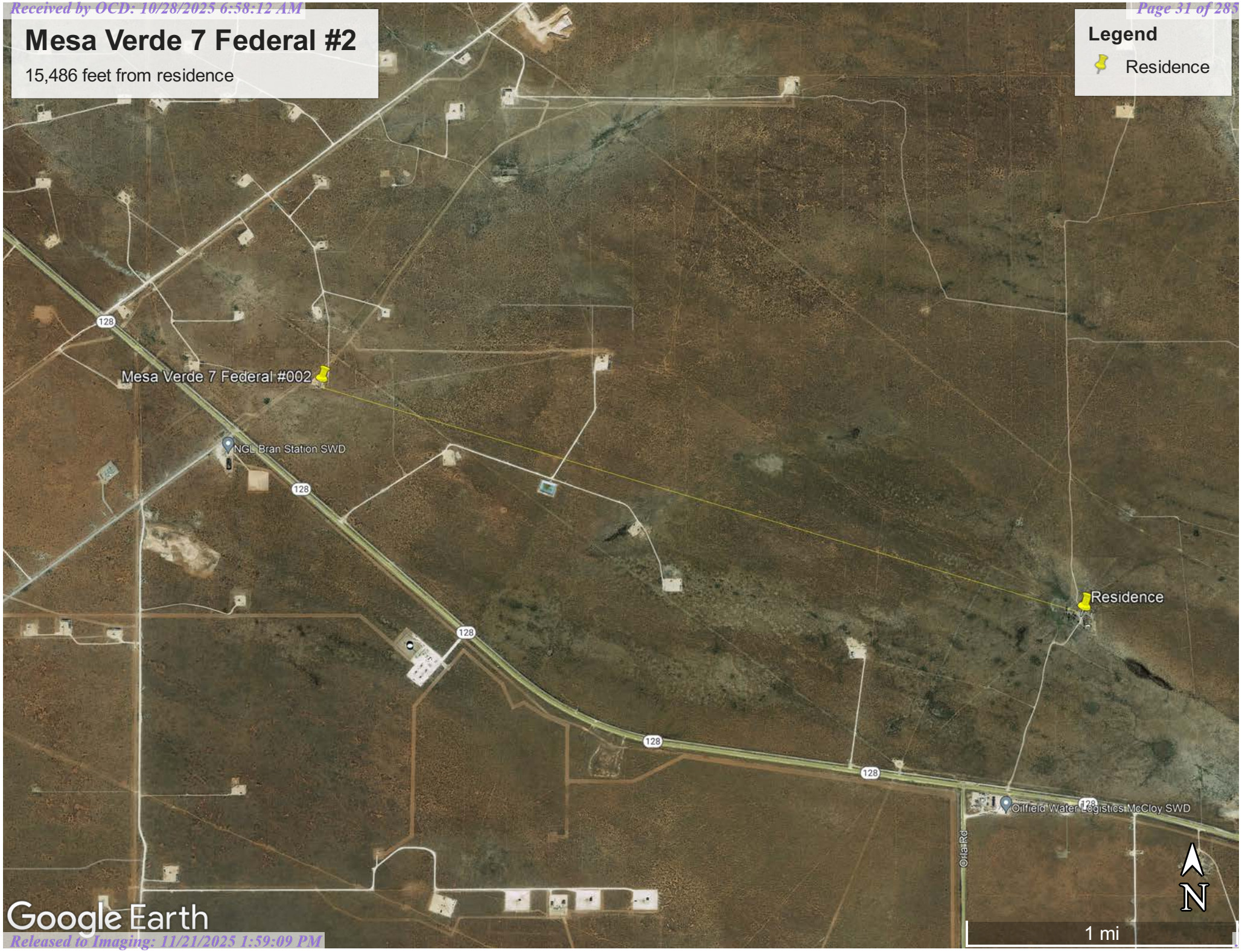
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Mesa Verde 7 Federal #2

15,486 feet from residence



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 64	q 16	q 4	Sec	Tws	Rng	X	Y	Distance
C 03530	C	STK	0	ANNETTE MCCLOY	LE	C 03530 POD1					3	4	3	07	24S	32E	620886	3566156	1369
C 04672	CUB	EXP	0	OXY USA INC.	ED	C 04672 POD 1	NA				2	1	4	01	24S	31E	619762	3568286	1825
C 04687	CUB	MON	0	OXY USA INC	ED	C 04687 POD1	NA				4	2	3	12	24S	31E	619481	3566450	2136
C 03555	C	STK	3	NGL WATER SOLUTIONS PERMIAN	LE	C 03555 POD1	NA			Shallow	2	2	1	05	24S	32E	622748	3569233	2261
C 04712	CUB	MON	0	HARVARD PETROLEUM COMPANY LLC	LE	C 04712 POD1	NA				1	4	1	31	23S	32E	620917	3570289	2890
C 00225 A	CUB	IRR	8.4	GREGORY ROCKHOUSE RANCH	ED	C 02405				Shallow		4	1	02	24S	31E	617690	3568631*	3876
C 01246 AO	CUB	IRR	47.82	CATHLEEN MC INTIRE	ED	C 02405				Shallow		4	1	02	24S	31E	617690	3568631*	3876
C 02405	C	PRO	0	TEXACO EXPLORATION & PROD. IND	ED	C 02405				Shallow		4	1	02	24S	31E	617690	3568631*	3876
C 02452	C	PRO	0	TEXACO EXPLORATION & PROD INC.	ED	C 02405				Shallow		4	1	02	24S	31E	617690	3568631*	3876
					ED	C 02452						4	1	02	24S	31E	617690	3568631*	3876
C 02576	C	PRO	0	SONAT EXPLORATION COMPANY	ED	C 02405				Shallow		4	1	02	24S	31E	617690	3568631*	3876
C 02464	C	PRO	0	COMMISSIONER OF PUBLIC LANDS	ED	C 02464				Shallow	2	3	1	02	24S	31E	617644	3568581	3904
C 02460	C	PRO	0	SONAT EXPLORATION	ED	C 02460				Shallow			3	02	24S	31E	617496	3568022*	3925
					ED	C 02460 POD2				Shallow			3	02	24S	31E	617496	3568022*	3925
C 02901	C	PUB	0	B & H MAINTENANCE & CONST.	ED	C 02901					3	4	1	02	24S	31E	617589	3568530*	3943
C 03529	C	STK	0	U.S. DEPT. OF INTERIOR--BLM	LE	C 03529 POD1					2	4	3	29	23S	32E	622651	3571212	3986
C 04220	CUB	MON	0	CHEVRON N AMERICA EXPL & PROD	ED	C 04220 POD1	NA				2	3	3	11	24S	31E	617401	3566340	4123
C 02602	C	SAN	0	POGO PRODUCING COMPANY	ED	C 02602						2	2	35	23S	31E	618471	3570650*	4333
C 03575	C	STK	0	ANNETTE MCCCLOY	LE	C 03575 POD1					1	2	1	15	24S	32E	625637	3566103	4463
C 03527	C	STK	3	ANNETTE MCCLOY	LE	C 03527 POD1					1	2	3	03	24S	32E	625769	3568487	4516
C 02350	CUB	STK	3	LIMESTONE LIVESTOCK LLC	ED	C 02350						4	3	10	24S	32E	625826	3566333*	4583
C 04665	CUB	EXP	0	ENSOLUM	LE	C 04665	NA				1	1	2	30	24S	32E	621349	3562798	4636
C 04576	CUB	EXP	0	KB SERVICES LLC	ED	C 04576 POD1	NA			Artesian	1	2	1	23	24S	31E	617699	3564324	4816
C 01882	C	STK	0	BUREAU OF LAND MANAGEMENT US DEPT OF INTERIOR	LE	C 01882					1	1	4	03	24S	32E	626103	3568453*	4834
C 03528	C	STK	3	NGL WATER SOLUTIONS PERMIAN	LE	C 03528 POD1				Shallow	1	1	2	15	24S	32E	626040	3566129	4842

Record Count: 25

UTMNAD83 Radius Search (in meters):

Easting (X): 621377 **Northing (Y):** 3567435 **Radius:** 5000

Sorted by: Distance

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

New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	**POD Number**	**Q64**	**Q16**	**Q4**	**Sec**	**Tws**	**Rng**	**X**	**Y**
	C 03530 POD1	3	4	3	07	24S	32E	620886	3566156

x

Driller License: **Driller Company:**

Driller Name:

Drill Start Date: **Drill Finish Date:** **Plug Date:**

Log File Date: **PCW Rcv Date:** **Source:**

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 6.00 **Depth Well:** 550 feet **Depth Water:**

x

U.S. Fish and Wildlife Service
National Wetlands Inventory

Mesa Verde 7 Federal #002
Wetland 4,188 feet

February 25, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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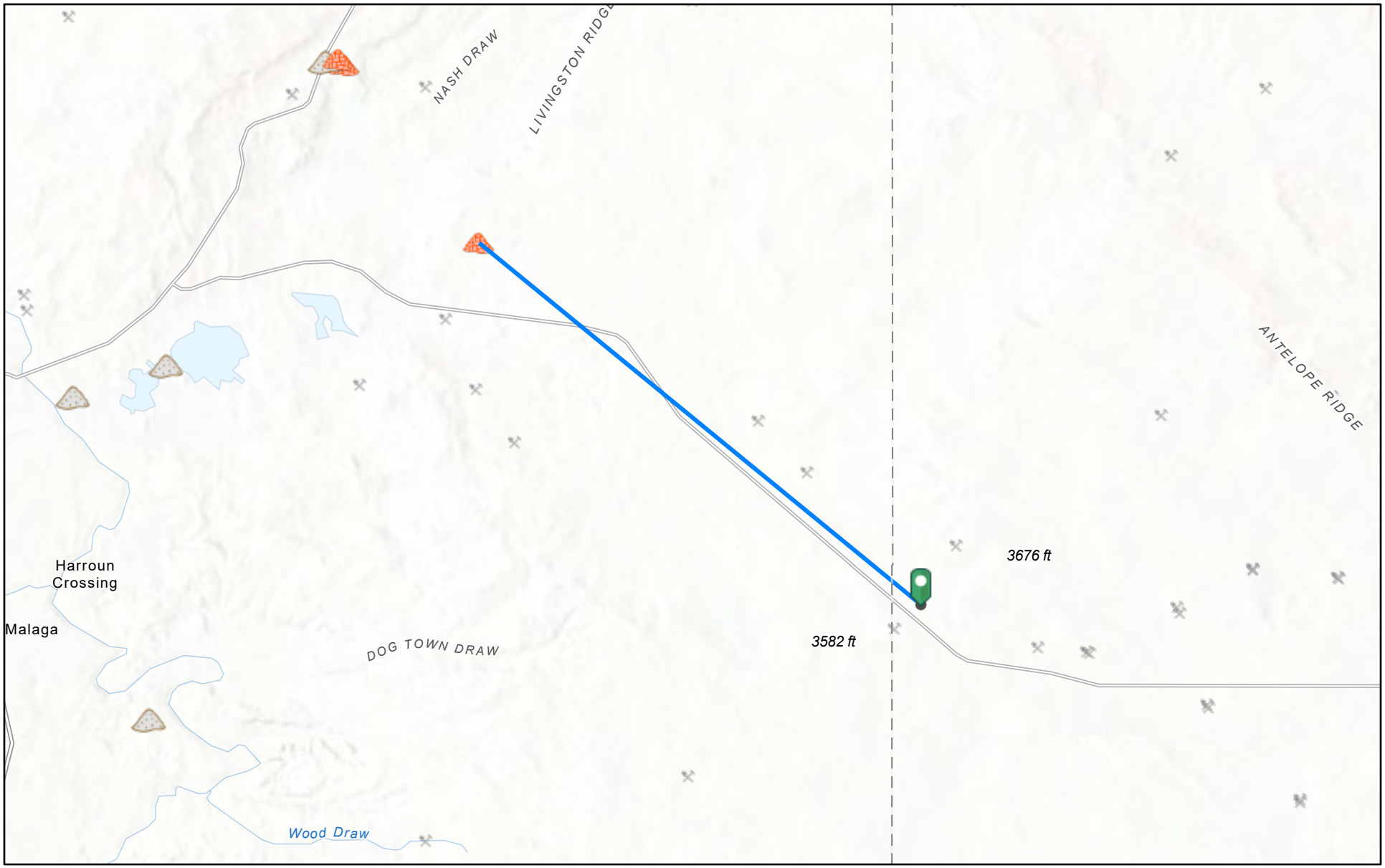
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Mesa Verde 7 Federal #2 - Mine 68,277ft



1/26/2024, 1:43:24 PM

1:233,976

0 1.75 3.5 7 mi

0 2.75 5.5 11 km

Registered Mines

Aggregate, Stone etc.

Aggregate, Stone etc.

Aggregate, Stone etc.

Aggregate, Stone etc.

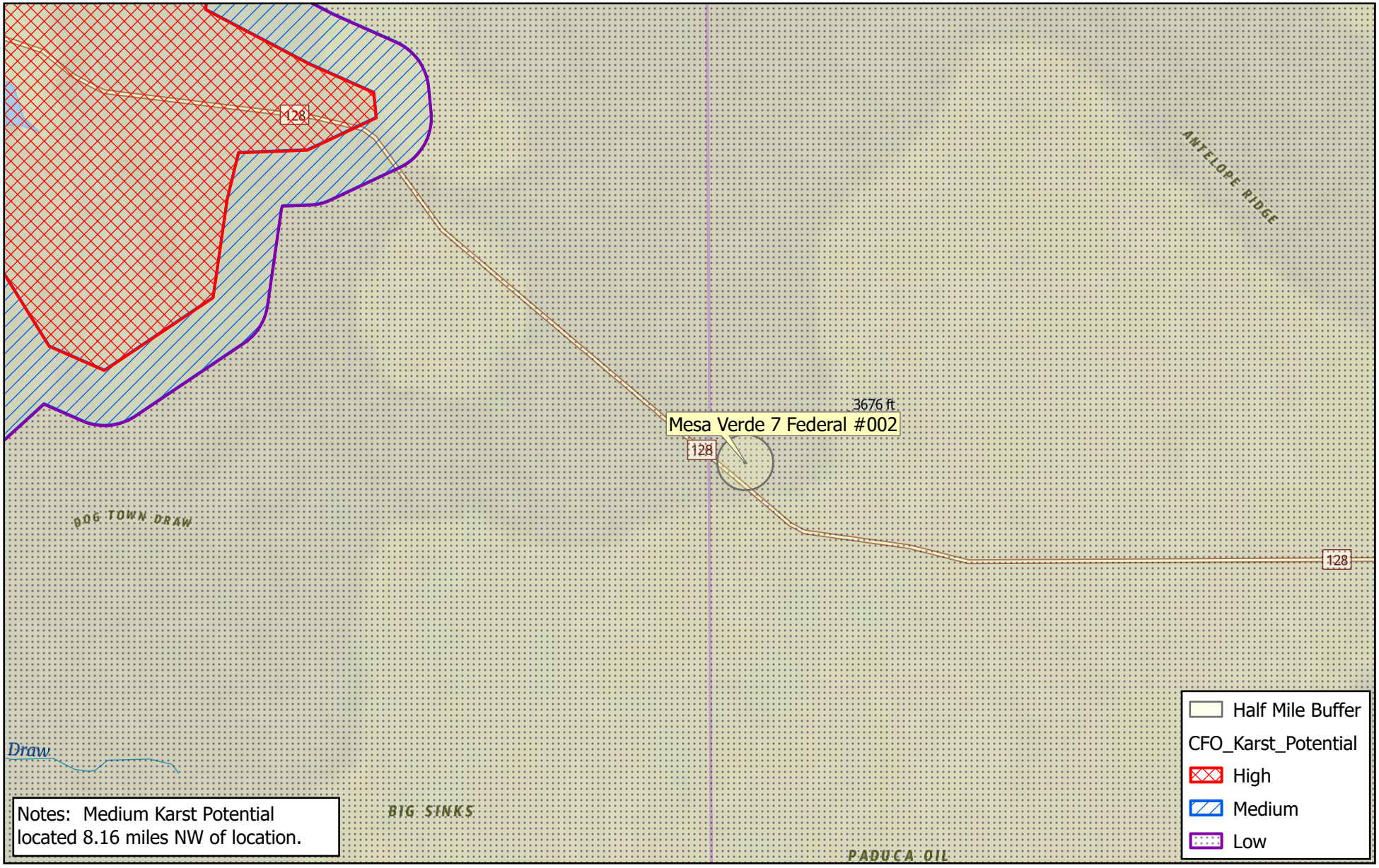
Potash

Salt

Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS

EMNRD MMD GIS Coordinator

NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e577974664d689b47790897ca2795)



VERTEX

0 1 2 Miles

NAD 1983 StatePlane New Mexico East FIPS 3001 Feet

Map Center:
Lat/Long: 32.244757°N, 103.728889°W

Date: Apr 04/25

N

Karst Potential
Mesa Verde 7 Federal #002

PLATE: 8

devon

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2025. Site features from GPS, Vertex, 2025.

VERSATILITY. EXPERTISE.

National Flood Hazard Layer FIRMette

FEMA

32°14'29.50"N

103°43'18.49"W

103°42'41.03"W

32°13'59.06"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- 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 *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

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

OTHER FEATURES
- 20.2 / 17.5 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

N

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

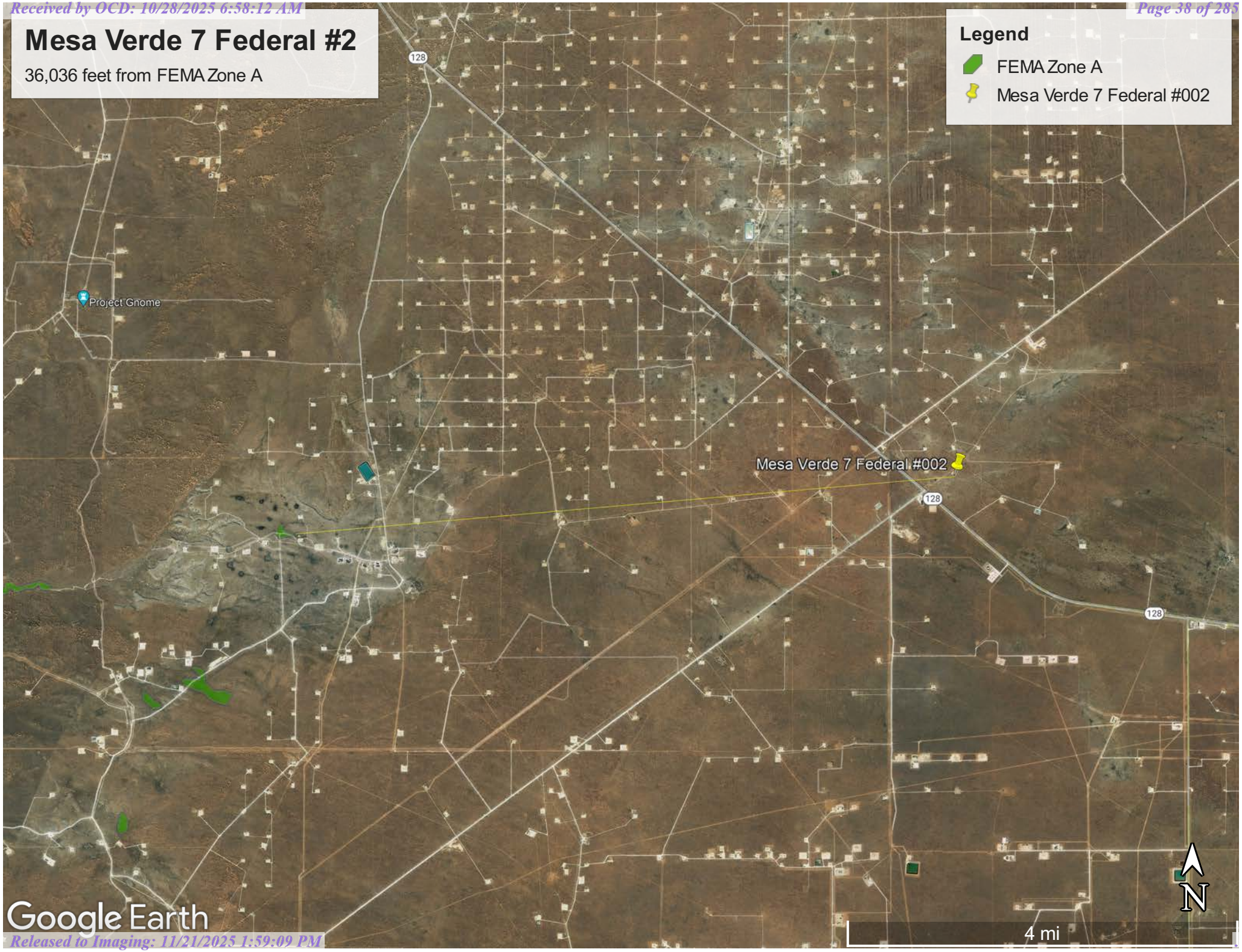
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/3/2020 at 5:04:21 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.

Mesa Verde 7 Federal #2

36,036 feet from FEMA Zone A



United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Lea County, New Mexico

Mesa Verde 7 Federal 2

April 21, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 17, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PU	Pyote and Maljamar fine sands	7.2	100.0%
Totals for Area of Interest		**7.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lea County, New Mexico

PU—Pyote and Maljamar fine sands

Map Unit Setting

National map unit symbol: dmqq
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Pyote and similar soils: 46 percent
Maljamar and similar soils: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 30 inches: fine sand
Bt - 30 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water capacity: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Description of Maljamar

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 24 inches: fine sand
Bt - 24 to 50 inches: sandy clay loam
Bkm - 50 to 60 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 10 percent
Ecological site: R042XC022NM - Sandhills
Hydric soil rating: No

USDA Natural Resources Conservation Service

Ecological site R042XC022NM
Sandhills

Accessed: 05/07/2021

General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on plains. The soils are calcareous sandy eolian deposits derived from sedimentary rock. Land form of sand dunes or hillslopes. Slopes average 5 to 35 percent. Slopes are complex as the steeper slopes are shorter in length while the more gentle slopes are longer in length. Direction of slopes vary and is usually not significant. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Plain (2) Hill (3) Dune
Flooding frequency	None
Ponding frequency	None

Elevation	2,842–4,500 ft
Slope	5–35%
Aspect	Aspect is not a significant factor

Climatic features

The climate of the area is “semi-arid continental”. The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity – short duration thunderstorms. Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer. The average frost-free season is 180 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November. Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Because of the texture of this soil, most rainfall is effective. Strong winds blow from the west and southwest from January through June which accelerates soil drying at a time for cool season plant growth.

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

Table 3. Representative climatic features

Frost-free period (average)	220 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced by wetlands or streams.

Soil features

The soils of this site are deep and very deep. Surface textures are fine sand or loamy fine sand. Subsoilis a fine sand or loamy fine sand to a depth of 60 inches or more. These soils have less than 10 percent clay content. These soils are subject to severe wind erosion if vegetative cover is not adequate.

Minimum and maximum values listed below represent the characterist soils for this site.

Characteristic Soils Are:
Kermit
Aguena

Table 4. Representative soil features

Surface texture	(1) Fine sand (2) Loamy fine sand (3) Loamy sand
Family particle size	(1) Sandy
Drainage class	Well drained to excessively drained
Permeability class	Rapid to very rapid
Soil depth	60–72 in
Surface fragment cover <=3"	0–5%

Surface fragment cover >3"	0%
Available water capacity (0-40in)	3–9 in
Calcium carbonate equivalent (0-40in)	0–7%
Electrical conductivity (0-40in)	0–2 mmhos/cm
Sodium adsorption ratio (0-40in)	0–1
Soil reaction (1:1 water) (0-40in)	7.4–8.4
Subsurface fragment volume <=3" (Depth not specified)	0–5%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview:
The Sandhills site occurs adjacent to or intergrades with the Deep Sand site. The Sandhills site is differentiated from deep sand sites by a steeper average slope, and an increased depth to a soil texture change. Sandhills slopes are usually greater than eight percent, and the soil profile is a fine sand or loamy fine sand to a depth greater than 60 inches. Deep Sand sites have slopes less than eight percent and a textural change can occur at less than 60 inches. The historic plant community of the Sandhills site is a mixture of grasses, shrubs and forbs, with tall grasses dominating in aspect. During years of abundant spring moisture, tall growing forbs occasionally reach aspect dominance. Sand bluestem and giant dropseed are the dominant grasses, with Havard panicum and dropseeds as sub-dominants. Sand shinnery oak and soapweed yucca are the dominant shrubs. Drought favors shinnery by impacting grasses more severly. Shinnery oak's ability to store water and carbohydrates, and its strong negetive leaf water potential enable it to out compete grasses during drought conditions. Changes in historical fire regimes, competition by shrubs, and overgrazing may contribute to this site becoming dominated by sand shinnery oak.

State and transition model

Plant Communities and Transitional Pathways (diagram)

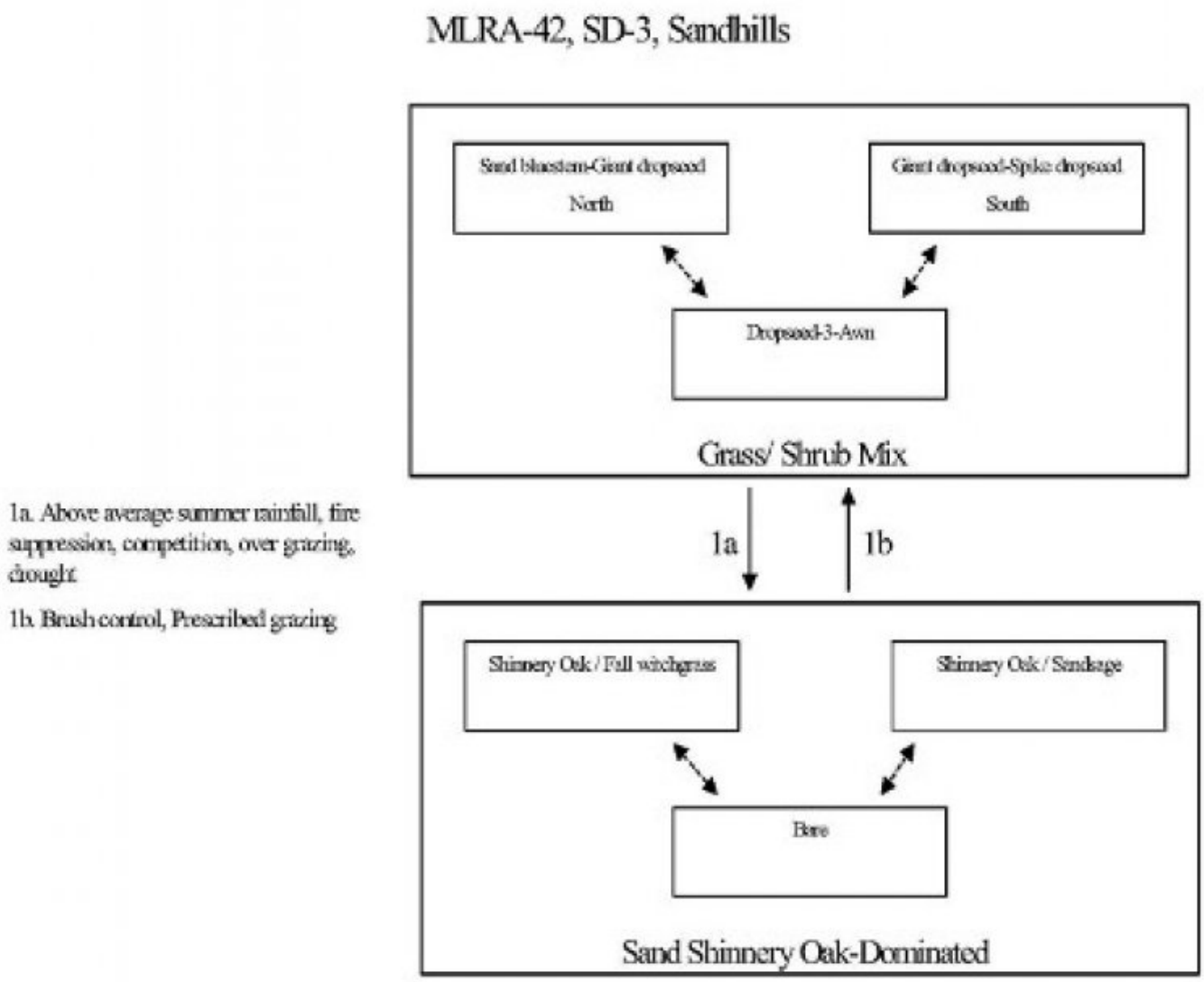


Figure 4.

State 1
Grass/Shrub Mix

Community 1.1
Grass/Shrub Mix

Grass/Shrub Mix: The historic plant community in the northern part of the resource area (SD-3) is dominated by sand bluestem and giant dropseed, with Havard panicum as a sub-dominant. Primary grass dominance may gradually shift moving south across the resource area to a community dominated by giant dropseed and spike dropseed, with mesa dropseed as the sub-dominant grass species. Throughout the resource area sand shinnery oak and soapweed yucca are the dominant shrubs with sand sagebrush as the sub-dominant. As retrogression within this state occurs, plants such as sand bluestem, giant dropseed, Havard panicum, plains bristlegrass, sand paspalum, and fourwing saltbush decrease. This results in an increase in spike dropseed, sand dropseed, mesa dropseed, threeawns sand shinnery oak, and sand sagebrush. Continued loss of grass cover may result in a transition to a sand shinnery oak dominated state.

Diagnosis: Sand bluestem or giant dropseed are dominant or present in substantial amounts. Spike dropseed, sand dropseed or mesa dropseed may be dominant in some instances. Grass cover is variable, shifting sands and large irregular dunes produce considerable variation in the spatial distribution and composition of the plant community. Grass cover is not continuous, but is fairly uniform across the more stable areas. Large natural bare areas or blowouts are a common feature on the less stable portions of the Sandhills site.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	360	585	810
Shrub/Vine	120	195	270
Forb	120	195	270
Total	**600**	**975**	**1350**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	10-15%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	20-25%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	45-60%

Figure 6. Plant community growth curve (percent production by month). NM2822, R042XC022NM Sandhills HCPC. R042XC022NM Sandhills HCPC warm season plant community.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	1	3	4	10	10	25	30	12	5	0	0

State 2
Sand Shinnery Oak-Dominated

Community 2.1
Sand Shinnery Oak-Dominated

Additional States:
Sand Shinnery Oak -Dominated: Sand shinnery oak is the dominant species and in dense stands may reduce forage production by as much as 90 percent.1 It often forms a mosaic of dense thickets interspersed with occasional motts of taller oaks, large areas of bare ground, and concentrations of sand sagebrush. Sand shinnery oak is well suited to deep sandy soils. The height and cover of oak decreases as sand depth decreases or clay content increases. The aggressive nature of fall witchgrass and continued loss of more palatable grasses and threeawn species may result in a sand shinnery oak-fall witchgrass community. Burning may result in a community with very little grass or sand shinnery oak (bare). Sand shinnery oak usually recovers due to its ability to sprout aggressively following fire.

Diagnosis: Sand shinnery oak is the dominant species. Grass cover is sparse and patchy. Shrub cover is high. Blowouts and bare areas are common, however, high shrub cover mediates erosion.

Transition to Sand Shinnery Oak Dominated (1a): Climate may play a role in facilitating the spread sand shinnery oak. It is best adapted to those areas that receive and average of 16 inches of annual rainfall; it may therefore gain a competitive advantage during cycles of above average precipitation. Sand shinnery oak spreads mainly by elongation of rhizomes, but in some instances will reproduce by seed. The establishment and survival of seedlings is limited to those years with abundant rainfall during the months of July and August. If fire historically played a part in suppressing the density and distribution of shrubs in desert grasslands, then fire suppression may facilitate a shift to shrub dominance.2 Competition for resources between grasses and shrubs may be a factor in increased densities of sand shinnery oak. 1 Sand shinnery oak has an extensive system of underground roots and stems that can uptake and store water for growth during drier periods, allowing it to increase, at times when grasses decrease. Evidence of competitive suppression of grasses is indicated by increases in herbaceous vegetation following chemical control of sand shinnery oak.1 However, this increase may in part be due to a flush of nutrients made available from the decomposing biomass of woody roots and stems. Loss of grass cover due to overgrazing or drought may give a competitive advantage to sand shinnery oak.

Key indicators of approach to transition:
* A decrease in the tall grass species and the associated increase in threeawns may be indicative of the initial stage of transition to a shrub-dominated state.
* Increased cover of sand shinnery oak.

Transition back to Grass/Shrub Mix (1b) Chemical brush control is an effective means of controlling sand shinnery oak and sand sagebrush. Where large areas of chemical control are planned, increased erosion and the effect on loss of wildlife habitat should be considered. Prescribed grazing will help ensure an adequate deferment period to allow grass recovery and subsequent proper forage utilization. There have been studies that suggest long term browsing by goats can reduce sand shinnery oak, altering production in favor of grasses.3

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					
1				195–293	
	sand bluestem	ANHA	*Andropogon hallii*	195–293	–
	Havard's panicgrass	PAHA2	*Panicum havardii*	195–293	–
	giant dropseed	SPGI	*Sporobolus giganteus*	195–293	–
2				146–195	
	spike dropseed	SPCO4	*Sporobolus contractus*	146–195	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	146–195	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	146–195	–
3				49–98	
	thin paspalum	PASE5	*Paspalum setaceum*	49–98	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	49–98	–
4				29–49	
	threeawn	ARIST	*Aristida*	29–49	–
	mat sandbur	CELO3	*Cenchrus longispinus*	29–49	–
	flatsedge	CYPER	*Cyperus*	29–49	–
5				29–49	
	Grass, perennial	2GP	*Grass, perennial*	29–49	–
Shrub/Vine					

6				49–98	
	Havard oak	QUHA3	*Quercus havardii*	49–98	–
7				49–98	
	soapweed yucca	YUGL	*Yucca glauca*	49–98	–
8				29–49	
	sand sagebrush	ARFI2	*Artemisia filifolia*	29–49	–
9				20–49	
	fourwing saltbush	ATCA2	*Atriplex canescens*	20–49	–
10				20–49	
	rabbitbrush	CHRYS9	*Chrysothamnus*	20–49	–
11				20–49	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	20–49	–
Forb					
12				20–49	
	featherplume	DAFO	*Dalea formosa*	20–49	–
13				29–49	
	sundrops	CALYL	*Calylophus*	29–49	–
	phlox heliotrope	HECO5	*Heliotropium convolvulaceum*	29–49	–
	sharpleaf penstemon	PEAC	*Penstemon acuminatus*	29–49	–
14				20–49	
	touristplant	DIWI2	*Dimorphocarpa wislizeni*	20–49	–
	lemon beebalm	MOCI	*Monarda citriodora*	20–49	–
16				29–49	
	hymenopappus	HYMEN4	*Hymenopappus*	29–49	–
	blazingstar	MENTZ	*Mentzelia*	29–49	–
	threadleaf ragwort	SEFLF	*Senecio flaccidus var. flaccidus*	29–49	–
17				20–49	
	sunflower	HELIA3	*Helianthus*	20–49	–
18				20–49	
	buckwheat	ERIOG	*Eriogonum*	20–49	–
19				20–49	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	20–49	–

Animal community

This site provides habitat which support a resident animal community that is characterized by pronghorn antelope, black-tailed jackrabbit, Ord's kangaroo rat, Northern grasshopper mouse, Southern Plains woodrat, swift fox, roadrunner, meadowlark, lark bunting, ferruginous hawk, lesser prairie chicken, mourning dove, scaled quail, sand dune lizard, marbled whiptail, ornate box turtle, bullsnake and Western diamondback rattlesnake. Grasshopper and vesper sparrows utilize the site during migration. The ferruginous hawk sometimes nests on dunes associated with the site. White-tailed deer are also sometimes associated with this site (Mescalero Sands). Where mesquite invades, resident species of birds such as white-necked raven, roadrunner, pyrrhuloxia, mourning dove, and Harris hawk nest. Where sand hummocks form around shrubs, rodent populations and their predators increase. Fourwing saltbush, shinnery oak, sand sagebrush, and mesquite provide protective cover for scaled quail. Seed, green herbage, and fruit from a variety of grasses, forbs, and shrubs provide food for a number of birds and mammals, including mourning dove, scaled quail, lessor prairie chicken and antelope.

Hydrological functions

The runoff curve numbers are determined by field investigations using hydrolic cover conditions and hydrologic soil groups.

Hydrologic Interpretations
Soil Series------- Hydrologic Group
Kermit---------- A
Aguena---------- A

Recreational uses

This site offers recreation potential for hiking, horseback riding, nature observation and photography. This site also offers opportunities for hunting of such species as quail, dove and antelope.

Mechanical, off-road vehicle use by dune buggies, four wheelers, or motor bikes is site-destructive, resulting in severe soil movement by wind erosion. Off-road vehicle use should be confined to those areas which are already deterioriated and where intensive management for soil protection can be practiced.

During years of abundant spring moisture, this site desplays a colorful array of wildflowers during May and June. A few showy summer and fall flowers also occur.

Wood products

The plant community associated with this site affords little or no wood products.

Other products

This site is suitable for grazing during all seasons of the year by all kinds and classes of livestock. Where shinnery oak has increased considerably above the amount in the potential plant community cattle loss can occur if grazed during the late bud and early leaf stage. This site responds well to an integrated brush management and grazing management. Brush management is inappropriate in occupied or potential habitat for sand dune lizard. Mismannagement of this site will cause a decrease in Harvard panicum, sand bluestem, giant dropseed, plains bristlegrass, sand paspalum and fourwing saltbush. There will be a corresponding increase in dropseeds, sand sagebrush and shinnery oak. When shinnery oak is not a problem, this site responds best to a system of mangement that rotates the season of use. Grazing management plans should be design to leave adequate residual cover for lesser prairie chicken nesting.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index----- Ac/AUM
100 - 76---------- 2.0 – 4.0
75 – 51---------- 3.0 – 6.5
50 – 26---------- 5.0 – 12.0
25 – 0---------- 12.0 - +

Inventory data references

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains (SD-3) Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: South Chaves, Eddy, Lea and Otero Counties.

Other references

Literature Cited:

1. Sears, W.E., C.M. Britton, D.B. Wester, and R.D. Pettit. 1986. Herbicide conversion of a sand shinnery oak (Quercus havardii) community: effects on biomass. J. Range. Manage. 39: 399-403.

2. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2002, September). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/ [accessed 1/07/02].

3.Villena, F. and J.A. Pfister. 1990. Sand shinnery oak as forage for Angora and Spanish goats. J. Range. Manage. 43: 116-122.

Contributors

David Trujillo
Don Sylvester

Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	
Contact for lead author	
Date	
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:**

2. **Presence of water flow patterns:**

3. **Number and height of erosional pedestals or terracettes:**

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):**

5. **Number of gullies and erosion associated with gullies:**

6. **Extent of wind scoured, blowouts and/or depositional areas:**

7. **Amount of litter movement (describe size and distance expected to travel):**

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

12. **Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):**

    Dominant:

    Sub-dominant:

    Other:

    Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):**

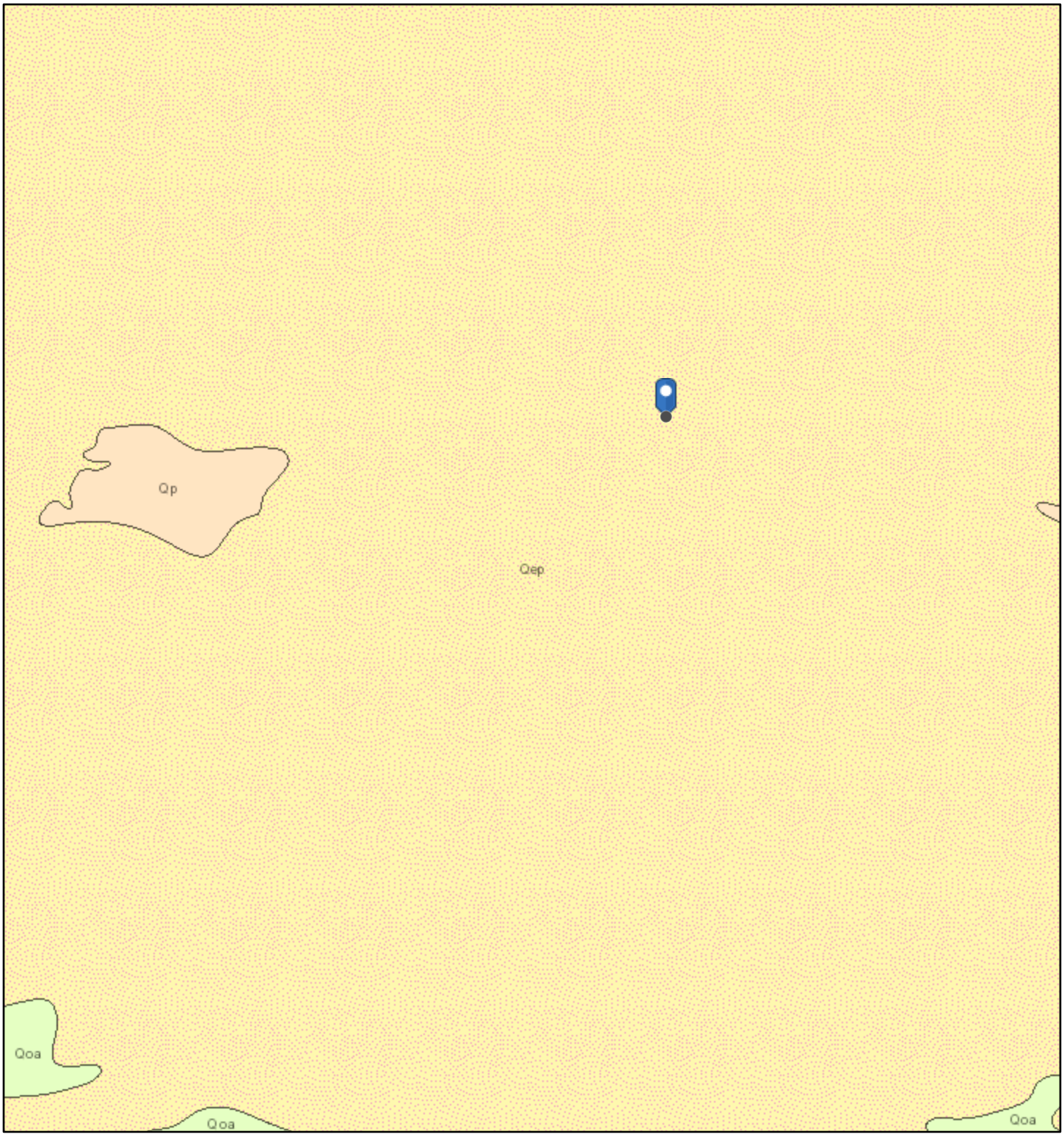
14. **Average percent litter cover (%) and depth (in):**

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):**

16. **Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:**

17. **Perennial plant reproductive capability:**

Mesa Verde 7 Federal #002 Geology



5/16/2025, 10:27:06 AM

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Lithologic Units

- Playa—Alluvium and evaporite deposits (Holocene)
- Water—Perenial standing water
- Qa—Alluvium (Holocene to upper Pleistocene)

Esri, NASA, NGA, USGS, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data;

ArcGIS Web AppBuilder

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National

APPENDIX B – Daily Field and Sampling Reports

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	2/22/2023
Site Location Name:	Mesa Verde 7 Federal 2 (spill at Mesa Verde 7 Fed 1 Battery)	Report Run Date:	2/22/2023 11:17 PM
Client Contact Name:	Wes Matthews	API #:	30-025-32399
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/22/2023 10:19 AM
Departed Site	2/22/2023 4:30 PM

Field Notes

15:26 Arrived on site and filled out JSA

15:27 Walked around the site to see where I will place Boreholes for site delineation

15:30 At 10:30 I began digging Boreholes 1-4 at 0', 2', and 4' depths

15:31 All samples collected were field screened on EC meter

All samples are clean on Chlorides

15:32 All samples were field screened on Petroflag unit

BH23-03 at 0' and all samples for BH24-04 are Hot for TPH

15:34 All samples have been jarred and placed on ice.

All samples are ready for lab

15:35 Upon arrival I noticed oil staining throughout the tank battery.

Daily Site Visit Report

Next Steps & Recommendations

1 Continue site delineation

Daily Site Visit Report

Site Photos

Viewing Direction: East

BH23-01
Facing East

Viewing Direction: Southeast

BH23-02
Facing southeast

Viewing Direction: West

BH23-03
Facing West

Viewing Direction: North

BH23-04
Facing North

Daily Site Visit Report

Viewing Direction: East

Visible staining on North side of tanks

Facing East

Viewing Direction: East

South side of tanks
Facing East

Viewing Direction: Northwest

Staining on East side of tanks

Facing Northwest

Viewing Direction: Southwest

Tank is point of release
Staining on equipment and soil

Facing Southwest

Daily Site Visit Report

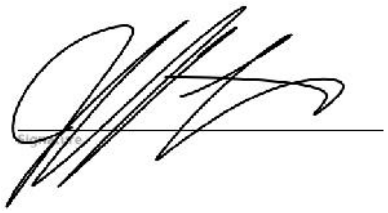
Viewing Direction: Southeast

Stained equipment
Facing Southeast

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Jacob Reta

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	2/23/2023
Site Location Name:	Mesa Verde 7 Federal 2 (spill at Mesa Verde 7 Fed 1 Battery)	Report Run Date:	2/23/2023 10:40 PM
Client Contact Name:	Wes Matthews	API #:	30-025-32399
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/23/2023 9:49 AM
Departed Site	2/23/2023 3:30 PM

Field Notes

14:49 Arrived on site and filled out JSA

14:49 Today's focus was to continue site delineation with Vertical samples

14:50 At 10:30 I began digging BH23-05 for vertical sampling

14:51 Samples were collected at 0', 2', 4', 6',and 8' depths

14:52 At 11:30 I placed another Borehole (Bh23-06) on the south side of the tanks

14:52 Samples were collected from BH23-06 at 0', 2',and 4' depths

14:52 All samples were field screened on EC meter

All samples are clean on chlorides

Daily Site Visit Report

14:55 All samples were Field screened on Petroflag unit

BH23-04 at 6’ and 8’ are clean on TPH

All BH23-05 samples are hot on TPH

All BH23-06 samples are hot on TPH

14:54 All samples have been jarred and ready for lab

Next Steps & Recommendations

1 Continue vertical delineation

Daily Site Visit Report

Site Photos

Viewing Direction: South

BH23-05
Facing South

Viewing Direction: East

Overview of South side of tanks
Facing East

Viewing Direction: West

BH23-04
Facing West

Viewing Direction: West

BH23-06
Facing West

Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: Southwest
	
Overview of site Facing Northwest	Overview of site Facing Southwest
Viewing Direction: West	**Viewing Direction**: South
	
Overview or staining on North side of tanks Facing West	Overview of staining on East side of tanks Facing Southeast

Daily Site Visit Report

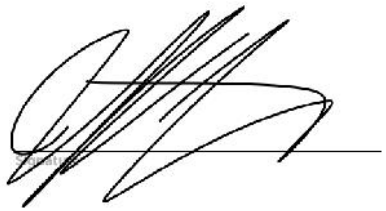
Viewing Direction: East	**Viewing Direction**: Southeast
	
Overview of staining on East side of tanks Facing east	Overview of north Side of tanks Facing Southeast

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Jacob Reta

Signature:



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	2/24/2023
Site Location Name:	Mesa Verde 7 Federal 2 (spill at Mesa Verde 7 Fed 1 Battery)	Report Run Date:	2/25/2023 12:00 AM
Client Contact Name:	Wes Matthews	API #:	30-025-32399
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/24/2023 9:11 AM
Departed Site	2/24/2023 3:45 PM

Field Notes

13:56 Arrived on site with L. Pullman and signed JSA

14:10 Today's focus is to continue site delineation with vertical samples

14:01 At 10:40 Pullman and I began to further delineate BH23-05 at 10' and 12' depths

Samples were collected at these depths

14:03 At 11:45 BH23-07 was dug and samples were collected at 0', 2', 4', 6', and 7'

14:03 All samples collected today were field screened on EC meter

All samples are clean on Chlorides

Daily Site Visit Report

14:05 All samples collected today were field screened on Petroflag unit

BH23-07 at 0’ and 2’ were hot on TPH

All other samples are clean for TPH

14:05 All samples collected are jarred and ready to be sent to lab

14:11 Geoprobe assisted with sampling today

Next Steps & Recommendations

1 Continue horizontal delineation to on west side of the site

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: South
	
BH23-05 vertical delineation Facing West	BH23-07 Facing South

Viewing Direction: Southwest	**Viewing Direction**: Northwest
	
Overview of site Facing Southwest	Overview of site Facing Northwest

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: Southeast
	
Overview of site Facing East	Overview of site Facing Southeast

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Jacob Reta

Signature:

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/12/2023
Site Location Name:	Mesa Verde 7 Federal 2 (spill at Mesa Verde 7 Fed 1 Battery)	Report Run Date:	4/12/2023 9:48 PM
Client Contact Name:	Wes Matthews	API #:	30-025-32399
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/12/2023 6:49 AM
Departed Site	4/12/2023 1:06 PM

Field Notes

6:59 Completed JSA on arrival. On site to continue horizontal delineation.

7:47 Mapped additional borehole locations in Arc Collector. Swept borehole areas with magnetic locator prior to ground disturbance.

12:24 Advanced BH23-10, BH23-11, BH23-12, and BH23-13 to attempt horizontal delineation. Collected samples at 0, 2, and 4 feet bgs.

12:25 Field screening results were all below NMOCD strictest criteria for chloride and TPH. Horizontal delineation complete pending laboratory results.

13:02 Remapped release area based on field screening results.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: South

North of containment facing south.

Viewing Direction: North

South of fence around containment facing north. Advanced BH23-10 southeast of tanks.

Viewing Direction: North

South of fence around containment facing north. Advanced BH23-11 south of tanks.

Viewing Direction: East

East side of west tank battery facing east. Advanced BH23-12 on edge of containment immediately west of release.

Daily Site Visit Report

Viewing Direction: South

North and east of fence around containment facing south. Advanced BH23-13 north of tanks.

Viewing Direction: East

Northeast corner of release area facing east.

Viewing Direction: East

Southeast corner of release area facing east.

Viewing Direction: Northwest

Southeast corner of release area facing northwest.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	10/24/2023
Site Location Name:	Mesa Verde 6 Federal CTB	Report Run Date:	10/25/2023 1:02 AM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	10/24/2023 2:00 PM
Departed Site	10/24/2023 3:50 PM

Field Notes

14:25 Arrive on site, drillers on site, conduct safety meeting

14:34 Drillers set up and begin drilling down 105 ft bgs

15:25 Drillers reach max depth of 105 ft bgs. Drillers begin putting casing down well

15:42 Driller send interface probe down well for measurements. Probe reads 105ft bgs. No water in well

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: West
	
Photo taken west facing east. Site name placard	Photo taken west facing east (encompasses entire pad)
Viewing Direction: North	**Viewing Direction**: Southeast
	
Photo taken north facing south. Encompasses entire pad (Drilling work happening on southeast corner of pad)	Southeast facing west, drillers begin going down 105 ft bgs

Daily Site Visit Report

Viewing Direction: Southeast	**Viewing Direction**: Southwest
	
Photo taken north east facing southwest. Drillers reach max depth of 105 ft bgs and begin putting casing on	Photo taken southwest facing north. Interface probe measurement 105 ft bgs (Minus casing)
Viewing Direction: Southwest	**Viewing Direction**: Southwest
	
Photo taken southwest facing north. Height of casing	Photo taken southwest facing north. Well has been coned and sealed

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Alexis Castro

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Incident ID #:	
Site Location Name:	Mesa Verde 7 Federal 2 (spill at Mesa Verde 7 Fed 1 Battery)	API #:	30-025-32399
Inspection Date:	9/3/2025		

Summary of Times	
Arrived at Site	9/3/2025 7:40 AM
Departed Site	9/3/2025 3:48 PM

Daily Site Visit Report

Site Sketch

Site Sketch

Daily Site Visit Report

Field Notes

8:56 Completed saftey paperwork upon arrival

8:56 Met with plains pipeline to discuss the location of their line

8:57 Marked out the location with GPS

8:57 Both Kelly and Vertex personal conducted a secondary sweep inside the marked area

9:11 Neither secondary sweep could effectively identify line with the metal interference. It was decided to call the Harvard 811 people back to site

9:16 Dig crews 811 was confirmed to be active before they broke ground

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: West

Area flagged out before excavation began

Viewing Direction: West

Area excavated by end of day in the southeast corner

Viewing Direction: South

Area excavated in the northeast area by end of day

Viewing Direction: Southwest

Northern area approved for mechanical excavation by Brice pending additional saftey concerns

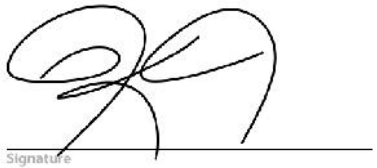
Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: North
	
Southern area approved for mechanical excavation by Brice pending additional saftey and access concerns	Eastern area was required to be hand dug by Brice

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Katrina Taylor

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Incident ID #:	
Site Location Name:	Mesa Verde 7 Federal 2 (spill at Mesa Verde 7 Fed 1 Battery)	API #:	30-025-32399
Inspection Date:	9/5/2025		

Summary of Times	
Arrived at Site	9/5/2025 11:34 AM
Departed Site	9/5/2025 1:45 PM

Daily Site Visit Report

Site Sketch

Site Sketch

Daily Site Visit Report

Field Notes

11:35 Completed saftey paperwork upon arrival

11:59 Checked on the excavation progress and determined they were just under 50% done

13:45 The east side of the excavation is complete, the north side is near done, and the south currently untouched

Next Steps & Recommendations

1 When the crew finishes excavation of the northern side, samples of the east and north can be taken to confirm if the remediation extent is sufficient

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: West
	
Excavation progress in the northeast	Excavation progress in the east
Viewing Direction: Southwest	**Viewing Direction**: West
	
Excavation process in the northern area	Trench done on the north side

Daily Site Visit Report

Viewing Direction: West

Where the crew were at at EOD

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Katrina Taylor

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Incident ID #:	
Site Location Name:	Mesa Verde 7 Federal 2	API #:	
Inspection Date:	9/8/2025		

Summary of Times

Arrived at Site	9/8/2025 12:29 PM
Departed Site	9/8/2025 4:36 PM

Field Notes

15:37 JSA has been filled out by Vertex Resource Environmental Technician and Kelley Oilfield Services, Inc.

13:19 Purpose: spot check to see if further excavation is required

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: Northeast	**Viewing Direction**: Southwest
	
Site view of excavation in front (North) of the tanks at 2ft. Image taken from the Northeast corner.	Site view of excavation east of the tanks at 2ft. Image taken from the Northeast corner.

Daily Site Visit Report

Viewing Direction: Northeast

Site view of excavation in front (North) of the tanks at 2ft. Image taken from the west end of the excavation/tank area.

Viewing Direction: East

Site view of excavation view behind (South) of the tanks at 2ft. Image taken from the Southeast corner.

Viewing Direction: Southwest

Site view of excavation in front (North) of the tanks at 2ft. Image taken from the Northeast corner.

Viewing Direction: Southeast

Site view of excavation in front (North) of the tanks at 2ft. Image taken from the northwest corner. Area in the green box will be scraped to 2.5’

Daily Site Visit Report

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Sharon Minnix

Signature:

Daily Site Visit Report

Client:	Devon Energy Corporation	Incident ID #:	
Site Location Name:	Mesa Verde 7 Federal 2	API #:	
Inspection Date:	9/9/2025		

Summary of Times

Arrived at Site	9/9/2025 8:40 AM
Departed Site	9/9/2025 1:54 PM

Field Notes

13:28 JSA has been filled out by Vertex Resource Environmental Technician and Kelley Oilfield Services, Inc.

13:29 Northwest corner was scrapped to a depth of 2.5’

13:29 Collect confirmation samples. Field screen samples and jar them.

13:29 Jarred samples will be sent to lab

13:31 Excavation area is contained with orange web fencing

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: Northeast	**Viewing Direction**: Southeast
	
Site view of the backfill pile	Site view of excavation in front (North) of the tanks at 2ft and 2.5ft. Image taken from the northwest corner.

Daily Site Visit Report

Viewing Direction: Northeast

Site view of excavation in front (North) of the tanks at 2ft and 2.5ft. Image taken from the northwest corner.

Viewing Direction: Northeast

Site view of excavation in front (North) of the tanks at 2ft and 2.5ft. Image taken from the west end.

Viewing Direction: Northeast

Site view of excavation in front (South) of the tanks at 2ft. Image taken from the Southwest corner.

Viewing Direction: Northeast

Site view of excavation in front (North) of the tanks at 2ft. Image taken from the northeast corner.

Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: Southwest
	
Site view of excavation in front (North) of the tanks at 2ft. Image taken from the northeast corner.	Site view of excavation west of the tanks at 2ft. Image taken from the northeast corner.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Sharon Minnix

Signature:

Daily Site Visit Report

Client:	Devon Energy Corporation	Incident ID #:	
Site Location Name:	Mesa Verde 7 Federal 2	API #:	
Inspection Date:	9/10/2025		

Summary of Times

Arrived at Site	9/10/2025 10:51 AM
Departed Site	9/10/2025 1:41 PM

Field Notes

13:22 JSA has been filled out by Vertex Resource Environmental Technician

13:23 Purpose: to collect two base samples and two wall samples

13:23 Samples have been collected and field screened. Samples were jarred and will be sent to lab.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: Northwest	**Viewing Direction**: Southwest
	
Site view of 2’ excavation where WS25-08 was collected	Site view of 2’ excavation where BS25-07 was collected
Viewing Direction: Southeast	**Viewing Direction**: Northeast
	
Site view of 2’ excavation where BS25-07 was collected	Site view of 2’ excavation where BS25-08 was collected

Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: Northwest
	
Site view of 2.5’ excavation where WS25-08 was collected	Site view of 2.5’ excavation where WS25-08 was collected

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Sharon Minnix

Signature: 

APPENDIX C – Laboratory Data Reports and Chain of Custody Forms

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 06, 2023

Kent Stallings

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX

RE: Mesa Verde 7 Federal 2 OrderNo.: 2302A64

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 12 sample(s) on 2/24/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Mesa Verde 7 Federal 2
Lab ID: 2302A64-001 **Matrix:** SOIL

Client Sample ID: BH23-01 0'
Collection Date: 2/22/2023 10:45:00 AM
Received Date: 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	2/28/2023 1:22:19 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/28/2023 1:22:19 PM
Surr: DNOP	91.9	69-147		%Rec	1	2/28/2023 1:22:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/1/2023 1:32:55 AM
Surr: BFB	103	37.7-212		%Rec	1	3/1/2023 1:32:55 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/1/2023 1:32:55 AM
Toluene	ND	0.049		mg/Kg	1	3/1/2023 1:32:55 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/1/2023 1:32:55 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/1/2023 1:32:55 AM
Surr: 4-Bromofluorobenzene	94.5	70-130		%Rec	1	3/1/2023 1:32:55 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/27/2023 5:20:46 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-01 2'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/22/2023 10:50:00 AM
Lab ID: 2302A64-002 **Matrix:** SOIL **Received Date:** 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/28/2023 1:32:57 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/28/2023 1:32:57 PM
Surr: DNOP	96.6	69-147		%Rec	1	2/28/2023 1:32:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/1/2023 1:56:23 AM
Surr: BFB	102	37.7-212		%Rec	1	3/1/2023 1:56:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	3/1/2023 1:56:23 AM
Toluene	ND	0.046		mg/Kg	1	3/1/2023 1:56:23 AM
Ethylbenzene	ND	0.046		mg/Kg	1	3/1/2023 1:56:23 AM
Xylenes, Total	ND	0.091		mg/Kg	1	3/1/2023 1:56:23 AM
Surr: 4-Bromofluorobenzene	92.3	70-130		%Rec	1	3/1/2023 1:56:23 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	83	60		mg/Kg	20	2/27/2023 5:58:00 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-01 4'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/22/2023 10:55:00 AM
Lab ID: 2302A64-003 **Matrix:** SOIL **Received Date:** 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/28/2023 1:43:34 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/28/2023 1:43:34 PM
Surr: DNOP	105	69-147		%Rec	1	2/28/2023 1:43:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/1/2023 2:19:52 AM
Surr: BFB	103	37.7-212		%Rec	1	3/1/2023 2:19:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/1/2023 2:19:52 AM
Toluene	ND	0.048		mg/Kg	1	3/1/2023 2:19:52 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/1/2023 2:19:52 AM
Xylenes, Total	ND	0.097		mg/Kg	1	3/1/2023 2:19:52 AM
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	3/1/2023 2:19:52 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	130	61		mg/Kg	20	2/27/2023 6:35:14 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Mesa Verde 7 Federal 2
Lab ID: 2302A64-004 **Matrix:** SOIL

Client Sample ID: BH23-02 0'
Collection Date: 2/22/2023 11:00:00 AM
Received Date: 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/28/2023 1:54:15 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/28/2023 1:54:15 PM
Surr: DNOP	90.4	69-147		%Rec	1	2/28/2023 1:54:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/1/2023 2:43:17 AM
Surr: BFB	99.6	37.7-212		%Rec	1	3/1/2023 2:43:17 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/1/2023 2:43:17 AM
Toluene	ND	0.049		mg/Kg	1	3/1/2023 2:43:17 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/1/2023 2:43:17 AM
Xylenes, Total	ND	0.098		mg/Kg	1	3/1/2023 2:43:17 AM
Surr: 4-Bromofluorobenzene	89.6	70-130		%Rec	1	3/1/2023 2:43:17 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/27/2023 6:47:38 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-02 2'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/22/2023 11:05:00 AM
Lab ID: 2302A64-005 **Matrix:** SOIL **Received Date:** 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	2/28/2023 2:04:55 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	2/28/2023 2:04:55 PM
Surr: DNOP	106	69-147		%Rec	1	2/28/2023 2:04:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/1/2023 3:06:47 AM
Surr: BFB	101	37.7-212		%Rec	1	3/1/2023 3:06:47 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/1/2023 3:06:47 AM
Toluene	ND	0.048		mg/Kg	1	3/1/2023 3:06:47 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/1/2023 3:06:47 AM
Xylenes, Total	ND	0.096		mg/Kg	1	3/1/2023 3:06:47 AM
Surr: 4-Bromofluorobenzene	91.9	70-130		%Rec	1	3/1/2023 3:06:47 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/27/2023 7:24:52 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Mesa Verde 7 Federal 2
Lab ID: 2302A64-006 **Matrix:** SOIL

Client Sample ID: BH23-02 4'
Collection Date: 2/22/2023 11:10:00 AM
Received Date: 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/28/2023 3:27:11 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/28/2023 3:27:11 PM
Surr: DNOP	99.6	69-147		%Rec	1	2/28/2023 3:27:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/1/2023 3:30:11 AM
Surr: BFB	101	37.7-212		%Rec	1	3/1/2023 3:30:11 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/1/2023 3:30:11 AM
Toluene	ND	0.048		mg/Kg	1	3/1/2023 3:30:11 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/1/2023 3:30:11 AM
Xylenes, Total	ND	0.097		mg/Kg	1	3/1/2023 3:30:11 AM
Surr: 4-Bromofluorobenzene	92.1	70-130		%Rec	1	3/1/2023 3:30:11 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/27/2023 7:37:17 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Mesa Verde 7 Federal 2
Lab ID: 2302A64-007 **Matrix:** SOIL

Client Sample ID: BH23-03 0'
Collection Date: 2/22/2023 11:15:00 AM
Received Date: 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	380	99		mg/Kg	10	2/28/2023 1:01:03 PM
Motor Oil Range Organics (MRO)	780	490		mg/Kg	10	2/28/2023 1:01:03 PM
Surr: DNOP	0	69-147	S	%Rec	10	2/28/2023 1:01:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/1/2023 3:53:38 AM
Surr: BFB	97.2	37.7-212		%Rec	1	3/1/2023 3:53:38 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/1/2023 3:53:38 AM
Toluene	ND	0.050		mg/Kg	1	3/1/2023 3:53:38 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/1/2023 3:53:38 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/1/2023 3:53:38 AM
Surr: 4-Bromofluorobenzene	88.7	70-130		%Rec	1	3/1/2023 3:53:38 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/27/2023 7:49:41 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-03 2'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/22/2023 11:20:00 AM
Lab ID: 2302A64-008 **Matrix:** SOIL **Received Date:** 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	2/28/2023 3:37:46 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	2/28/2023 3:37:46 PM
Surr: DNOP	121	69-147		%Rec	1	2/28/2023 3:37:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/1/2023 4:17:02 AM
Surr: BFB	99.6	37.7-212		%Rec	1	3/1/2023 4:17:02 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/1/2023 4:17:02 AM
Toluene	ND	0.050		mg/Kg	1	3/1/2023 4:17:02 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/1/2023 4:17:02 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/1/2023 4:17:02 AM
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	3/1/2023 4:17:02 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	61		mg/Kg	20	2/27/2023 8:02:05 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-03 4'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/22/2023 11:25:00 AM
Lab ID: 2302A64-009 **Matrix:** SOIL **Received Date:** 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	2/28/2023 3:48:24 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	2/28/2023 3:48:24 PM
Surr: DNOP	97.1	69-147		%Rec	1	2/28/2023 3:48:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/1/2023 4:40:24 AM
Surr: BFB	100	37.7-212		%Rec	1	3/1/2023 4:40:24 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/1/2023 4:40:24 AM
Toluene	ND	0.049		mg/Kg	1	3/1/2023 4:40:24 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/1/2023 4:40:24 AM
Xylenes, Total	ND	0.098		mg/Kg	1	3/1/2023 4:40:24 AM
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	3/1/2023 4:40:24 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/27/2023 8:14:30 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Mesa Verde 7 Federal 2
Lab ID: 2302A64-010 **Matrix:** SOIL

Client Sample ID: BH23-04 0'
Collection Date: 2/22/2023 11:30:00 AM
Received Date: 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	170	91		mg/Kg	10	2/28/2023 7:10:12 PM
Motor Oil Range Organics (MRO)	480	460		mg/Kg	10	2/28/2023 7:10:12 PM
Surr: DNOP	0	69-147	S	%Rec	10	2/28/2023 7:10:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/28/2023 7:23:00 PM
Surr: BFB	103	37.7-212		%Rec	1	2/28/2023 7:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/1/2023 10:43:11 AM
Toluene	ND	0.047		mg/Kg	1	3/1/2023 10:43:11 AM
Ethylbenzene	ND	0.047		mg/Kg	1	3/1/2023 10:43:11 AM
Xylenes, Total	ND	0.095		mg/Kg	1	3/1/2023 10:43:11 AM
Surr: 4-Bromofluorobenzene	89.5	70-130		%Rec	1	3/1/2023 10:43:11 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	2/27/2023 11:13:58 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-04 2'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/22/2023 11:35:00 AM
Lab ID: 2302A64-011 **Matrix:** SOIL
Received Date: 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	2700	94		mg/Kg	10	2/28/2023 7:31:11 PM
Motor Oil Range Organics (MRO)	2200	470		mg/Kg	10	2/28/2023 7:31:11 PM
Surr: DNOP	0	69-147	S	%Rec	10	2/28/2023 7:31:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/28/2023 8:22:00 PM
Surr: BFB	107	37.7-212		%Rec	1	2/28/2023 8:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/1/2023 11:06:50 AM
Toluene	ND	0.049		mg/Kg	1	3/1/2023 11:06:50 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/1/2023 11:06:50 AM
Xylenes, Total	ND	0.098		mg/Kg	1	3/1/2023 11:06:50 AM
Surr: 4-Bromofluorobenzene	92.8	70-130		%Rec	1	3/1/2023 11:06:50 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	59		mg/Kg	20	2/27/2023 11:26:19 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2302A64**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Mesa Verde 7 Federal 2
Lab ID: 2302A64-012 **Matrix:** SOIL

Client Sample ID: BH23-04 4'
Collection Date: 2/22/2023 11:40:00 AM
Received Date: 2/24/2023 7:28:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	330	98		mg/Kg	10	2/28/2023 7:52:08 PM
Motor Oil Range Organics (MRO)	630	490		mg/Kg	10	2/28/2023 7:52:08 PM
Surr: DNOP	0	69-147	S	%Rec	10	2/28/2023 7:52:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/28/2023 9:20:00 PM
Surr: BFB	104	37.7-212		%Rec	1	2/28/2023 9:20:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/1/2023 11:30:29 AM
Toluene	ND	0.048		mg/Kg	1	3/1/2023 11:30:29 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/1/2023 11:30:29 AM
Xylenes, Total	ND	0.095		mg/Kg	1	3/1/2023 11:30:29 AM
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	3/1/2023 11:30:29 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/27/2023 8:26:54 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302A64**

06-Mar-23

Client: Devon Energy

Project: Mesa Verde 7 Federal 2

Sample ID: **MB-73395**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **73395**	RunNo: **94907**							
Prep Date: **2/27/2023**	Analysis Date: **2/27/2023**	SeqNo: **3430889**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-73395**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **73395**	RunNo: **94907**							
Prep Date: **2/27/2023**	Analysis Date: **2/27/2023**	SeqNo: **3430890**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.8	90	110			

Sample ID: **MB-73405**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **73405**	RunNo: **94908**							
Prep Date: **2/27/2023**	Analysis Date: **2/27/2023**	SeqNo: **3431077**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-73405**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **73405**	RunNo: **94908**							
Prep Date: **2/27/2023**	Analysis Date: **2/27/2023**	SeqNo: **3431078**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302A64**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **LCS-73377**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **73377**	RunNo: **94894**							
Prep Date: **2/24/2023**	Analysis Date: **2/27/2023**	SeqNo: **3430273**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	10	50.00	0	72.8	61.9	130			
Surr: DNOP	3.9		5.000		79.0	69	147			

Sample ID: **MB-73377**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **73377**	RunNo: **94894**							
Prep Date: **2/24/2023**	Analysis Date: **2/27/2023**	SeqNo: **3430279**	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	7.9		10.00		79.3	69	147			

Sample ID: **LCS-73400**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **73400**	RunNo: **94924**							
Prep Date: **2/27/2023**	Analysis Date: **2/28/2023**	SeqNo: **3431562**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.5	61.9	130			
Surr: DNOP	4.3		5.000		86.1	69	147			

Sample ID: **MB-73400**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **73400**	RunNo: **94924**							
Prep Date: **2/27/2023**	Analysis Date: **2/28/2023**	SeqNo: **3431563**	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	8.3		10.00		83.2	69	147			

Sample ID: **MB-73474**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **73474**	RunNo: **94965**							
Prep Date: **3/2/2023**	Analysis Date: **3/2/2023**	SeqNo: **3434009**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.4		10.00		84.0	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302A64**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **LCS-73474**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **73474**	RunNo: **94965**							
Prep Date: **3/2/2023**	Analysis Date: **3/2/2023**	SeqNo: **3434010**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.1	69	147			

Sample ID: **MB-73456**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **73456**	RunNo: **94965**							
Prep Date: **3/1/2023**	Analysis Date: **3/2/2023**	SeqNo: **3434451**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		113	69	147			

Sample ID: **LCS-73456**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **73456**	RunNo: **94965**							
Prep Date: **3/1/2023**	Analysis Date: **3/2/2023**	SeqNo: **3434452**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302A64**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **lcs-73371** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **73371** RunNo: **94929**
Prep Date: **2/24/2023** Analysis Date: **2/28/2023** SeqNo: **3431929** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.3	72.3	137			
Surr: BFB	2200		1000		217	37.7	212			S

Sample ID: **mb-73371** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **73371** RunNo: **94929**
Prep Date: **2/24/2023** Analysis Date: **2/28/2023** SeqNo: **3431930** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		100	37.7	212			

Sample ID: **2302A64-010ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-04 0'** Batch ID: **73371** RunNo: **94929**
Prep Date: **2/24/2023** Analysis Date: **2/28/2023** SeqNo: **3431932** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.7	23.67	0	82.8	70	130			
Surr: BFB	1900		947.0		205	37.7	212			

Sample ID: **2302A64-010amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-04 0'** Batch ID: **73371** RunNo: **94929**
Prep Date: **2/24/2023** Analysis Date: **2/28/2023** SeqNo: **3431933** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.7	23.67	0	91.0	70	130	9.39	20	
Surr: BFB	2000		947.0		208	37.7	212	0	0	

Sample ID: **lcs-73369** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **73369** RunNo: **94910**
Prep Date: **2/24/2023** Analysis Date: **2/28/2023** SeqNo: **3431995** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.1	72.3	137			
Surr: BFB	2000		1000		198	37.7	212			

Sample ID: **mb-73369** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **73369** RunNo: **94910**
Prep Date: **2/24/2023** Analysis Date: **2/28/2023** SeqNo: **3431996** 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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302A64**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **mb-73369**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **73369**	RunNo: **94910**
Prep Date: **2/24/2023**	Analysis Date: **2/28/2023**	SeqNo: **3431996** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		100	37.7	212			

Sample ID: **mb-73371**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **73371**	RunNo: **94933**
Prep Date: **2/24/2023**	Analysis Date: **3/1/2023**	SeqNo: **3432056** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	37.7	212			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302A64**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **LCS-73369** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **73369** RunNo: **94910**
Prep Date: **2/24/2023** Analysis Date: **2/28/2023** SeqNo: **3432010** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.025	1.000	0	81.9	80	120			
Toluene	0.84	0.050	1.000	0	83.9	80	120			
Ethylbenzene	0.83	0.050	1.000	0	83.2	80	120			
Xylenes, Total	2.5	0.10	3.000	0	83.0	80	120			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.3	70	130			

Sample ID: **mb-73369** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **73369** RunNo: **94910**
Prep Date: **2/24/2023** Analysis Date: **2/28/2023** SeqNo: **3432011** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.7	70	130			

Sample ID: **LCS-73371** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **73371** RunNo: **94933**
Prep Date: **2/24/2023** Analysis Date: **3/1/2023** SeqNo: **3432053** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	87.5	80	120			
Toluene	0.92	0.050	1.000	0	91.6	80	120			
Ethylbenzene	0.89	0.050	1.000	0	89.3	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.3	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.8	70	130			

Sample ID: **mb-73371** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **73371** RunNo: **94933**
Prep Date: **2/24/2023** Analysis Date: **3/1/2023** SeqNo: **3432077** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302A64**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **2302a64-011ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-04 2'** Batch ID: **73371** RunNo: **94933**
Prep Date: **2/24/2023** Analysis Date: **3/1/2023** SeqNo: **3432569** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9718	0	85.8	68.8	120			
Toluene	0.86	0.049	0.9718	0	88.2	73.6	124			
Ethylbenzene	0.85	0.049	0.9718	0	87.5	72.7	129			
Xylenes, Total	2.6	0.097	2.915	0.04873	86.1	75.7	126			
Surr: 4-Bromofluorobenzene	0.92		0.9718		94.3	70	130			

Sample ID: **2302a64-011amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-04 2'** Batch ID: **73371** RunNo: **94933**
Prep Date: **2/24/2023** Analysis Date: **3/1/2023** SeqNo: **3432570** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9747	0	87.8	68.8	120	2.58	20	
Toluene	0.88	0.049	0.9747	0	90.1	73.6	124	2.42	20	
Ethylbenzene	0.86	0.049	0.9747	0	88.7	72.7	129	1.65	20	
Xylenes, Total	2.6	0.097	2.924	0.04873	87.0	75.7	126	1.26	20	
Surr: 4-Bromofluorobenzene	0.91		0.9747		93.8	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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2302A64 RcptNo: 1

Received By: Tracy Casarrubias 2/24/2023 7:28:00 AM

Completed By: Tracy Casarrubias 2/24/2023 7:48:33 AM

Reviewed By: JM 2/24/23

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: SC 2/24/23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.6	Good	Yes	Morty		

Chain-of-Custody Record

Client: Devon (Vertex)

Mailing Address: on file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 48 Hr

Project Name: Mesa Verde 7 Federal 2

Project #: 21E-02816

Project Manager: Kent Stallings

Sampler: S. Reta

On Ice: ☑ Yes ☐ No many

# of Coolers:

Cooler Temp(Including CF): 3.6-.0=3.6 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2302A64	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)
2/22/23	10:45	Soil	BH23-01 0'	4oz Jar	Ice	001										
	10:50		BH23-01 2'			002										
	10:55		BH23-01 4'			003										
	11:00		BH23-02 0'			004										
	11:05		BH23-02 2'			005										
	11:10		BH23-02 4'			006										
	11:15		BH23-03 0'			007										
	11:20		BH23-03 2'			008										
	11:25		BH23-03 4'			009										
	11:30		BH23-04 0'			010										
	11:35		BH23-04 2'			011										
	11:40		BH23-04 4'			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2/22/23	17:14	S. Reta			2/23/23	915
2/23/23	1900				2/24/23	7:20

Remarks:
Direct Bill to Devon
CC: Jacob Reta

Devon/Harvard

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 06, 2023

Kent Stallings

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX

RE: Mesa Verde 7 Federal 2 OrderNo.: 2302B05

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 10 sample(s) on 2/25/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Mesa Verde 7 Federal 2
Lab ID: 2302B05-001 **Matrix:** SOIL

Client Sample ID: BH23-04 6'
Collection Date: 2/23/2023 10:30:00 AM
Received Date: 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/1/2023 2:31:18 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/1/2023 2:31:18 PM
Surr: DNOP	105	69-147		%Rec	1	3/1/2023 2:31:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/2/2023 2:03:04 AM
Surr: BFB	102	37.7-212		%Rec	1	3/2/2023 2:03:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/2/2023 2:03:04 AM
Toluene	ND	0.049		mg/Kg	1	3/2/2023 2:03:04 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/2/2023 2:03:04 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/2/2023 2:03:04 AM
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	3/2/2023 2:03:04 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	170	60		mg/Kg	20	2/28/2023 7:28:58 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-04 8'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/23/2023 10:35:00 AM
Lab ID: 2302B05-002 **Matrix:** SOIL **Received Date:** 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	25	9.9		mg/Kg	1	3/1/2023 2:41:58 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/1/2023 2:41:58 PM
Surr: DNOP	115	69-147		%Rec	1	3/1/2023 2:41:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/2/2023 2:26:37 AM
Surr: BFB	104	37.7-212		%Rec	1	3/2/2023 2:26:37 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/2/2023 2:26:37 AM
Toluene	ND	0.050		mg/Kg	1	3/2/2023 2:26:37 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/2/2023 2:26:37 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/2/2023 2:26:37 AM
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	3/2/2023 2:26:37 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	110	60		mg/Kg	20	2/28/2023 7:41:22 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-05 0'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/23/2023 10:40:00 AM
Lab ID: 2302B05-003 **Matrix:** SOIL **Received Date:** 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	930	180		mg/Kg	20	3/1/2023 1:27:35 PM
Motor Oil Range Organics (MRO)	930	890		mg/Kg	20	3/1/2023 1:27:35 PM
Surr: DNOP	0	69-147	S	%Rec	20	3/1/2023 1:27:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	60	24		mg/Kg	5	3/2/2023 2:50:09 AM
Surr: BFB	162	37.7-212		%Rec	5	3/2/2023 2:50:09 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.12		mg/Kg	5	3/2/2023 2:50:09 AM
Toluene	0.46	0.24		mg/Kg	5	3/2/2023 2:50:09 AM
Ethylbenzene	0.38	0.24		mg/Kg	5	3/2/2023 2:50:09 AM
Xylenes, Total	1.8	0.48		mg/Kg	5	3/2/2023 2:50:09 AM
Surr: 4-Bromofluorobenzene	96.1	70-130		%Rec	5	3/2/2023 2:50:09 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/28/2023 7:53:47 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-05 2'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/23/2023 10:45:00 AM
Lab ID: 2302B05-004 **Matrix:** SOIL **Received Date:** 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	1900	92		mg/Kg	10	3/1/2023 4:50:26 PM
Motor Oil Range Organics (MRO)	2400	460		mg/Kg	10	3/1/2023 4:50:26 PM
Surr: DNOP	0	69-147	S	%Rec	10	3/1/2023 4:50:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	21	4.6		mg/Kg	1	3/2/2023 3:37:11 AM
Surr: BFB	201	37.7-212		%Rec	1	3/2/2023 3:37:11 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	0.028	0.023		mg/Kg	1	3/2/2023 3:37:11 AM
Toluene	0.12	0.046		mg/Kg	1	3/2/2023 3:37:11 AM
Ethylbenzene	0.14	0.046		mg/Kg	1	3/2/2023 3:37:11 AM
Xylenes, Total	0.64	0.093		mg/Kg	1	3/2/2023 3:37:11 AM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	3/2/2023 3:37:11 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	59		mg/Kg	20	2/28/2023 8:06:12 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-05 4'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/23/2023 10:50:00 AM
Lab ID: 2302B05-005 **Matrix:** SOIL **Received Date:** 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	810	91		mg/Kg	10	3/1/2023 5:22:31 PM
Motor Oil Range Organics (MRO)	1400	450		mg/Kg	10	3/1/2023 5:22:31 PM
Surr: DNOP	0	69-147	S	%Rec	10	3/1/2023 5:22:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	5.2	4.7		mg/Kg	1	3/2/2023 4:00:43 AM
Surr: BFB	127	37.7-212		%Rec	1	3/2/2023 4:00:43 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	3/2/2023 4:00:43 AM
Toluene	ND	0.047		mg/Kg	1	3/2/2023 4:00:43 AM
Ethylbenzene	ND	0.047		mg/Kg	1	3/2/2023 4:00:43 AM
Xylenes, Total	0.16	0.094		mg/Kg	1	3/2/2023 4:00:43 AM
Surr: 4-Bromofluorobenzene	92.5	70-130		%Rec	1	3/2/2023 4:00:43 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/28/2023 8:18:36 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Mesa Verde 7 Federal 2
Lab ID: 2302B05-006 **Matrix:** SOIL

Client Sample ID: BH23-05 6'
Collection Date: 2/23/2023 10:55:00 AM
Received Date: 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	350	99		mg/Kg	10	3/2/2023 11:33:38 AM
Motor Oil Range Organics (MRO)	650	490		mg/Kg	10	3/2/2023 11:33:38 AM
Surr: DNOP	0	69-147	S	%Rec	10	3/2/2023 11:33:38 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/2/2023 4:24:12 AM
Surr: BFB	118	37.7-212		%Rec	1	3/2/2023 4:24:12 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	3/2/2023 4:24:12 AM
Toluene	ND	0.046		mg/Kg	1	3/2/2023 4:24:12 AM
Ethylbenzene	ND	0.046		mg/Kg	1	3/2/2023 4:24:12 AM
Xylenes, Total	0.13	0.093		mg/Kg	1	3/2/2023 4:24:12 AM
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	1	3/2/2023 4:24:12 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/28/2023 8:31:01 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-05 8'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/23/2023 11:00:00 AM
Lab ID: 2302B05-007 **Matrix:** SOIL **Received Date:** 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	290	9.3		mg/Kg	1	3/2/2023 12:05:15 PM
Motor Oil Range Organics (MRO)	550	46		mg/Kg	1	3/2/2023 12:05:15 PM
Surr: DNOP	104	69-147		%Rec	1	3/2/2023 12:05:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/2/2023 4:47:40 AM
Surr: BFB	109	37.7-212		%Rec	1	3/2/2023 4:47:40 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/2/2023 4:47:40 AM
Toluene	ND	0.049		mg/Kg	1	3/2/2023 4:47:40 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/2/2023 4:47:40 AM
Xylenes, Total	ND	0.098		mg/Kg	1	3/2/2023 4:47:40 AM
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	3/2/2023 4:47:40 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/28/2023 8:43:25 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-06 0'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/23/2023 11:05:00 AM
Lab ID: 2302B05-008 **Matrix:** SOIL
Received Date: 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	8200	93		mg/Kg	10	3/1/2023 7:18:47 PM
Motor Oil Range Organics (MRO)	5300	470		mg/Kg	10	3/1/2023 7:18:47 PM
Surr: DNOP	0	69-147	S	%Rec	10	3/1/2023 7:18:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/2/2023 5:11:09 AM
Surr: BFB	100	37.7-212		%Rec	1	3/2/2023 5:11:09 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/2/2023 5:11:09 AM
Toluene	ND	0.047		mg/Kg	1	3/2/2023 5:11:09 AM
Ethylbenzene	ND	0.047		mg/Kg	1	3/2/2023 5:11:09 AM
Xylenes, Total	ND	0.094		mg/Kg	1	3/2/2023 5:11:09 AM
Surr: 4-Bromofluorobenzene	88.9	70-130		%Rec	1	3/2/2023 5:11:09 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	260	60		mg/Kg	20	2/28/2023 8:55:49 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-06 2'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/23/2023 11:10:00 AM
Lab ID: 2302B05-009 **Matrix:** SOIL **Received Date:** 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	1500	91		mg/Kg	10	3/1/2023 7:50:10 PM
Motor Oil Range Organics (MRO)	1700	450		mg/Kg	10	3/1/2023 7:50:10 PM
Surr: DNOP	0	69-147	S	%Rec	10	3/1/2023 7:50:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/2/2023 5:34:37 AM
Surr: BFB	96.6	37.7-212		%Rec	1	3/2/2023 5:34:37 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/2/2023 5:34:37 AM
Toluene	ND	0.048		mg/Kg	1	3/2/2023 5:34:37 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/2/2023 5:34:37 AM
Xylenes, Total	ND	0.095		mg/Kg	1	3/2/2023 5:34:37 AM
Surr: 4-Bromofluorobenzene	89.7	70-130		%Rec	1	3/2/2023 5:34:37 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	61		mg/Kg	20	2/28/2023 9:08:13 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B05**
Date Reported: **3/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-06 4'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/23/2023 11:15:00 AM
Lab ID: 2302B05-010 **Matrix:** SOIL **Received Date:** 2/25/2023 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	1700	93		mg/Kg	10	3/1/2023 8:21:27 PM
Motor Oil Range Organics (MRO)	2100	470		mg/Kg	10	3/1/2023 8:21:27 PM
Surr: DNOP	0	69-147	S	%Rec	10	3/1/2023 8:21:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/2/2023 5:58:07 AM
Surr: BFB	98.1	37.7-212		%Rec	1	3/2/2023 5:58:07 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	3/2/2023 5:58:07 AM
Toluene	ND	0.047		mg/Kg	1	3/2/2023 5:58:07 AM
Ethylbenzene	ND	0.047		mg/Kg	1	3/2/2023 5:58:07 AM
Xylenes, Total	ND	0.094		mg/Kg	1	3/2/2023 5:58:07 AM
Surr: 4-Bromofluorobenzene	89.5	70-130		%Rec	1	3/2/2023 5:58:07 AM
EPA METHOD 300.0: ANIONS						Analyst: **NAI**
Chloride	ND	60		mg/Kg	20	2/28/2023 9:20:38 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B05**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **MB-73423**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **73423**	RunNo: **94937**							
Prep Date: **2/28/2023**	Analysis Date: **2/28/2023**	SeqNo: **3432208**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-73423**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **73423**	RunNo: **94937**							
Prep Date: **2/28/2023**	Analysis Date: **2/28/2023**	SeqNo: **3432210**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B05**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **LCS-73421** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **73421** RunNo: **94952**
Prep Date: **2/28/2023** Analysis Date: **3/1/2023** SeqNo: **3432996** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	81.2	61.9	130			
Surr: DNOP	4.5		5.000		90.0	69	147			

Sample ID: **MB-73421** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **73421** RunNo: **94952**
Prep Date: **2/28/2023** Analysis Date: **3/1/2023** SeqNo: **3432998** 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	10		10.00		104	69	147			

Sample ID: **MB-73436** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **73436** RunNo: **94952**
Prep Date: **2/28/2023** Analysis Date: **3/1/2023** SeqNo: **3433068** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.2		10.00		92.3	69	147			

Sample ID: **LCS-73436** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **73436** RunNo: **94952**
Prep Date: **2/28/2023** Analysis Date: **3/1/2023** SeqNo: **3433069** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		92.6	69	147			

Sample ID: **MB-73474** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **73474** RunNo: **94965**
Prep Date: **3/2/2023** Analysis Date: **3/2/2023** SeqNo: **3434009** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.4		10.00		84.0	69	147			

Sample ID: **LCS-73474** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **73474** RunNo: **94965**
Prep Date: **3/2/2023** Analysis Date: **3/2/2023** SeqNo: **3434010** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.1	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B05**

06-Mar-23

Client: Devon Energy

Project: Mesa Verde 7 Federal 2

Sample ID: **MB-73456**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **73456**	RunNo: **94965**
Prep Date: **3/1/2023**	Analysis Date: **3/2/2023**	SeqNo: **3434451** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		113	69	147			

Sample ID: **LCS-73456**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **73456**	RunNo: **94965**
Prep Date: **3/1/2023**	Analysis Date: **3/2/2023**	SeqNo: **3434452** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B05**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **lcs-73396**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **73396**	RunNo: **94933**
Prep Date: **2/27/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433434** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.8	72.3	137			
Surr: BFB	1900		1000		193	37.7	212			

Sample ID: **mb-73396**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **73396**	RunNo: **94933**
Prep Date: **2/27/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433435** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	37.7	212			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B05**
06-Mar-23

Client: Devon Energy
Project: Mesa Verde 7 Federal 2

Sample ID: **LCS-73396** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **73396** RunNo: **94933**
Prep Date: **2/27/2023** Analysis Date: **3/1/2023** SeqNo: **3433469** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.5	80	120			
Toluene	0.87	0.050	1.000	0	87.0	80	120			
Ethylbenzene	0.86	0.050	1.000	0	85.8	80	120			
Xylenes, Total	2.6	0.10	3.000	0	86.2	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.2	70	130			

Sample ID: **mb-73396** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **73396** RunNo: **94933**
Prep Date: **2/27/2023** Analysis Date: **3/1/2023** SeqNo: **3433470** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Devon Energy | Work Order Number: 2302B05 | RcptNo: 1

Received By: Tracy Casarrubias 2/25/2023 9:00:00 AM

Completed By: Tracy Casarrubias 2/25/2023 10:09:57 AM

Reviewed By: PAD 2/27/23

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: TML 2/25/23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Devon (Vertex)

Mailing Address: on file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 48 Hr

Project Name: Mesa Verde 7 Federal 2

Project #: 21E-02816

Project Manager: Kent Stallings

Sampler: J. Reta

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(Including CF): 2.1 - 0 = 2.1 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
9/23/23	10:30	Soil	BH23-04 6'	4oz Jar	Ice	2302805 001
	10:35		BH23-04 8'			002
	10:40		BH23-05 0'			003
	10:45		BH23-05 2'			004
	10:50		BH23-05 4'			005
	10:55		BH23-05 6'			006
	11:00		BH23-05 8'			007
	11:05		BH23-06 0'			008
	11:10		BH23-06 2'			009
	11:15		BH23-06 4'			010

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)
X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
9/23/23	16:52	J. Reta				
9/24/23	9:00			Courier	9/25/23	9:00

Remarks: Direct Bill to Devon
cc: Jacob Reta

Devon/Harvard

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 08, 2023

Kent Stallings

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX:

RE: Mesa Verde 7 Federal 2 OrderNo.: 2302B49

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 7 sample(s) on 2/28/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2302B49**
Date Reported: **3/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-05 10'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/24/2023 10:40:00 AM
Lab ID: 2302B49-001 **Matrix:** SOIL **Received Date:** 2/28/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	25	9.4		mg/Kg	1	3/2/2023 12:05:40 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/2/2023 12:05:40 AM
Surr: DNOP	102	69-147		%Rec	1	3/2/2023 12:05:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/3/2023 3:32:37 AM
Surr: BFB	98.2	37.7-212		%Rec	1	3/3/2023 3:32:37 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/3/2023 3:32:37 AM
Toluene	ND	0.048		mg/Kg	1	3/3/2023 3:32:37 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/3/2023 3:32:37 AM
Xylenes, Total	ND	0.096		mg/Kg	1	3/3/2023 3:32:37 AM
Surr: 4-Bromofluorobenzene	89.6	70-130		%Rec	1	3/3/2023 3:32:37 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	88	60		mg/Kg	20	3/1/2023 8:03:09 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B49**
Date Reported: **3/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-05 12'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/24/2023 10:50:00 AM
Lab ID: 2302B49-002 **Matrix:** SOIL **Received Date:** 2/28/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	3/2/2023 12:16:22 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	3/2/2023 12:16:22 AM
Surr: DNOP	125	69-147		%Rec	1	3/2/2023 12:16:22 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/3/2023 3:55:56 AM
Surr: BFB	101	37.7-212		%Rec	1	3/3/2023 3:55:56 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/3/2023 3:55:56 AM
Toluene	ND	0.049		mg/Kg	1	3/3/2023 3:55:56 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/3/2023 3:55:56 AM
Xylenes, Total	ND	0.098		mg/Kg	1	3/3/2023 3:55:56 AM
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	3/3/2023 3:55:56 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	97	60		mg/Kg	20	3/1/2023 8:15:33 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B49**
Date Reported: **3/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-07 0'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/24/2023 11:45:00 AM
Lab ID: 2302B49-003 **Matrix:** SOIL **Received Date:** 2/28/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	13000	200		mg/Kg	20	3/2/2023 12:27:01 AM
Motor Oil Range Organics (MRO)	4900	980		mg/Kg	20	3/2/2023 12:27:01 AM
Surr: DNOP	0	69-147	S	%Rec	20	3/2/2023 12:27:01 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	2300	250		mg/Kg	50	3/3/2023 12:43:22 PM
Surr: BFB	333	37.7-212	S	%Rec	50	3/3/2023 12:43:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	1.2	0.98		mg/Kg	50	3/3/2023 12:43:22 PM
Toluene	30	2.5		mg/Kg	50	3/3/2023 12:43:22 PM
Ethylbenzene	25	2.5		mg/Kg	50	3/3/2023 12:43:22 PM
Xylenes, Total	120	4.9		mg/Kg	50	3/3/2023 12:43:22 PM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	50	3/3/2023 12:43:22 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	3/1/2023 8:52:47 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B49**
Date Reported: **3/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-07 2'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/24/2023 11:50:00 AM
Lab ID: 2302B49-004 **Matrix:** SOIL **Received Date:** 2/28/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	370	9.7		mg/Kg	1	3/2/2023 12:48:16 AM
Motor Oil Range Organics (MRO)	180	48		mg/Kg	1	3/2/2023 12:48:16 AM
Surr: DNOP	101	69-147		%Rec	1	3/2/2023 12:48:16 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	11	4.9		mg/Kg	1	3/3/2023 1:07:18 PM
Surr: BFB	182	37.7-212		%Rec	1	3/3/2023 1:07:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/3/2023 1:07:18 PM
Toluene	ND	0.049		mg/Kg	1	3/3/2023 1:07:18 PM
Ethylbenzene	ND	0.049		mg/Kg	1	3/3/2023 1:07:18 PM
Xylenes, Total	0.22	0.098		mg/Kg	1	3/3/2023 1:07:18 PM
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	3/3/2023 1:07:18 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	3/1/2023 9:05:11 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2302B49**
Date Reported: **3/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-07 4'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/24/2023 11:55:00 AM
Lab ID: 2302B49-005 **Matrix:** SOIL **Received Date:** 2/28/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	22	9.5		mg/Kg	1	3/2/2023 1:09:28 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/2/2023 1:09:28 AM
Surr: DNOP	97.4	69-147		%Rec	1	3/2/2023 1:09:28 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/3/2023 5:06:00 AM
Surr: BFB	110	37.7-212		%Rec	1	3/3/2023 5:06:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/3/2023 5:06:00 AM
Toluene	ND	0.050		mg/Kg	1	3/3/2023 5:06:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/3/2023 5:06:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/3/2023 5:06:00 AM
Surr: 4-Bromofluorobenzene	91.3	70-130		%Rec	1	3/3/2023 5:06:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	3/1/2023 9:17:36 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B49**
Date Reported: **3/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-07 6'
Project: Mesa Verde 7 Federal 2 **Collection Date:** 2/24/2023 12:00:00 PM
Lab ID: 2302B49-006 **Matrix:** SOIL **Received Date:** 2/28/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	55	9.9		mg/Kg	1	3/2/2023 1:20:02 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/2/2023 1:20:02 AM
Surr: DNOP	100	69-147		%Rec	1	3/2/2023 1:20:02 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/3/2023 5:29:19 AM
Surr: BFB	105	37.7-212		%Rec	1	3/3/2023 5:29:19 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/3/2023 5:29:19 AM
Toluene	ND	0.049		mg/Kg	1	3/3/2023 5:29:19 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/3/2023 5:29:19 AM
Xylenes, Total	ND	0.097		mg/Kg	1	3/3/2023 5:29:19 AM
Surr: 4-Bromofluorobenzene	88.6	70-130		%Rec	1	3/3/2023 5:29:19 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	3/1/2023 9:30:01 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2302B49**
Date Reported: **3/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-07 7'
Project: Mesa Verde 7 Federal 2
Collection Date: 2/24/2023 12:05:00 PM
Lab ID: 2302B49-007 **Matrix:** SOIL **Received Date:** 2/28/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	21	10		mg/Kg	1	3/2/2023 1:30:31 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/2/2023 1:30:31 AM
Surr: DNOP	90.3	69-147		%Rec	1	3/2/2023 1:30:31 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/3/2023 5:52:41 AM
Surr: BFB	101	37.7-212		%Rec	1	3/3/2023 5:52:41 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/3/2023 5:52:41 AM
Toluene	ND	0.049		mg/Kg	1	3/3/2023 5:52:41 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/3/2023 5:52:41 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/3/2023 5:52:41 AM
Surr: 4-Bromofluorobenzene	87.3	70-130		%Rec	1	3/3/2023 5:52:41 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	3/2/2023 12:36:09 AM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B49**

08-Mar-23

Client: Vertex Resources Services, Inc.

Project: Mesa Verde 7 Federal 2

Sample ID: **MB-73447**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **73447**	RunNo: **94974**							
Prep Date: **3/1/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433828**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-73447**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **73447**	RunNo: **94974**							
Prep Date: **3/1/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433829**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	90	110			

Sample ID: **MB-73467**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **73467**	RunNo: **94974**							
Prep Date: **3/1/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433861**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-73467**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **73467**	RunNo: **94974**							
Prep Date: **3/1/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433862**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B49**

08-Mar-23

Client: Vertex Resources Services, Inc.

Project: Mesa Verde 7 Federal 2

Sample ID: **MB-73436**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **73436**	RunNo: **94952**
Prep Date: **2/28/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433068** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.3	69	147			

Sample ID: **LCS-73436**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **73436**	RunNo: **94952**
Prep Date: **2/28/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433069** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.8	61.9	130			
Surr: DNOP	4.6		5.000		92.6	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B49**

08-Mar-23

Client: Vertex Resources Services, Inc.

Project: Mesa Verde 7 Federal 2

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS94977**	RunNo: **94977**
Prep Date:	Analysis Date: **3/2/2023**	SeqNo: **3433961** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		199	37.7	212			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS94977**	RunNo: **94977**
Prep Date:	Analysis Date: **3/2/2023**	SeqNo: **3433962** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		103	37.7	212			

Sample ID: **lcs-73430**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **73430**	RunNo: **94977**
Prep Date: **2/28/2023**	Analysis Date: **3/2/2023**	SeqNo: **3435300** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.6	72.3	137			
Surr: BFB	2000		1000		197	37.7	212			

Sample ID: **MB-73430**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **73430**	RunNo: **94977**
Prep Date: **2/28/2023**	Analysis Date: **3/2/2023**	SeqNo: **3435301** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		101	37.7	212			

Sample ID: **lcs-73374**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **73374**	RunNo: **95021**
Prep Date: **2/24/2023**	Analysis Date: **3/3/2023**	SeqNo: **3435872** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		197	37.7	212			

Sample ID: **mb-73374**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **73374**	RunNo: **95021**
Prep Date: **2/24/2023**	Analysis Date: **3/3/2023**	SeqNo: **3435873** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		103	37.7	212			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B49**

08-Mar-23

Client: Vertex Resources Services, Inc.

Project: Mesa Verde 7 Federal 2

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R94977**	RunNo: **94977**
Prep Date:	Analysis Date: **3/2/2023**	SeqNo: **3433969** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.93		1.000		92.8	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R94977**	RunNo: **94977**
Prep Date:	Analysis Date: **3/2/2023**	SeqNo: **3433970** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		91.8	70	130			

Sample ID: **LCS-73430**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **73430**	RunNo: **94977**
Prep Date: **2/28/2023**	Analysis Date: **3/2/2023**	SeqNo: **3435356** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.025	1.000	0	81.9	80	120			
Toluene	0.85	0.050	1.000	0	85.3	80	120			
Ethylbenzene	0.84	0.050	1.000	0	84.1	80	120			
Xylenes, Total	2.5	0.10	3.000	0	84.8	80	120			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.5	70	130			

Sample ID: **MB-73430**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **73430**	RunNo: **94977**
Prep Date: **2/28/2023**	Analysis Date: **3/2/2023**	SeqNo: **3435357** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.4	70	130			

Sample ID: **LCS-73374**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **73374**	RunNo: **95021**
Prep Date: **2/24/2023**	Analysis Date: **3/3/2023**	SeqNo: **3435881** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		94.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302B49**

08-Mar-23

Client: Vertex Resources Services, Inc.

Project: Mesa Verde 7 Federal 2

Sample ID: **mb-73374**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **73374**	RunNo: **95021**
Prep Date: **2/24/2023**	Analysis Date: **3/3/2023**	SeqNo: **3435882** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.93		1.000		93.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2302B49

RcptNo: 1

Received By: Cheyenne Cason 2/28/2023 8:00:00 AM

Completed By: Sean Livingston 2/28/2023 8:31:09 AM

Reviewed By: JK 2-28-23

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: KPC 2-28-23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Not Present	YOGI		

Chain-of-Custody Record

Client: Devon (Vertex)

Mailing Address: on file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 48 Hr

Project Name: Mesa Verde 7 Federal 2

Project #: 21E-02816

Project Manager: Kent Stallings

Sampler: J. Reta, L. Pullman

On Ice: ☒ Yes ☐ No Yogi

# of Coolers: 1

Cooler Temp (including CF): 0.0 + 0.1 = 0.1 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name		Container Type and #	Preservative Type	HEAL No. 2302B49	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)
02/24/23	10:40	Soil	BH23-05	10'	4oz Jar	Ice	001	X	X					X			
	10:50		BH23-05	12'			002	X	X					X			
	11:45		BH23-07	0'			003	X	X					X			
	11:50		BH23-07	2'			004	X	X					X			
	11:55		BH23-07	4'			005	X	X					X			
	12:00		BH23-07	6'			006	X	X					X			
	12:05		BH23-07	7'			007	X	X					X			

Date	Time	Relinquished by	Received by	Via	Date	Time
02/24/23	16:10	J. Reta	[signature]		2/27/23	0815
2/27/23	1900	[signature]	CMC	courier	2/28/23	0800

Remarks: Direct Bill to Devon
CC: Jacob Reta
Devon/Harvard.

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 10, 2023

Kent Stallings

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX

RE: Mesa Verde 7 Federal 2 OrderNo.: 2303177

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/3/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2303177**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-08 0'
Project: Mesa Verde 7 Federal 2
Collection Date: 3/1/2023 10:00:00 AM
Lab ID: 2303177-001 **Matrix:** SOIL **Received Date:** 3/3/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	91	10		mg/Kg	1	3/7/2023 1:35:21 PM
Motor Oil Range Organics (MRO)	210	50		mg/Kg	1	3/7/2023 1:35:21 PM
Surr: DNOP	102	69-147		%Rec	1	3/7/2023 1:35:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/6/2023 5:07:00 PM
Surr: BFB	88.4	37.7-212		%Rec	1	3/6/2023 5:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	3/6/2023 5:07:00 PM
Toluene	ND	0.050		mg/Kg	1	3/6/2023 5:07:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/6/2023 5:07:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/6/2023 5:07:00 PM
Surr: 4-Bromofluorobenzene	88.4	70-130		%Rec	1	3/6/2023 5:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	3/6/2023 1:22:16 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2303177**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-08 2'
Project: Mesa Verde 7 Federal 2 **Collection Date:** 3/1/2023 10:05:00 AM
Lab ID: 2303177-002 **Matrix:** SOIL **Received Date:** 3/3/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	1300	98		mg/Kg	10	3/6/2023 9:57:09 PM
Motor Oil Range Organics (MRO)	1600	490		mg/Kg	10	3/6/2023 9:57:09 PM
Surr: DNOP	0	69-147	S	%Rec	10	3/6/2023 9:57:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/6/2023 5:29:00 PM
Surr: BFB	87.8	37.7-212		%Rec	1	3/6/2023 5:29:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/6/2023 5:29:00 PM
Toluene	ND	0.049		mg/Kg	1	3/6/2023 5:29:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	3/6/2023 5:29:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	3/6/2023 5:29:00 PM
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	3/6/2023 5:29:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	3/6/2023 1:34:41 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303177**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-08 4'
Project: Mesa Verde 7 Federal 2
Collection Date: 3/1/2023 10:10:00 AM
Lab ID: 2303177-003 **Matrix:** SOIL **Received Date:** 3/3/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/6/2023 10:18:19 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/6/2023 10:18:19 PM
Surr: DNOP	95.1	69-147		%Rec	1	3/6/2023 10:18:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/6/2023 5:51:00 PM
Surr: BFB	93.8	37.7-212		%Rec	1	3/6/2023 5:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/6/2023 5:51:00 PM
Toluene	ND	0.048		mg/Kg	1	3/6/2023 5:51:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	3/6/2023 5:51:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	3/6/2023 5:51:00 PM
Surr: 4-Bromofluorobenzene	92.1	70-130		%Rec	1	3/6/2023 5:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	3/6/2023 1:47:05 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2303177**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-09 0'
Project: Mesa Verde 7 Federal 2
Collection Date: 3/1/2023 10:30:00 AM
Lab ID: 2303177-004 **Matrix:** SOIL **Received Date:** 3/3/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/6/2023 10:28:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/6/2023 10:28:57 PM
Surr: DNOP	95.5	69-147		%Rec	1	3/6/2023 10:28:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/6/2023 6:12:00 PM
Surr: BFB	98.3	37.7-212		%Rec	1	3/6/2023 6:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	3/6/2023 6:12:00 PM
Toluene	ND	0.049		mg/Kg	1	3/6/2023 6:12:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	3/6/2023 6:12:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	3/6/2023 6:12:00 PM
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	3/6/2023 6:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	3/6/2023 2:24:18 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303177**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-09 2'
Project: Mesa Verde 7 Federal 2
Collection Date: 3/1/2023 10:35:00 AM
Lab ID: 2303177-005 **Matrix:** SOIL **Received Date:** 3/3/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	3/6/2023 10:39:34 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/6/2023 10:39:34 PM
Surr: DNOP	97.6	69-147		%Rec	1	3/6/2023 10:39:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/6/2023 6:34:00 PM
Surr: BFB	90.5	37.7-212		%Rec	1	3/6/2023 6:34:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/6/2023 6:34:00 PM
Toluene	ND	0.048		mg/Kg	1	3/6/2023 6:34:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	3/6/2023 6:34:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	3/6/2023 6:34:00 PM
Surr: 4-Bromofluorobenzene	91.9	70-130		%Rec	1	3/6/2023 6:34:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	3/6/2023 2:36:43 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303177**
Date Reported: **3/10/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-09 4'
Project: Mesa Verde 7 Federal 2
Collection Date: 3/1/2023 10:40:00 AM
Lab ID: 2303177-006 **Matrix:** SOIL **Received Date:** 3/3/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	3/6/2023 10:50:10 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/6/2023 10:50:10 PM
Surr: DNOP	95.7	69-147		%Rec	1	3/6/2023 10:50:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/6/2023 6:56:00 PM
Surr: BFB	90.3	37.7-212		%Rec	1	3/6/2023 6:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	3/6/2023 6:56:00 PM
Toluene	ND	0.047		mg/Kg	1	3/6/2023 6:56:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/6/2023 6:56:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	3/6/2023 6:56:00 PM
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	3/6/2023 6:56:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	3/6/2023 2:49:07 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303177**

10-Mar-23

Client: Vertex Resources Services, Inc.

Project: Mesa Verde 7 Federal 2

Sample ID: **MB-73517**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **73517**	RunNo: **95055**							
Prep Date: **3/6/2023**	Analysis Date: **3/6/2023**	SeqNo: **3437412**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-73517**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **73517**	RunNo: **95055**							
Prep Date: **3/6/2023**	Analysis Date: **3/6/2023**	SeqNo: **3437413**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2303177**
10-Mar-23

Client: Vertex Resources Services, Inc.
Project: Mesa Verde 7 Federal 2

Sample ID: **LCS-73501** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **73501** RunNo: **95068**
Prep Date: **3/3/2023** Analysis Date: **3/6/2023** SeqNo: **3438072** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.8	61.9	130			
Surr: DNOP	4.4		5.000		88.1	69	147			

Sample ID: **MB-73501** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **73501** RunNo: **95068**
Prep Date: **3/3/2023** Analysis Date: **3/6/2023** SeqNo: **3438075** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		89.5	69	147			

Sample ID: **LCS-73532** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **73532** RunNo: **95077**
Prep Date: **3/6/2023** Analysis Date: **3/7/2023** SeqNo: **3438281** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		87.7	69	147			

Sample ID: **MB-73532** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **73532** RunNo: **95077**
Prep Date: **3/6/2023** Analysis Date: **3/7/2023** SeqNo: **3438285** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		89.2	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2303177**
10-Mar-23

Client: Vertex Resources Services, Inc.
Project: Mesa Verde 7 Federal 2

Sample ID: **lcs-73497** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **73497** RunNo: **95057**
Prep Date: **3/3/2023** Analysis Date: **3/6/2023** SeqNo: **3437771** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	90.0	70	130			
Surr: BFB	2000		1000		197	37.7	212			

Sample ID: **MB-73497** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **73497** RunNo: **95057**
Prep Date: **3/3/2023** Analysis Date: **3/6/2023** SeqNo: **3437780** 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	930		1000		93.0	37.7	212			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303177**

10-Mar-23

Client: Vertex Resources Services, Inc.

Project: Mesa Verde 7 Federal 2

Sample ID: **LCS-73497** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **73497** RunNo: **95057**

Prep Date: **3/3/2023** Analysis Date: **3/6/2023** SeqNo: **3437776** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	82.8	80	120			
Toluene	0.83	0.050	1.000	0	82.7	80	120			
Ethylbenzene	0.81	0.050	1.000	0	81.4	80	120			
Xylenes, Total	2.4	0.10	3.000	0	81.2	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.0	70	130			

Sample ID: **MB-73497** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **73497** RunNo: **95057**

Prep Date: **3/3/2023** Analysis Date: **3/6/2023** SeqNo: **3437779** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		90.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2303177

RcptNo: 1

Received By: Tracy Casarrubias 3/3/2023 7:30:00 AM

Completed By: Sean Livingston 3/3/2023 8:10:25 AM

Reviewed By: JH 3-3-23

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: KPG 2 KPG 3.3.23

3.3.23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.6	Good	Not Present	Morty		

Chain-of-Custody Record

Client: Devon (Vertex)

Mailing Address: on file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 48 Hr

Project Name: Mesa Verde 7 Federal 2

Project #: 21E-02816

Project Manager: Kent Stallings

Sampler: J. Reta

On Ice: ☒ Yes ☐ No many

# of Coolers: 1

Cooler Temp (Including CF): 5.6-0=5.6 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2303177	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)
03/01/2023	10:00	Soil	BH23-08 0'	4/02 Jar	Ice	001										
	10:05		BH23-08 2'			002										
	10:10		BH23-08 4'			003										
	10:30		BH23-09 0'			004										
	10:35		BH23-09 2'			005										
	10:40		BH23-09 4'			006										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
03/01/2023	18:10	J. Reta			3/2/23	915
3/2/23	1900			courier	3/3/23	7:30

Remarks: Direct Bill to Devon
CC: Jacob Reta

Devon/Harvard

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 19, 2023

Kent Stallings

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX

RE: Mesa Verde 7 Federal 002 OrderNo.: 2304661

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 12 sample(s) on 4/15/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-10 0'
Project: Mesa Verde 7 Federal 002
Collection Date: 4/12/2023 7:50:00 AM
Lab ID: 2304661-001 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	4/18/2023 10:37:30 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	4/18/2023 10:37:30 AM
Surr: DNOP	92.9	69-147		%Rec	1	4/18/2023 10:37:30 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/18/2023 12:18:52 PM
Surr: BFB	93.9	37.7-212		%Rec	1	4/18/2023 12:18:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	4/18/2023 12:18:52 PM
Toluene	ND	0.050		mg/Kg	1	4/18/2023 12:18:52 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/18/2023 12:18:52 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/18/2023 12:18:52 PM
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	4/18/2023 12:18:52 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 11:42:43 AM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-10 2'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 7:55:00 AM
Lab ID: 2304661-002 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/18/2023 11:09:11 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/18/2023 11:09:11 AM
Surr: DNOP	94.3	69-147		%Rec	1	4/18/2023 11:09:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2023 1:29:17 PM
Surr: BFB	99.2	37.7-212		%Rec	1	4/18/2023 1:29:17 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 1:29:17 PM
Toluene	ND	0.048		mg/Kg	1	4/18/2023 1:29:17 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2023 1:29:17 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/18/2023 1:29:17 PM
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	4/18/2023 1:29:17 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 12:19:43 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-10 4'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 8:00:00 AM
Lab ID: 2304661-003 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/18/2023 11:22:05 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/18/2023 11:22:05 AM
Surr: DNOP	115	69-147		%Rec	1	4/18/2023 11:22:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/18/2023 2:39:30 PM
Surr: BFB	82.0	37.7-212		%Rec	1	4/18/2023 2:39:30 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	4/18/2023 2:39:30 PM
Toluene	ND	0.049		mg/Kg	1	4/18/2023 2:39:30 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/18/2023 2:39:30 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/18/2023 2:39:30 PM
Surr: 4-Bromofluorobenzene	91.4	70-130		%Rec	1	4/18/2023 2:39:30 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 12:32:04 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-11 0'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 8:10:00 AM
Lab ID: 2304661-004 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/18/2023 11:32:42 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/18/2023 11:32:42 AM
Surr: DNOP	91.8	69-147		%Rec	1	4/18/2023 11:32:42 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/18/2023 3:02:58 PM
Surr: BFB	107	37.7-212		%Rec	1	4/18/2023 3:02:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	4/18/2023 3:02:58 PM
Toluene	ND	0.049		mg/Kg	1	4/18/2023 3:02:58 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/18/2023 3:02:58 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/18/2023 3:02:58 PM
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	4/18/2023 3:02:58 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 12:44:25 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-11 2'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 8:15:00 AM
Lab ID: 2304661-005 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/18/2023 11:43:22 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/18/2023 11:43:22 AM
Surr: DNOP	111	69-147		%Rec	1	4/18/2023 11:43:22 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/18/2023 3:26:18 PM
Surr: BFB	93.4	37.7-212		%Rec	1	4/18/2023 3:26:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	4/18/2023 3:26:18 PM
Toluene	ND	0.047		mg/Kg	1	4/18/2023 3:26:18 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/18/2023 3:26:18 PM
Xylenes, Total	ND	0.093		mg/Kg	1	4/18/2023 3:26:18 PM
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	4/18/2023 3:26:18 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 12:56:45 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-11 4'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 8:20:00 AM
Lab ID: 2304661-006 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/18/2023 11:54:03 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/18/2023 11:54:03 AM
Surr: DNOP	108	69-147		%Rec	1	4/18/2023 11:54:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2023 3:49:39 PM
Surr: BFB	94.1	37.7-212		%Rec	1	4/18/2023 3:49:39 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 3:49:39 PM
Toluene	ND	0.048		mg/Kg	1	4/18/2023 3:49:39 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2023 3:49:39 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/18/2023 3:49:39 PM
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	4/18/2023 3:49:39 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	120	60		mg/Kg	20	4/18/2023 1:09:06 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-12 0'
Project: Mesa Verde 7 Federal 002
Collection Date: 4/12/2023 8:25:00 AM
Lab ID: 2304661-007 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/18/2023 12:04:45 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/18/2023 12:04:45 PM
Surr: DNOP	113	69-147		%Rec	1	4/18/2023 12:04:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2023 4:13:01 PM
Surr: BFB	86.8	37.7-212		%Rec	1	4/18/2023 4:13:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 4:13:01 PM
Toluene	ND	0.048		mg/Kg	1	4/18/2023 4:13:01 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2023 4:13:01 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/18/2023 4:13:01 PM
Surr: 4-Bromofluorobenzene	92.6	70-130		%Rec	1	4/18/2023 4:13:01 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 1:21:26 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-12 2'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 8:30:00 AM
Lab ID: 2304661-008 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/18/2023 12:15:29 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/18/2023 12:15:29 PM
Surr: DNOP	132	69-147		%Rec	1	4/18/2023 12:15:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/18/2023 4:36:26 PM
Surr: BFB	96.0	37.7-212		%Rec	1	4/18/2023 4:36:26 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	4/18/2023 4:36:26 PM
Toluene	ND	0.050		mg/Kg	1	4/18/2023 4:36:26 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/18/2023 4:36:26 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/18/2023 4:36:26 PM
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	4/18/2023 4:36:26 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	61		mg/Kg	20	4/18/2023 1:33:47 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-12 4'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 8:35:00 AM
Lab ID: 2304661-009 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/18/2023 12:28:17 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/18/2023 12:28:17 PM
Surr: DNOP	92.5	69-147		%Rec	1	4/18/2023 12:28:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/18/2023 4:59:46 PM
Surr: BFB	88.6	37.7-212		%Rec	1	4/18/2023 4:59:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	4/18/2023 4:59:46 PM
Toluene	ND	0.049		mg/Kg	1	4/18/2023 4:59:46 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/18/2023 4:59:46 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/18/2023 4:59:46 PM
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	4/18/2023 4:59:46 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	59		mg/Kg	20	4/18/2023 1:46:08 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-13 0'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 8:45:00 AM
Lab ID: 2304661-010 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/18/2023 12:38:57 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/18/2023 12:38:57 PM
Surr: DNOP	118	69-147		%Rec	1	4/18/2023 12:38:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2023 5:23:18 PM
Surr: BFB	106	37.7-212		%Rec	1	4/18/2023 5:23:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 5:23:18 PM
Toluene	ND	0.048		mg/Kg	1	4/18/2023 5:23:18 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2023 5:23:18 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/18/2023 5:23:18 PM
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	4/18/2023 5:23:18 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 2:47:52 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-13 2'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 8:50:00 AM
Lab ID: 2304661-011 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/18/2023 12:49:43 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/18/2023 12:49:43 PM
Surr: DNOP	89.5	69-147		%Rec	1	4/18/2023 12:49:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/18/2023 6:09:56 PM
Surr: BFB	92.0	37.7-212		%Rec	1	4/18/2023 6:09:56 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 6:09:56 PM
Toluene	ND	0.047		mg/Kg	1	4/18/2023 6:09:56 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/18/2023 6:09:56 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/18/2023 6:09:56 PM
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	4/18/2023 6:09:56 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 3:00:12 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304661**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-13 4'
Project: Mesa Verde 7 Federal 002 **Collection Date:** 4/12/2023 8:55:00 AM
Lab ID: 2304661-012 **Matrix:** SOIL **Received Date:** 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/18/2023 1:00:28 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/18/2023 1:00:28 PM
Surr: DNOP	95.0	69-147		%Rec	1	4/18/2023 1:00:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/18/2023 6:33:27 PM
Surr: BFB	89.8	37.7-212		%Rec	1	4/18/2023 6:33:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	4/18/2023 6:33:27 PM
Toluene	ND	0.050		mg/Kg	1	4/18/2023 6:33:27 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/18/2023 6:33:27 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/18/2023 6:33:27 PM
Surr: 4-Bromofluorobenzene	93.3	70-130		%Rec	1	4/18/2023 6:33:27 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 3:12:33 PM

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	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304661**

19-Apr-23

Client: Vertex Resources Services, Inc.

Project: Mesa Verde 7 Federal 002

Sample ID: **MB-74385**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **74385**	RunNo: **96129**							
Prep Date: **4/18/2023**	Analysis Date: **4/18/2023**	SeqNo: **3481207**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-74385**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **74385**	RunNo: **96129**							
Prep Date: **4/18/2023**	Analysis Date: **4/18/2023**	SeqNo: **3481208**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2304661**
19-Apr-23

Client: Vertex Resources Services, Inc.
Project: Mesa Verde 7 Federal 002

Sample ID: **2304661-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-10 0'** Batch ID: **74349** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481314** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.8	49.21	0	88.6	54.2	135			
Surr: DNOP	5.3		4.921		107	69	147			

Sample ID: **2304661-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-10 0'** Batch ID: **74349** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481315** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.6	47.80	0	87.3	54.2	135	4.44	29.2	
Surr: DNOP	4.7		4.780		98.4	69	147	0	0	

Sample ID: **LCS-74349** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **74349** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481379** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.0	61.9	130			
Surr: DNOP	4.6		5.000		92.7	69	147			

Sample ID: **LCS-74375** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **74375** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481381** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.4	69	147			

Sample ID: **MB-74349** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **74349** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481383** 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	10		10.00		101	69	147			

Sample ID: **MB-74375** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **74375** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481385** Units: **%Rec**

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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2304661**
19-Apr-23

Client: Vertex Resources Services, Inc.
Project: Mesa Verde 7 Federal 002

Sample ID: **MB-74375**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**						
Client ID: **PBS**	Batch ID: **74375**			RunNo: **96131**						
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**			SeqNo: **3481385**		Units: **%Rec**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		86.6	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2304661**
19-Apr-23

Client: Vertex Resources Services, Inc.
Project: Mesa Verde 7 Federal 002

Sample ID: **lcs-74359**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **74359**	RunNo: **96123**
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3480902** 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	93.7	70	130			
Surr: BFB	5100		1000		507	37.7	212			S

Sample ID: **mb-74359**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **74359**	RunNo: **96123**
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3480903** 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		87.5	37.7	212			

Sample ID: **2304661-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-10 0'**	Batch ID: **74359**	RunNo: **96123**
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3480905** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.85	0	104	70	130			
Surr: BFB	5800		994.0		584	37.7	212			S

Sample ID: **2304661-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-10 0'**	Batch ID: **74359**	RunNo: **96123**
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3480906** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	24.90	0	101	70	130	2.77	20	
Surr: BFB	5700		996.0		571	37.7	212	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2304661**
19-Apr-23

Client: Vertex Resources Services, Inc.
Project: Mesa Verde 7 Federal 002

Sample ID: **LCS-74359**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **74359**	RunNo: **96123**
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3480930** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.7	80	120			
Toluene	0.85	0.050	1.000	0	85.1	80	120			
Ethylbenzene	0.86	0.050	1.000	0	85.6	80	120			
Xylenes, Total	2.6	0.10	3.000	0	86.8	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.2	70	130			

Sample ID: **mb-74359**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **74359**	RunNo: **96123**
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3480931** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		92.0	70	130			

Sample ID: **2304661-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-10 2'**	Batch ID: **74359**	RunNo: **96123**
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3480934** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.024	0.9588	0	94.4	68.8	120			
Toluene	0.93	0.048	0.9588	0.01734	94.9	73.6	124			
Ethylbenzene	0.94	0.048	0.9588	0	98.3	72.7	129			
Xylenes, Total	2.9	0.096	2.876	0	99.5	75.7	126			
Surr: 4-Bromofluorobenzene	0.90		0.9588		94.0	70	130			

Sample ID: **2304661-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-10 2'**	Batch ID: **74359**	RunNo: **96123**
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3480935** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.024	0.9597	0	93.0	68.8	120	1.43	20	
Toluene	0.91	0.048	0.9597	0.01734	93.4	73.6	124	1.41	20	
Ethylbenzene	0.93	0.048	0.9597	0	96.8	72.7	129	1.46	20	
Xylenes, Total	2.8	0.096	2.879	0	98.0	75.7	126	1.46	20	
Surr: 4-Bromofluorobenzene	0.93		0.9597		97.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2304661

RcptNo: 1

Received By: Cheyenne Cason 4/15/2023 8:40:00 AM

Completed By: Cheyenne Cason 4/15/2023 9:37:04 AM

Reviewed By: JN 4/17/23

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: _____

MB 4/17/23

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	1.0	Good	Not Present	Morty		

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Vertex (direct bill to Devon)

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other ______

☐ EDD (Type) ______

Turn-Around Time: ☐ Standard ☒ Rush 48-hr

Project Name: Mesa Verde 7 Federal #002

Project #: 22E-02816-05

Project Manager: Kent Stallings

kstallings@vertex.ca

Sampler: L. Pullman

On Ice: ☒ Yes ☐ No Morty

# of Coolers: 1

Cooler Temp (Including CF): 1.1-0.1=1.0

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2304661	(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)						
04/12/23	7:50	Soil	BH23-10 0'	1, 4oz jar		001	X	X					X									
04/12/23	7:55	Soil	BH23-10 2'	1, 4oz jar		002	X	X					X									
04/12/23	8:00	Soil	BH23-10 4'	1, 4oz jar		003	X	X					X									
04/12/23	8:10	Soil	BH23-11 0'	1, 4oz jar		004	X	X					X									
04/12/23	8:15	Soil	BH23-11 2'	1, 4oz jar		005	X	X					X									
04/12/23	8:20	Soil	BH23-11 4'	1, 4oz jar		006	X	X					X									
04/12/23	8:25	Soil	BH23-12 0'	1, 4oz jar		007	X	X					X									
04/12/23	8:30	Soil	BH23-12 2'	1, 4oz jar		008	X	X					X									
04/12/23	8:35	Soil	BH23-12 4'	1, 4oz jar		009	X	X					X									
04/12/23	8:45	Soil	BH23-13 0'	1, 4oz jar		010	X	X					X									
04/12/23	8:50	Soil	BH23-13 2'	1, 4oz jar		011	X	X					X									
04/12/23	8:55	Soil	BH23-13 4'	1, 4oz jar		012	X	X					X									

Date	Time	Relinquished by	Received by	Via	Date	Time
4-14-23	07:00	[signature]	[signature]		4/14/23	700
4/14/23	1900	[signature]	[signature]	courier	4/15/23	0840

Remarks:
Direct bill to Devon, Dale Woodall
cc. kstallings@vertex.ca for Final Report

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.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 9/25/2025 9:38:19 AM

JOB DESCRIPTION

Mesa Verde 7 Federal 2

JOB NUMBER

885-33153-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
9/25/2025 9:38:19 AM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Laboratory Job ID: 885-33153-1

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Definitions/Glossary

Client: Vertex Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Vertex Job ID: 885-33153-1
Project: Mesa Verde 7 Federal 2

Job ID: 885-33153-1 Eurofins Albuquerque

Job Narrative
885-33153-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 9/12/2025 7:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.0°C.

Gasoline Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-01 at 2.5 ft
Lab Sample ID: 885-33153-1
Date Collected: 09/09/25 12:05
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.7		mg/Kg		09/16/25 17:09	09/18/25 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*15 - 150*	*09/16/25 17:09*	*09/18/25 21:07*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		09/16/25 17:09	09/18/25 21:07	1
Ethylbenzene	ND		0.047		mg/Kg		09/16/25 17:09	09/18/25 21:07	1
Toluene	ND		0.047		mg/Kg		09/16/25 17:09	09/18/25 21:07	1
Xylenes, Total	ND		0.094		mg/Kg		09/16/25 17:09	09/18/25 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 150*	*09/16/25 17:09*	*09/18/25 21:07*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**260**		20		mg/Kg		09/18/25 10:29	09/19/25 16:34	2
Motor Oil Range Organics [C28-C40]	**370**		98		mg/Kg		09/18/25 10:29	09/19/25 16:34	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*126*		*62 - 134*	*09/18/25 10:29*	*09/19/25 16:34*	*2*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**450**		50		mg/Kg		09/17/25 09:10	09/17/25 20:17	10

Client Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33153-1

Client Sample ID: BS25-02 at 2ft

Date Collected: 09/09/25 12:10
Date Received: 09/12/25 07:45

Lab Sample ID: 885-33153-2

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.7		mg/Kg		09/16/25 17:09	09/18/25 21:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*15 - 150*	*09/16/25 17:09*	*09/18/25 21:31*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		09/16/25 17:09	09/18/25 21:31	1
Ethylbenzene	ND		0.047		mg/Kg		09/16/25 17:09	09/18/25 21:31	1
Toluene	ND		0.047		mg/Kg		09/16/25 17:09	09/18/25 21:31	1
Xylenes, Total	ND		0.093		mg/Kg		09/16/25 17:09	09/18/25 21:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*15 - 150*	*09/16/25 17:09*	*09/18/25 21:31*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**130**		19		mg/Kg		09/18/25 10:29	09/19/25 17:11	2
Motor Oil Range Organics [C28-C40]	**200**		97		mg/Kg		09/18/25 10:29	09/19/25 17:11	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*118*		*62 - 134*	*09/18/25 10:29*	*09/19/25 17:11*	*2*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**610**		50		mg/Kg		09/17/25 09:10	09/17/25 20:28	10

Client Sample Results

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-03 at 2ft
Lab Sample ID: 885-33153-3
Date Collected: 09/09/25 12:15
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.6		mg/Kg		09/16/25 17:09	09/18/25 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*15 - 150*	*09/16/25 17:09*	*09/18/25 21:55*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		09/16/25 17:09	09/18/25 21:55	1
Ethylbenzene	ND		0.046		mg/Kg		09/16/25 17:09	09/18/25 21:55	1
Toluene	ND		0.046		mg/Kg		09/16/25 17:09	09/18/25 21:55	1
Xylenes, Total	ND		0.093		mg/Kg		09/16/25 17:09	09/18/25 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 150*	*09/16/25 17:09*	*09/18/25 21:55*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		09/18/25 10:29	09/19/25 00:55	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		09/18/25 10:29	09/19/25 00:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*	*09/18/25 10:29*	*09/19/25 00:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**140**		49		mg/Kg		09/17/25 09:10	09/17/25 20:38	10

Client Sample Results

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-04 at 2ft
Lab Sample ID: 885-33153-4
Date Collected: 09/09/25 12:20
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.7		mg/Kg		09/16/25 17:09	09/18/25 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*15 - 150*	*09/16/25 17:09*	*09/18/25 22:18*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		09/16/25 17:09	09/18/25 22:18	1
Ethylbenzene	ND		0.047		mg/Kg		09/16/25 17:09	09/18/25 22:18	1
Toluene	ND		0.047		mg/Kg		09/16/25 17:09	09/18/25 22:18	1
Xylenes, Total	ND		0.095		mg/Kg		09/16/25 17:09	09/18/25 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 150*	*09/16/25 17:09*	*09/18/25 22:18*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**22**		9.7		mg/Kg		09/18/25 10:29	09/19/25 01:19	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		09/18/25 10:29	09/19/25 01:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*106*		*62 - 134*	*09/18/25 10:29*	*09/19/25 01:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**140**		50		mg/Kg		09/17/25 09:10	09/17/25 20:48	10

Client Sample Results

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-05 at 2ft
Lab Sample ID: 885-33153-5
Date Collected: 09/09/25 12:25
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.8		mg/Kg		09/16/25 17:09	09/18/25 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*15 - 150*	*09/16/25 17:09*	*09/18/25 22:42*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		09/16/25 17:09	09/18/25 22:42	1
Ethylbenzene	ND		0.048		mg/Kg		09/16/25 17:09	09/18/25 22:42	1
Toluene	ND		0.048		mg/Kg		09/16/25 17:09	09/18/25 22:42	1
Xylenes, Total	ND		0.095		mg/Kg		09/16/25 17:09	09/18/25 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 150*	*09/16/25 17:09*	*09/18/25 22:42*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.1		mg/Kg		09/18/25 10:29	09/19/25 01:43	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		09/18/25 10:29	09/19/25 01:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*111*		*62 - 134*	*09/18/25 10:29*	*09/19/25 01:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		50		mg/Kg		09/17/25 09:10	09/17/25 20:59	10

Client Sample Results

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-06 at 2ft
Lab Sample ID: 885-33153-6
Date Collected: 09/09/25 12:30
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		09/16/25 18:08	09/19/25 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*15 - 150*	*09/16/25 18:08*	*09/19/25 02:15*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		09/16/25 18:08	09/19/25 02:15	1
Ethylbenzene	ND		0.050		mg/Kg		09/16/25 18:08	09/19/25 02:15	1
Toluene	ND		0.050		mg/Kg		09/16/25 18:08	09/19/25 02:15	1
Xylenes, Total	ND		0.10		mg/Kg		09/16/25 18:08	09/22/25 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 150*	*09/16/25 18:08*	*09/19/25 02:15*	*1*
4-Bromofluorobenzene (Surr)	*96*		*15 - 150*	*09/16/25 18:08*	*09/22/25 19:36*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**17**		9.4		mg/Kg		09/18/25 10:29	09/19/25 02:07	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		09/18/25 10:29	09/19/25 02:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*96*		*62 - 134*	*09/18/25 10:29*	*09/19/25 02:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**68**		50		mg/Kg		09/17/25 16:24	09/17/25 21:30	10

Client Sample Results

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: WS25-01 at 0-2ft
Lab Sample ID: 885-33153-7
Date Collected: 09/09/25 12:35
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.9		mg/Kg		09/16/25 18:08	09/19/25 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 150*	*09/16/25 18:08*	*09/19/25 03:26*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		09/16/25 18:08	09/19/25 03:26	1
Ethylbenzene	ND		0.049		mg/Kg		09/16/25 18:08	09/19/25 03:26	1
Toluene	ND		0.049		mg/Kg		09/16/25 18:08	09/19/25 03:26	1
Xylenes, Total	ND		0.099		mg/Kg		09/16/25 18:08	09/19/25 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 150*	*09/16/25 18:08*	*09/19/25 03:26*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**36**		9.5		mg/Kg		09/18/25 10:29	09/19/25 02:54	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		09/18/25 10:29	09/19/25 02:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*	*09/18/25 10:29*	*09/19/25 02:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**990**		50		mg/Kg		09/17/25 16:24	09/17/25 21:40	10

Client Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33153-1

Client Sample ID: WS25-02 at 0-2ft

Lab Sample ID: 885-33153-8
Matrix: Solid
Date Collected: 09/09/25 12:40
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.7		mg/Kg		09/16/25 18:08	09/19/25 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 150*	*09/16/25 18:08*	*09/19/25 04:37*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		09/16/25 18:08	09/19/25 04:37	1
Ethylbenzene	ND		0.047		mg/Kg		09/16/25 18:08	09/19/25 04:37	1
Toluene	ND		0.047		mg/Kg		09/16/25 18:08	09/19/25 04:37	1
Xylenes, Total	ND		0.094		mg/Kg		09/16/25 18:08	09/19/25 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 150*	*09/16/25 18:08*	*09/19/25 04:37*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.1		mg/Kg		09/18/25 10:29	09/19/25 03:18	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		09/18/25 10:29	09/19/25 03:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*09/18/25 10:29*	*09/19/25 03:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**190**		50		mg/Kg		09/17/25 16:24	09/17/25 22:52	10

Client Sample Results

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: WS25-03 at 0-2ft
Lab Sample ID: 885-33153-9
Date Collected: 09/09/25 12:45
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.9		mg/Kg		09/16/25 18:08	09/19/25 05:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 150*	*09/16/25 18:08*	*09/19/25 05:01*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		09/16/25 18:08	09/19/25 05:01	1
Ethylbenzene	ND		0.049		mg/Kg		09/16/25 18:08	09/19/25 05:01	1
Toluene	ND		0.049		mg/Kg		09/16/25 18:08	09/19/25 05:01	1
Xylenes, Total	ND		0.098		mg/Kg		09/16/25 18:08	09/19/25 05:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 150*	*09/16/25 18:08*	*09/19/25 05:01*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.2		mg/Kg		09/18/25 10:29	09/19/25 03:42	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		09/18/25 10:29	09/19/25 03:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*	*09/18/25 10:29*	*09/19/25 03:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		49		mg/Kg		09/17/25 16:24	09/17/25 23:03	10

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33153-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-34794/1-A
Matrix: Solid
Analysis Batch: 34937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34794

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		09/16/25 17:09	09/18/25 12:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*15 - 150*	*09/16/25 17:09*	*09/18/25 12:53*	*1*

Lab Sample ID: LCS 885-34794/2-A
Matrix: Solid
Analysis Batch: 34937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34794

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	22.4		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*193*		*15 - 150*

Lab Sample ID: MB 885-34801/1-A
Matrix: Solid
Analysis Batch: 35000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34801

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		09/16/25 18:08	09/19/25 00:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 150*	*09/16/25 18:08*	*09/19/25 00:40*	*1*

Lab Sample ID: LCS 885-34801/2-A
Matrix: Solid
Analysis Batch: 35000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34801

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	22.7		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*198*		*15 - 150*

Lab Sample ID: 885-33153-6 MSD
Matrix: Solid
Analysis Batch: 35000

Client Sample ID: BS25-06 at 2ft
Prep Type: Total/NA
Prep Batch: 34801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	ND		24.8	22.3		mg/Kg		90	70 - 130	8	20

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33153-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: 885-33153-6 MSD
Matrix: Solid
Analysis Batch: 35000

Client Sample ID: BS25-06 at 2ft
Prep Type: Total/NA
Prep Batch: 34801

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*194*		*15 - 150*

Lab Sample ID: 885-33153-A-6-B MS
Matrix: Solid
Analysis Batch: 35000

Client Sample ID: 885-33153-A-6-B MS
Prep Type: Total/NA
Prep Batch: 34801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	ND		24.9	24.1		mg/Kg		97	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*199*		*15 - 150*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-34794/1-A
Matrix: Solid
Analysis Batch: 34938

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34794

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		09/16/25 17:09	09/18/25 12:53	1
Ethylbenzene	ND		0.050		mg/Kg		09/16/25 17:09	09/18/25 12:53	1
Toluene	ND		0.050		mg/Kg		09/16/25 17:09	09/18/25 12:53	1
Xylenes, Total	ND		0.10		mg/Kg		09/16/25 17:09	09/18/25 12:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*102*		*15 - 150*	*09/16/25 17:09*	*09/18/25 12:53*	*1*

Lab Sample ID: LCS 885-34794/3-A
Matrix: Solid
Analysis Batch: 34938

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34794

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene			1.00	1.04		mg/Kg		104	70 - 130
Ethylbenzene			1.00	1.04		mg/Kg		104	70 - 130
m-Xylene & p-Xylene			2.00	2.09		mg/Kg		104	70 - 130
o-Xylene			1.00	1.04		mg/Kg		104	70 - 130
Toluene			1.00	1.03		mg/Kg		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*105*		*15 - 150*

Lab Sample ID: MB 885-34801/1-A
Matrix: Solid
Analysis Batch: 34999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34801

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		09/16/25 18:08	09/19/25 00:40	1

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33153-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 885-34801/1-A
Matrix: Solid
Analysis Batch: 34999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34801

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.050		mg/Kg		09/16/25 18:08	09/19/25 00:40	1
Toluene	ND		0.050		mg/Kg		09/16/25 18:08	09/19/25 00:40	1
Xylenes, Total	ND		0.10		mg/Kg		09/16/25 18:08	09/19/25 00:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 150*	*09/16/25 18:08*	*09/19/25 00:40*	*1*

Lab Sample ID: LCS 885-34801/3-A
Matrix: Solid
Analysis Batch: 34999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34801

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.01		mg/Kg		101	70 - 130		
Ethylbenzene			1.00	0.998		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			2.00	2.00		mg/Kg		100	70 - 130		
o-Xylene			1.00	1.00		mg/Kg		100	70 - 130		
Toluene			1.00	1.00		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*15 - 150*

Lab Sample ID: 885-33153-7 MS
Matrix: Solid
Analysis Batch: 34999

Client Sample ID: WS25-01 at 0-2ft
Prep Type: Total/NA
Prep Batch: 34801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.994	1.03		mg/Kg		103	70 - 130		
Ethylbenzene	ND		0.994	1.02		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene	ND		1.99	2.06		mg/Kg		102	70 - 130		
o-Xylene	ND		0.994	1.01		mg/Kg		100	70 - 130		
Toluene	ND		0.994	1.02		mg/Kg		103	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*15 - 150*

Lab Sample ID: 885-33153-7 MSD
Matrix: Solid
Analysis Batch: 34999

Client Sample ID: WS25-01 at 0-2ft
Prep Type: Total/NA
Prep Batch: 34801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.998	0.940		mg/Kg		94	70 - 130	9	20
Ethylbenzene	ND		0.998	0.939		mg/Kg		93	70 - 130	9	20
m-Xylene & p-Xylene	ND		2.00	1.88		mg/Kg		93	70 - 130	9	20
o-Xylene	ND		0.998	0.937		mg/Kg		93	70 - 130	7	20
Toluene	ND		0.998	0.948		mg/Kg		95	70 - 130	8	20

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33153-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 885-33153-7 MSD
Matrix: Solid
Analysis Batch: 34999

Client Sample ID: WS25-01 at 0-2ft
Prep Type: Total/NA
Prep Batch: 34801

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		15 - 150

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-34935/1-A
Matrix: Solid
Analysis Batch: 34917

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34935

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		09/18/25 10:28	09/18/25 17:47	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		09/18/25 10:28	09/18/25 17:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	110		62 - 134	09/18/25 10:28	09/18/25 17:47	1

Lab Sample ID: LCS 885-34935/2-A
Matrix: Solid
Analysis Batch: 34917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34935

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	47.8		mg/Kg		96	51 - 148		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	93		62 - 134

Lab Sample ID: MB 885-34979/1-A
Matrix: Solid
Analysis Batch: 35011

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34979

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.50		mg/Kg		09/18/25 14:42	09/19/25 16:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	122		62 - 134	09/18/25 14:42	09/19/25 16:10	1

Lab Sample ID: LCS 885-34979/2-A
Matrix: Solid
Analysis Batch: 35011

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34979

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			2.50	3.22		mg/Kg		129	51 - 148		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	128		62 - 134

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33153-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-34813/1-A
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34813

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg		09/17/25 09:10	09/17/25 10:14	1

Lab Sample ID: LCS 885-34813/2-A
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34813

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.5	49.2		mg/Kg		97	90 - 110		

Lab Sample ID: MB 885-34890/1-A
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34890

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.1		mg/Kg		09/17/25 16:24	09/17/25 21:09	1

Lab Sample ID: LCS 885-34890/2-A
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34890

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.2	49.2		mg/Kg		98	90 - 110		

Lab Sample ID: 885-33153-6 MS
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: BS25-06 at 2ft
Prep Type: Total/NA
Prep Batch: 34890

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	68		49.5	122		mg/Kg		110	50 - 150		

Lab Sample ID: 885-33153-6 MSD
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: BS25-06 at 2ft
Prep Type: Total/NA
Prep Batch: 34890

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	68		50.0	118		mg/Kg		99	50 - 150	4	20

QC Association Summary

Client: Vertex Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

GC VOA

Prep Batch: 34794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-1	BS25-01 at 2.5 ft	Total/NA	Solid	5030C	
885-33153-2	BS25-02 at 2ft	Total/NA	Solid	5030C	
885-33153-3	BS25-03 at 2ft	Total/NA	Solid	5030C	
885-33153-4	BS25-04 at 2ft	Total/NA	Solid	5030C	
885-33153-5	BS25-05 at 2ft	Total/NA	Solid	5030C	
MB 885-34794/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-34794/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-34794/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 34801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-6	BS25-06 at 2ft	Total/NA	Solid	5030C	
885-33153-7	WS25-01 at 0-2ft	Total/NA	Solid	5030C	
885-33153-8	WS25-02 at 0-2ft	Total/NA	Solid	5030C	
885-33153-9	WS25-03 at 0-2ft	Total/NA	Solid	5030C	
MB 885-34801/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-34801/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-34801/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-33153-6 MSD	BS25-06 at 2ft	Total/NA	Solid	5030C	
885-33153-7 MS	WS25-01 at 0-2ft	Total/NA	Solid	5030C	
885-33153-7 MSD	WS25-01 at 0-2ft	Total/NA	Solid	5030C	
885-33153-A-6-B MS	885-33153-A-6-B MS	Total/NA	Solid	5030C	

Analysis Batch: 34937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-1	BS25-01 at 2.5 ft	Total/NA	Solid	8015M/D	34794
885-33153-2	BS25-02 at 2ft	Total/NA	Solid	8015M/D	34794
885-33153-3	BS25-03 at 2ft	Total/NA	Solid	8015M/D	34794
885-33153-4	BS25-04 at 2ft	Total/NA	Solid	8015M/D	34794
885-33153-5	BS25-05 at 2ft	Total/NA	Solid	8015M/D	34794
MB 885-34794/1-A	Method Blank	Total/NA	Solid	8015M/D	34794
LCS 885-34794/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34794

Analysis Batch: 34938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-1	BS25-01 at 2.5 ft	Total/NA	Solid	8021B	34794
885-33153-2	BS25-02 at 2ft	Total/NA	Solid	8021B	34794
885-33153-3	BS25-03 at 2ft	Total/NA	Solid	8021B	34794
885-33153-4	BS25-04 at 2ft	Total/NA	Solid	8021B	34794
885-33153-5	BS25-05 at 2ft	Total/NA	Solid	8021B	34794
MB 885-34794/1-A	Method Blank	Total/NA	Solid	8021B	34794
LCS 885-34794/3-A	Lab Control Sample	Total/NA	Solid	8021B	34794

Analysis Batch: 34999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-6	BS25-06 at 2ft	Total/NA	Solid	8021B	34801
885-33153-7	WS25-01 at 0-2ft	Total/NA	Solid	8021B	34801
885-33153-8	WS25-02 at 0-2ft	Total/NA	Solid	8021B	34801
885-33153-9	WS25-03 at 0-2ft	Total/NA	Solid	8021B	34801
MB 885-34801/1-A	Method Blank	Total/NA	Solid	8021B	34801
LCS 885-34801/3-A	Lab Control Sample	Total/NA	Solid	8021B	34801

QC Association Summary

Client: Vertex Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

GC VOA (Continued)

Analysis Batch: 34999 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-7 MS	WS25-01 at 0-2ft	Total/NA	Solid	8021B	34801
885-33153-7 MSD	WS25-01 at 0-2ft	Total/NA	Solid	8021B	34801

Analysis Batch: 35000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-6	BS25-06 at 2ft	Total/NA	Solid	8015M/D	34801
885-33153-7	WS25-01 at 0-2ft	Total/NA	Solid	8015M/D	34801
885-33153-8	WS25-02 at 0-2ft	Total/NA	Solid	8015M/D	34801
885-33153-9	WS25-03 at 0-2ft	Total/NA	Solid	8015M/D	34801
MB 885-34801/1-A	Method Blank	Total/NA	Solid	8015M/D	34801
LCS 885-34801/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34801
885-33153-6 MSD	BS25-06 at 2ft	Total/NA	Solid	8015M/D	34801
885-33153-A-6-B MS	885-33153-A-6-B MS	Total/NA	Solid	8015M/D	34801

Analysis Batch: 35162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-6	BS25-06 at 2ft	Total/NA	Solid	8021B	34801

GC Semi VOA

Analysis Batch: 34917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-3	BS25-03 at 2ft	Total/NA	Solid	8015M/D	34935
885-33153-4	BS25-04 at 2ft	Total/NA	Solid	8015M/D	34935
885-33153-5	BS25-05 at 2ft	Total/NA	Solid	8015M/D	34935
885-33153-6	BS25-06 at 2ft	Total/NA	Solid	8015M/D	34935
885-33153-7	WS25-01 at 0-2ft	Total/NA	Solid	8015M/D	34935
885-33153-8	WS25-02 at 0-2ft	Total/NA	Solid	8015M/D	34935
885-33153-9	WS25-03 at 0-2ft	Total/NA	Solid	8015M/D	34935
MB 885-34935/1-A	Method Blank	Total/NA	Solid	8015M/D	34935
LCS 885-34935/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34935

Prep Batch: 34935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-1	BS25-01 at 2.5 ft	Total/NA	Solid	SHAKE	
885-33153-2	BS25-02 at 2ft	Total/NA	Solid	SHAKE	
885-33153-3	BS25-03 at 2ft	Total/NA	Solid	SHAKE	
885-33153-4	BS25-04 at 2ft	Total/NA	Solid	SHAKE	
885-33153-5	BS25-05 at 2ft	Total/NA	Solid	SHAKE	
885-33153-6	BS25-06 at 2ft	Total/NA	Solid	SHAKE	
885-33153-7	WS25-01 at 0-2ft	Total/NA	Solid	SHAKE	
885-33153-8	WS25-02 at 0-2ft	Total/NA	Solid	SHAKE	
885-33153-9	WS25-03 at 0-2ft	Total/NA	Solid	SHAKE	
MB 885-34935/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-34935/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Prep Batch: 34979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-34979/1-A	Method Blank	Total/NA	Solid	3511	
LCS 885-34979/2-A	Lab Control Sample	Total/NA	Solid	3511	

QC Association Summary

Client: Vertex Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

GC Semi VOA

Analysis Batch: 35011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-1	BS25-01 at 2.5 ft	Total/NA	Solid	8015M/D	34935
885-33153-2	BS25-02 at 2ft	Total/NA	Solid	8015M/D	34935
MB 885-34979/1-A	Method Blank	Total/NA	Solid	8015M/D	34979
LCS 885-34979/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34979

HPLC/IC

Analysis Batch: 34808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-1	BS25-01 at 2.5 ft	Total/NA	Solid	300.0	34813
885-33153-2	BS25-02 at 2ft	Total/NA	Solid	300.0	34813
885-33153-3	BS25-03 at 2ft	Total/NA	Solid	300.0	34813
885-33153-4	BS25-04 at 2ft	Total/NA	Solid	300.0	34813
885-33153-5	BS25-05 at 2ft	Total/NA	Solid	300.0	34813
885-33153-6	BS25-06 at 2ft	Total/NA	Solid	300.0	34890
885-33153-7	WS25-01 at 0-2ft	Total/NA	Solid	300.0	34890
885-33153-8	WS25-02 at 0-2ft	Total/NA	Solid	300.0	34890
885-33153-9	WS25-03 at 0-2ft	Total/NA	Solid	300.0	34890
MB 885-34813/1-A	Method Blank	Total/NA	Solid	300.0	34813
MB 885-34890/1-A	Method Blank	Total/NA	Solid	300.0	34890
LCS 885-34813/2-A	Lab Control Sample	Total/NA	Solid	300.0	34813
LCS 885-34890/2-A	Lab Control Sample	Total/NA	Solid	300.0	34890
885-33153-6 MS	BS25-06 at 2ft	Total/NA	Solid	300.0	34890
885-33153-6 MSD	BS25-06 at 2ft	Total/NA	Solid	300.0	34890

Prep Batch: 34813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-1	BS25-01 at 2.5 ft	Total/NA	Solid	300_Prep	
885-33153-2	BS25-02 at 2ft	Total/NA	Solid	300_Prep	
885-33153-3	BS25-03 at 2ft	Total/NA	Solid	300_Prep	
885-33153-4	BS25-04 at 2ft	Total/NA	Solid	300_Prep	
885-33153-5	BS25-05 at 2ft	Total/NA	Solid	300_Prep	
MB 885-34813/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-34813/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Prep Batch: 34890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33153-6	BS25-06 at 2ft	Total/NA	Solid	300_Prep	
885-33153-7	WS25-01 at 0-2ft	Total/NA	Solid	300_Prep	
885-33153-8	WS25-02 at 0-2ft	Total/NA	Solid	300_Prep	
885-33153-9	WS25-03 at 0-2ft	Total/NA	Solid	300_Prep	
MB 885-34890/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-34890/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-33153-6 MS	BS25-06 at 2ft	Total/NA	Solid	300_Prep	
885-33153-6 MSD	BS25-06 at 2ft	Total/NA	Solid	300_Prep	

Lab Chronicle

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-01 at 2.5 ft
Lab Sample ID: 885-33153-1
Date Collected: 09/09/25 12:05
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8015M/D		1	34937	JP	EET ALB	09/18/25 21:07
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8021B		1	34938	JP	EET ALB	09/18/25 21:07
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		2	35011	DR	EET ALB	09/19/25 16:34
Total/NA	Prep	300_Prep			34813	RC	EET ALB	09/17/25 09:10
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 20:17

Client Sample ID: BS25-02 at 2ft
Lab Sample ID: 885-33153-2
Date Collected: 09/09/25 12:10
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8015M/D		1	34937	JP	EET ALB	09/18/25 21:31
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8021B		1	34938	JP	EET ALB	09/18/25 21:31
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		2	35011	DR	EET ALB	09/19/25 17:11
Total/NA	Prep	300_Prep			34813	RC	EET ALB	09/17/25 09:10
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 20:28

Client Sample ID: BS25-03 at 2ft
Lab Sample ID: 885-33153-3
Date Collected: 09/09/25 12:15
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8015M/D		1	34937	JP	EET ALB	09/18/25 21:55
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8021B		1	34938	JP	EET ALB	09/18/25 21:55
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 00:55
Total/NA	Prep	300_Prep			34813	RC	EET ALB	09/17/25 09:10
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 20:38

Client Sample ID: BS25-04 at 2ft
Lab Sample ID: 885-33153-4
Date Collected: 09/09/25 12:20
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8015M/D		1	34937	JP	EET ALB	09/18/25 22:18

Lab Chronicle

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-04 at 2ft
Lab Sample ID: 885-33153-4
Date Collected: 09/09/25 12:20
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8021B		1	34938	JP	EET ALB	09/18/25 22:18
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 01:19
Total/NA	Prep	300_Prep			34813	RC	EET ALB	09/17/25 09:10
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 20:48

Client Sample ID: BS25-05 at 2ft
Lab Sample ID: 885-33153-5
Date Collected: 09/09/25 12:25
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8015M/D		1	34937	JP	EET ALB	09/18/25 22:42
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8021B		1	34938	JP	EET ALB	09/18/25 22:42
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 01:43
Total/NA	Prep	300_Prep			34813	RC	EET ALB	09/17/25 09:10
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 20:59

Client Sample ID: BS25-06 at 2ft
Lab Sample ID: 885-33153-6
Date Collected: 09/09/25 12:30
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8015M/D		1	35000	KLS	EET ALB	09/19/25 02:15
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8021B		1	34999	KLS	EET ALB	09/19/25 02:15
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8021B		1	35162	AT	EET ALB	09/22/25 19:36
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 02:07
Total/NA	Prep	300_Prep			34890	RC	EET ALB	09/17/25 16:24
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 21:30

Client Sample ID: WS25-01 at 0-2ft
Lab Sample ID: 885-33153-7
Date Collected: 09/09/25 12:35
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8015M/D		1	35000	KLS	EET ALB	09/19/25 03:26

Lab Chronicle

Client: Vertex
Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: WS25-01 at 0-2ft
Lab Sample ID: 885-33153-7
Date Collected: 09/09/25 12:35
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8021B		1	34999	KLS	EET ALB	09/19/25 03:26
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 02:54
Total/NA	Prep	300_Prep			34890	RC	EET ALB	09/17/25 16:24
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 21:40

Client Sample ID: WS25-02 at 0-2ft
Lab Sample ID: 885-33153-8
Date Collected: 09/09/25 12:40
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8015M/D		1	35000	KLS	EET ALB	09/19/25 04:37
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8021B		1	34999	KLS	EET ALB	09/19/25 04:37
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 03:18
Total/NA	Prep	300_Prep			34890	RC	EET ALB	09/17/25 16:24
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 22:52

Client Sample ID: WS25-03 at 0-2ft
Lab Sample ID: 885-33153-9
Date Collected: 09/09/25 12:45
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8015M/D		1	35000	KLS	EET ALB	09/19/25 05:01
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8021B		1	34999	KLS	EET ALB	09/19/25 05:01
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 03:42
Total/NA	Prep	300_Prep			34890	RC	EET ALB	09/17/25 16:24
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 23:03

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex Job ID: 885-33153-1
Project/Site: Mesa Verde 7 Federal 2

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-27-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics (GRO)-C6-C10
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-26

Chain-of-Custody Record

Client: Vertex (bill to Devon Energy, Jim Raley)

Mailing Address: 3101 Boyd Dr
Carlsbad, New Mexico 88220

Phone #: 575.725.5001
email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
X Standard ✓ 5 Day

Project Name:
Mesa Verde 7 Federal 2

Project #:
25A-01341 Work Order (1007044201)

Project Manager:
Sally Carttar
SCarttar@vertexresource.com

Sampler: Sharon Minnix
On Ice: ☒ Yes ☐ No
# of Coolers: 1 Abby
Cooler Temp (including CF): 0.0-0.2=0

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

885-33153 COC

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)					
9.9.25	12:05	Soil	BS25-01 at 2.5ft	1, 4oz jar	ICE	1	X	X					X								
9.9.25	12:10	Soil	BS25-02 at 2ft	1, 4oz jar	ICE	2	X	X					X								
9.9.25	12:15	Soil	BS25-03 at 2ft	1, 4oz jar	ICE	3	X	X					X								
9.89.25	12:20	Soil	BS25-04 at 2ft	1, 4oz jar	ICE	4	X	X					X								
9.9.25	12:25	Soil	BS25-05 at 2ft	1, 4oz jar	ICE	5	X	X					X								
9.9.25	12:30	Soil	BS25-06 at 2ft	1, 4oz jar	ICE	6	X	X					X								
9.9.25	12:35	Soil	WS25-01 at 2ft	1, 4oz jar	ICE	7	X	X					X								
9.9.25	12:40	Soil	WS25-02 at 2ft	1, 4oz jar	ICE	8	X	X					X								
9.9.25	12:45	Soil	WS25-03 at 2ft	1, 4oz jar	ICE	9	X	X					X								

Date	Time	Relinquished by	Received by	Via	Date	Time
9/11/25	900	Sharon Minnix				
9/11/25	1900				9/12/25	700

Remarks: **Work Order # 1007044201.** Direct Bill to Devon Energy ATTN: Jim Raley CC: Sally Carttar (Scarttar@vertexresource.com), Permian@vertexresource.com, and Sharon Minnix (Sminnix@vertexresource.com) for final report.

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-33153-1

Login Number: 33153 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: McQuiston, Steven

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 9/23/2025 1:52:31 PM Revision 1

JOB DESCRIPTION

Mesa Verde 7 Federal 2

JOB NUMBER

885-33151-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

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Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Laboratory Job ID: 885-33151-1

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Definitions/Glossary

Client: Vertex Job ID: 885-33151-1
Project/Site: Mesa Verde 7 Federal 2

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Vertex Job ID: 885-33151-1
Project: Mesa Verde 7 Federal 2

Job ID: 885-33151-1 Eurofins Albuquerque

Job Narrative
885-33151-1

REVISION

The report being provided is a revision of the original report sent on 9/22/2025. The report (revision 1) is being revised due to change all of the samples to state 0 to 2ft instead of just 2ft since it is a wall sample..

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 9/12/2025 7:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.0°C.

Gasoline Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
Method 8015D_DRO: The following samples were diluted due to the nature of the sample matrix: WS25-05 at 0 to 2ft (885-33151-2) and WS25-06 at 0 to 2ft (885-33151-3). Elevated reporting limits (RLs) are provided.

Method 8015D_DRO: The following samples required a dilution due to the nature of the sample matrix: WS25-05 at 0 to 2ft (885-33151-2) and WS25-06 at 0 to 2ft (885-33151-3). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8015D_DRO: The following sample required a dilution due to the nature of the sample matrix: WS25-04 at 0 to 2ft (885-33151-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Vertex
Job ID: 885-33151-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: WS25-04 at 0 to 2ft
Lab Sample ID: 885-33151-1
Date Collected: 09/09/25 13:00
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	7.3		4.8		mg/Kg		09/16/25 17:09	09/18/25 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 150*	*09/16/25 17:09*	*09/18/25 19:56*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		09/16/25 17:09	09/18/25 19:56	1
Ethylbenzene	ND		0.048		mg/Kg		09/16/25 17:09	09/18/25 19:56	1
Toluene	ND		0.048		mg/Kg		09/16/25 17:09	09/18/25 19:56	1
Xylenes, Total	ND		0.096		mg/Kg		09/16/25 17:09	09/18/25 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 150*	*09/16/25 17:09*	*09/18/25 19:56*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2900		99		mg/Kg		09/18/25 10:29	09/18/25 22:33	10
Motor Oil Range Organics [C28-C40]	1500		490		mg/Kg		09/18/25 10:29	09/18/25 22:33	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*09/18/25 10:29*	*09/18/25 22:33*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1100		50		mg/Kg		09/17/25 09:10	09/17/25 19:25	10

Client Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33151-1

Client Sample ID: WS25-05 at 0 to 2ft

Date Collected: 09/09/25 12:50
Date Received: 09/12/25 07:45

Lab Sample ID: 885-33151-2

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	17		4.8		mg/Kg		09/16/25 17:09	09/18/25 20:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*		*15 - 150*	*09/16/25 17:09*	*09/18/25 20:20*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		09/16/25 17:09	09/18/25 20:20	1
Ethylbenzene	ND		0.048		mg/Kg		09/16/25 17:09	09/18/25 20:20	1
Toluene	ND		0.048		mg/Kg		09/16/25 17:09	09/18/25 20:20	1
Xylenes, Total	ND		0.096		mg/Kg		09/16/25 17:09	09/18/25 20:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*15 - 150*	*09/16/25 17:09*	*09/18/25 20:20*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	7800		93		mg/Kg		09/18/25 11:58	09/19/25 00:26	10
Motor Oil Range Organics [C28-C40]	5000		460		mg/Kg		09/18/25 11:58	09/19/25 00:26	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*09/18/25 11:58*	*09/19/25 00:26*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2000		50		mg/Kg		09/17/25 09:10	09/17/25 19:36	10

Client Sample Results

Client: Vertex
Job ID: 885-33151-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: WS25-06 at 0 to 2ft
Lab Sample ID: 885-33151-3
Date Collected: 09/09/25 12:55
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.7		mg/Kg		09/16/25 17:09	09/19/25 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*15 - 150*	*09/16/25 17:09*	*09/19/25 14:14*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		09/16/25 17:09	09/19/25 14:14	1
Ethylbenzene	ND		0.047		mg/Kg		09/16/25 17:09	09/19/25 14:14	1
Toluene	ND		0.047		mg/Kg		09/16/25 17:09	09/19/25 14:14	1
Xylenes, Total	ND		0.093		mg/Kg		09/16/25 17:09	09/19/25 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 150*	*09/16/25 17:09*	*09/19/25 14:14*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**190**		93		mg/Kg		09/18/25 11:58	09/19/25 01:03	10
Motor Oil Range Organics [C28-C40]	**580**		470		mg/Kg		09/18/25 11:58	09/19/25 01:03	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*09/18/25 11:58*	*09/19/25 01:03*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**200**		50		mg/Kg		09/17/25 09:10	09/17/25 20:07	10

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33151-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-34794/1-A
Matrix: Solid
Analysis Batch: 34937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34794

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		09/16/25 17:09	09/18/25 12:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*15 - 150*	*09/16/25 17:09*	*09/18/25 12:53*	*1*

Lab Sample ID: LCS 885-34794/2-A
Matrix: Solid
Analysis Batch: 34937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34794

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	22.4		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*193*		*15 - 150*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-34794/1-A
Matrix: Solid
Analysis Batch: 34938

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34794

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		09/16/25 17:09	09/18/25 12:53	1
Ethylbenzene	ND		0.050		mg/Kg		09/16/25 17:09	09/18/25 12:53	1
Toluene	ND		0.050		mg/Kg		09/16/25 17:09	09/18/25 12:53	1
Xylenes, Total	ND		0.10		mg/Kg		09/16/25 17:09	09/18/25 12:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*15 - 150*	*09/16/25 17:09*	*09/18/25 12:53*	*1*

Lab Sample ID: LCS 885-34794/3-A
Matrix: Solid
Analysis Batch: 34938

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34794

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.04		mg/Kg		104	70 - 130		
Ethylbenzene			1.00	1.04		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			2.00	2.09		mg/Kg		104	70 - 130		
o-Xylene			1.00	1.04		mg/Kg		104	70 - 130		
Toluene			1.00	1.03		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*15 - 150*

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33151-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-34935/1-A
Matrix: Solid
Analysis Batch: 34917

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34935

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		09/18/25 10:28	09/18/25 17:47	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		09/18/25 10:28	09/18/25 17:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*110*		*62 - 134*	*09/18/25 10:28*	*09/18/25 17:47*	*1*

Lab Sample ID: LCS 885-34935/2-A
Matrix: Solid
Analysis Batch: 34917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34935

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	47.8		mg/Kg		96	51 - 148		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*93*		*62 - 134*

Lab Sample ID: MB 885-34960/1-A
Matrix: Solid
Analysis Batch: 34915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34960

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		09/18/25 11:58	09/18/25 16:59	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		09/18/25 11:58	09/18/25 16:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*116*		*62 - 134*	*09/18/25 11:58*	*09/18/25 16:59*	*1*

Lab Sample ID: LCS 885-34960/2-A
Matrix: Solid
Analysis Batch: 34915

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34960

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	58.8		mg/Kg		118	51 - 148		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*119*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-34813/1-A
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34813

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg		09/17/25 09:10	09/17/25 10:14	1

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33151-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 885-34813/2-A
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34813

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.5	49.2		mg/Kg		97	90 - 110		

QC Association Summary

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33151-1

GC VOA

Prep Batch: 34794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-1	WS25-04 at 0 to 2ft	Total/NA	Solid	5030C	
885-33151-2	WS25-05 at 0 to 2ft	Total/NA	Solid	5030C	
885-33151-3	WS25-06 at 0 to 2ft	Total/NA	Solid	5030C	
MB 885-34794/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-34794/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-34794/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 34937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-1	WS25-04 at 0 to 2ft	Total/NA	Solid	8015M/D	34794
885-33151-2	WS25-05 at 0 to 2ft	Total/NA	Solid	8015M/D	34794
MB 885-34794/1-A	Method Blank	Total/NA	Solid	8015M/D	34794
LCS 885-34794/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34794

Analysis Batch: 34938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-1	WS25-04 at 0 to 2ft	Total/NA	Solid	8021B	34794
885-33151-2	WS25-05 at 0 to 2ft	Total/NA	Solid	8021B	34794
MB 885-34794/1-A	Method Blank	Total/NA	Solid	8021B	34794
LCS 885-34794/3-A	Lab Control Sample	Total/NA	Solid	8021B	34794

Analysis Batch: 35063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-3	WS25-06 at 0 to 2ft	Total/NA	Solid	8015M/D	34794

Analysis Batch: 35064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-3	WS25-06 at 0 to 2ft	Total/NA	Solid	8021B	34794

GC Semi VOA

Analysis Batch: 34915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-2	WS25-05 at 0 to 2ft	Total/NA	Solid	8015M/D	34960
885-33151-3	WS25-06 at 0 to 2ft	Total/NA	Solid	8015M/D	34960
MB 885-34960/1-A	Method Blank	Total/NA	Solid	8015M/D	34960
LCS 885-34960/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34960

Analysis Batch: 34917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-1	WS25-04 at 0 to 2ft	Total/NA	Solid	8015M/D	34935
MB 885-34935/1-A	Method Blank	Total/NA	Solid	8015M/D	34935
LCS 885-34935/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34935

Prep Batch: 34935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-1	WS25-04 at 0 to 2ft	Total/NA	Solid	SHAKE	
MB 885-34935/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-34935/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

QC Association Summary

Client: Vertex
Job ID: 885-33151-1
Project/Site: Mesa Verde 7 Federal 2

GC Semi VOA

Prep Batch: 34960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-2	WS25-05 at 0 to 2ft	Total/NA	Solid	SHAKE	
885-33151-3	WS25-06 at 0 to 2ft	Total/NA	Solid	SHAKE	
MB 885-34960/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-34960/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

HPLC/IC

Analysis Batch: 34808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-1	WS25-04 at 0 to 2ft	Total/NA	Solid	300.0	34813
885-33151-2	WS25-05 at 0 to 2ft	Total/NA	Solid	300.0	34813
885-33151-3	WS25-06 at 0 to 2ft	Total/NA	Solid	300.0	34813
MB 885-34813/1-A	Method Blank	Total/NA	Solid	300.0	34813
LCS 885-34813/2-A	Lab Control Sample	Total/NA	Solid	300.0	34813

Prep Batch: 34813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33151-1	WS25-04 at 0 to 2ft	Total/NA	Solid	300_Prep	
885-33151-2	WS25-05 at 0 to 2ft	Total/NA	Solid	300_Prep	
885-33151-3	WS25-06 at 0 to 2ft	Total/NA	Solid	300_Prep	
MB 885-34813/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-34813/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Lab Chronicle

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33151-1

Client Sample ID: WS25-04 at 0 to 2ft
Date Collected: 09/09/25 13:00
Date Received: 09/12/25 07:45

Lab Sample ID: 885-33151-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8015M/D		1	34937	JP	EET ALB	09/18/25 19:56
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8021B		1	34938	JP	EET ALB	09/18/25 19:56
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		10	34917	BZR	EET ALB	09/18/25 22:33
Total/NA	Prep	300_Prep			34813	RC	EET ALB	09/17/25 09:10
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 19:25

Client Sample ID: WS25-05 at 0 to 2ft
Date Collected: 09/09/25 12:50
Date Received: 09/12/25 07:45

Lab Sample ID: 885-33151-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8015M/D		1	34937	JP	EET ALB	09/18/25 20:20
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8021B		1	34938	JP	EET ALB	09/18/25 20:20
Total/NA	Prep	SHAKE			34960	BZR	EET ALB	09/18/25 11:58
Total/NA	Analysis	8015M/D		10	34915	EM	EET ALB	09/19/25 00:26
Total/NA	Prep	300_Prep			34813	RC	EET ALB	09/17/25 09:10
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 19:36

Client Sample ID: WS25-06 at 0 to 2ft
Date Collected: 09/09/25 12:55
Date Received: 09/12/25 07:45

Lab Sample ID: 885-33151-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8015M/D		1	35063	KLS	EET ALB	09/19/25 14:14
Total/NA	Prep	5030C			34794	JP	EET ALB	09/16/25 17:09
Total/NA	Analysis	8021B		1	35064	KLS	EET ALB	09/19/25 14:14
Total/NA	Prep	SHAKE			34960	BZR	EET ALB	09/18/25 11:58
Total/NA	Analysis	8015M/D		10	34915	EM	EET ALB	09/19/25 01:03
Total/NA	Prep	300_Prep			34813	RC	EET ALB	09/17/25 09:10
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 20:07

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Job ID: 885-33151-1
Project/Site: Mesa Verde 7 Federal 2

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-27-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics (GRO)-C6-C10
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-26

Chain-of-Custody Record

Client: **Vertex (bill to Devon Energy, Jim Raley)**

Mailing Address: 3101 Boyd Dr
Carlsbad, New Mexico 88220

Phone #: 575.725.5001
email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
X Standard & 5 Day Rush

Project Name:
Mesa Verde 7 Federal 2

Project #:
25A-01341 Work Order (1007044201)

Project Manager:
Sally Carttar
SCarttar@vertexresource.com

Sampler: Sharon Minnix
On Ice: ☒ Yes ☐ No
# of Coolers: 1 Abby
Cooler Temp(including CF): 0.2-0.2=0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental
4901 Hawkins NE - Albuquerque,
Tel. 505-345-3975 Fax 505-3

885-33151 COC

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9.9.25	13:00	Soil	WS25-04 at 2ft	1, 4oz jar	ICE	1	X	X					X			
9.9.25	12:50	Soil	WS25-05 at 2ft	1, 4oz jar	ICE	2	X	X					X			
9.9.25	12:55	Soil	WS25-06 at 2ft	1, 4oz jar	ICE	3	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/11/25	900				9/11/25	900
9/11/25	1902			Courier	9/12/25	7245

Remarks: **Work Order #1007044201.** Direct Bill to Devon Energy ATTN: Jim Raley CC: Sally Carttar (Scarttar@vertexresource.com), Permian@vertexresource.com, and Sharon Minnix (Sminnix@vertexresource.com) for final report.

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-33151-1

Login Number: 33151 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: McQuiston, Steven

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 9/24/2025 7:27:47 AM

JOB DESCRIPTION

Mesa Verde 7 Federal 2

JOB NUMBER

885-33156-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
9/24/2025 7:27:47 AM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Laboratory Job ID: 885-33156-1

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Definitions/Glossary

Client: Vertex Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Vertex Job ID: 885-33156-1
Project: Mesa Verde 7 Federal 2

Job ID: 885-33156-1 Eurofins Albuquerque

Job Narrative
885-33156-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 9/12/2025 7:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.0°C.

Gasoline Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Vertex
Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-07 at 2ft
Lab Sample ID: 885-33156-1
Date Collected: 09/10/25 11:00
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.6		mg/Kg		09/16/25 18:08	09/19/25 05:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 150*	*09/16/25 18:08*	*09/19/25 05:25*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		09/16/25 18:08	09/19/25 05:25	1
Ethylbenzene	ND		0.046		mg/Kg		09/16/25 18:08	09/19/25 05:25	1
Toluene	ND		0.046		mg/Kg		09/16/25 18:08	09/19/25 05:25	1
Xylenes, Total	ND		0.092		mg/Kg		09/16/25 18:08	09/19/25 05:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 150*	*09/16/25 18:08*	*09/19/25 05:25*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		09/18/25 10:29	09/19/25 04:06	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		09/18/25 10:29	09/19/25 04:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*09/18/25 10:29*	*09/19/25 04:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		50		mg/Kg		09/17/25 16:24	09/17/25 23:13	10

Client Sample Results

Client: Vertex
Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-08 at 2ft
Lab Sample ID: 885-33156-2
Date Collected: 09/10/25 11:10
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.7		mg/Kg		09/16/25 18:08	09/19/25 05:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*15 - 150*	*09/16/25 18:08*	*09/19/25 05:49*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		09/16/25 18:08	09/19/25 05:49	1
Ethylbenzene	ND		0.047		mg/Kg		09/16/25 18:08	09/19/25 05:49	1
Toluene	ND		0.047		mg/Kg		09/16/25 18:08	09/19/25 05:49	1
Xylenes, Total	ND		0.094		mg/Kg		09/16/25 18:08	09/19/25 05:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 150*	*09/16/25 18:08*	*09/19/25 05:49*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.4		mg/Kg		09/18/25 10:29	09/19/25 04:30	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		09/18/25 10:29	09/19/25 04:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*	*09/18/25 10:29*	*09/19/25 04:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1200**		50		mg/Kg		09/17/25 16:24	09/17/25 23:23	10

Client Sample Results

Client: Vertex
Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: WS25-07 at 0-2.5ft
Lab Sample ID: 885-33156-3
Date Collected: 09/10/25 11:30
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.6		mg/Kg		09/16/25 18:08	09/19/25 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*15 - 150*	*09/16/25 18:08*	*09/19/25 06:12*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		09/16/25 18:08	09/19/25 06:12	1
Ethylbenzene	ND		0.046		mg/Kg		09/16/25 18:08	09/19/25 06:12	1
Toluene	ND		0.046		mg/Kg		09/16/25 18:08	09/19/25 06:12	1
Xylenes, Total	ND		0.093		mg/Kg		09/16/25 18:08	09/19/25 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 150*	*09/16/25 18:08*	*09/19/25 06:12*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		09/18/25 10:29	09/19/25 04:53	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		09/18/25 10:29	09/19/25 04:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*99*		*62 - 134*	*09/18/25 10:29*	*09/19/25 04:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1900**		50		mg/Kg		09/17/25 16:24	09/17/25 23:34	10

Client Sample Results

Client: Vertex
Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: WS25-08 at 0-2ft
Lab Sample ID: 885-33156-4
Date Collected: 09/10/25 11:45
Matrix: Solid
Date Received: 09/12/25 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.7		mg/Kg		09/16/25 18:08	09/19/25 06:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*15 - 150*	*09/16/25 18:08*	*09/19/25 06:59*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		09/16/25 18:08	09/19/25 06:59	1
Ethylbenzene	ND		0.047		mg/Kg		09/16/25 18:08	09/19/25 06:59	1
Toluene	ND		0.047		mg/Kg		09/16/25 18:08	09/19/25 06:59	1
Xylenes, Total	ND		0.094		mg/Kg		09/16/25 18:08	09/19/25 06:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 150*	*09/16/25 18:08*	*09/19/25 06:59*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		09/18/25 15:11	09/19/25 11:49	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		09/18/25 15:11	09/19/25 11:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*84*		*62 - 134*	*09/18/25 15:11*	*09/19/25 11:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**330**		49		mg/Kg		09/17/25 16:24	09/17/25 23:44	10

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33156-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-34801/1-A
Matrix: Solid
Analysis Batch: 35000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34801

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		09/16/25 18:08	09/19/25 00:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 150*	*09/16/25 18:08*	*09/19/25 00:40*	*1*

Lab Sample ID: LCS 885-34801/2-A
Matrix: Solid
Analysis Batch: 35000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34801

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	22.7		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*198*		*15 - 150*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-34801/1-A
Matrix: Solid
Analysis Batch: 34999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34801

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		09/16/25 18:08	09/19/25 00:40	1
Ethylbenzene	ND		0.050		mg/Kg		09/16/25 18:08	09/19/25 00:40	1
Toluene	ND		0.050		mg/Kg		09/16/25 18:08	09/19/25 00:40	1
Xylenes, Total	ND		0.10		mg/Kg		09/16/25 18:08	09/19/25 00:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 150*	*09/16/25 18:08*	*09/19/25 00:40*	*1*

Lab Sample ID: LCS 885-34801/3-A
Matrix: Solid
Analysis Batch: 34999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34801

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.01		mg/Kg		101	70 - 130		
Ethylbenzene			1.00	0.998		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			2.00	2.00		mg/Kg		100	70 - 130		
o-Xylene			1.00	1.00		mg/Kg		100	70 - 130		
Toluene			1.00	1.00		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*15 - 150*

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33156-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-34935/1-A
Matrix: Solid
Analysis Batch: 34917

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34935

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		09/18/25 10:28	09/18/25 17:47	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		09/18/25 10:28	09/18/25 17:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*110*		*62 - 134*	*09/18/25 10:28*	*09/18/25 17:47*	*1*

Lab Sample ID: LCS 885-34935/2-A
Matrix: Solid
Analysis Batch: 34917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34935

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	47.8		mg/Kg		96	51 - 148		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*93*		*62 - 134*

Lab Sample ID: MB 885-34981/1-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34981

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		09/18/25 15:11	09/19/25 12:12	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		09/18/25 15:11	09/19/25 12:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*84*		*62 - 134*	*09/18/25 15:11*	*09/19/25 12:12*	*1*

Lab Sample ID: LCS 885-34981/2-A
Matrix: Solid
Analysis Batch: 35013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34981

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	40.7		mg/Kg		81	51 - 148		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*85*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-34890/1-A
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34890

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.1		mg/Kg		09/17/25 16:24	09/17/25 21:09	1

QC Sample Results

Client: Vertex
Project/Site: Mesa Verde 7 Federal 2

Job ID: 885-33156-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 885-34890/2-A
Matrix: Solid
Analysis Batch: 34808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34890

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.2	49.2		mg/Kg		98	90 - 110		

QC Association Summary

Client: Vertex Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

GC VOA

Prep Batch: 34801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33156-1	BS25-07 at 2ft	Total/NA	Solid	5030C	
885-33156-2	BS25-08 at 2ft	Total/NA	Solid	5030C	
885-33156-3	WS25-07 at 0-2.5ft	Total/NA	Solid	5030C	
885-33156-4	WS25-08 at 0-2ft	Total/NA	Solid	5030C	
MB 885-34801/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-34801/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-34801/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 34999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33156-1	BS25-07 at 2ft	Total/NA	Solid	8021B	34801
885-33156-2	BS25-08 at 2ft	Total/NA	Solid	8021B	34801
885-33156-3	WS25-07 at 0-2.5ft	Total/NA	Solid	8021B	34801
885-33156-4	WS25-08 at 0-2ft	Total/NA	Solid	8021B	34801
MB 885-34801/1-A	Method Blank	Total/NA	Solid	8021B	34801
LCS 885-34801/3-A	Lab Control Sample	Total/NA	Solid	8021B	34801

Analysis Batch: 35000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33156-1	BS25-07 at 2ft	Total/NA	Solid	8015M/D	34801
885-33156-2	BS25-08 at 2ft	Total/NA	Solid	8015M/D	34801
885-33156-3	WS25-07 at 0-2.5ft	Total/NA	Solid	8015M/D	34801
885-33156-4	WS25-08 at 0-2ft	Total/NA	Solid	8015M/D	34801
MB 885-34801/1-A	Method Blank	Total/NA	Solid	8015M/D	34801
LCS 885-34801/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34801

GC Semi VOA

Analysis Batch: 34917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33156-1	BS25-07 at 2ft	Total/NA	Solid	8015M/D	34935
885-33156-2	BS25-08 at 2ft	Total/NA	Solid	8015M/D	34935
885-33156-3	WS25-07 at 0-2.5ft	Total/NA	Solid	8015M/D	34935
MB 885-34935/1-A	Method Blank	Total/NA	Solid	8015M/D	34935
LCS 885-34935/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34935

Prep Batch: 34935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33156-1	BS25-07 at 2ft	Total/NA	Solid	SHAKE	
885-33156-2	BS25-08 at 2ft	Total/NA	Solid	SHAKE	
885-33156-3	WS25-07 at 0-2.5ft	Total/NA	Solid	SHAKE	
MB 885-34935/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-34935/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Prep Batch: 34981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33156-4	WS25-08 at 0-2ft	Total/NA	Solid	SHAKE	
MB 885-34981/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-34981/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

QC Association Summary

Client: Vertex
Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

GC Semi VOA

Analysis Batch: 35013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33156-4	WS25-08 at 0-2ft	Total/NA	Solid	8015M/D	34981
MB 885-34981/1-A	Method Blank	Total/NA	Solid	8015M/D	34981
LCS 885-34981/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	34981

HPLC/IC

Analysis Batch: 34808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33156-1	BS25-07 at 2ft	Total/NA	Solid	300.0	34890
885-33156-2	BS25-08 at 2ft	Total/NA	Solid	300.0	34890
885-33156-3	WS25-07 at 0-2.5ft	Total/NA	Solid	300.0	34890
885-33156-4	WS25-08 at 0-2ft	Total/NA	Solid	300.0	34890
MB 885-34890/1-A	Method Blank	Total/NA	Solid	300.0	34890
LCS 885-34890/2-A	Lab Control Sample	Total/NA	Solid	300.0	34890

Prep Batch: 34890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-33156-1	BS25-07 at 2ft	Total/NA	Solid	300_Prep	
885-33156-2	BS25-08 at 2ft	Total/NA	Solid	300_Prep	
885-33156-3	WS25-07 at 0-2.5ft	Total/NA	Solid	300_Prep	
885-33156-4	WS25-08 at 0-2ft	Total/NA	Solid	300_Prep	
MB 885-34890/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-34890/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Lab Chronicle

Client: Vertex
Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: BS25-07 at 2ft
Lab Sample ID: 885-33156-1
Date Collected: 09/10/25 11:00
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8015M/D		1	35000	KLS	EET ALB	09/19/25 05:25
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8021B		1	34999	KLS	EET ALB	09/19/25 05:25
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 04:06
Total/NA	Prep	300_Prep			34890	RC	EET ALB	09/17/25 16:24
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 23:13

Client Sample ID: BS25-08 at 2ft
Lab Sample ID: 885-33156-2
Date Collected: 09/10/25 11:10
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8015M/D		1	35000	KLS	EET ALB	09/19/25 05:49
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8021B		1	34999	KLS	EET ALB	09/19/25 05:49
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 04:30
Total/NA	Prep	300_Prep			34890	RC	EET ALB	09/17/25 16:24
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 23:23

Client Sample ID: WS25-07 at 0-2.5ft
Lab Sample ID: 885-33156-3
Date Collected: 09/10/25 11:30
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8015M/D		1	35000	KLS	EET ALB	09/19/25 06:12
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8021B		1	34999	KLS	EET ALB	09/19/25 06:12
Total/NA	Prep	SHAKE			34935	BZR	EET ALB	09/18/25 10:29
Total/NA	Analysis	8015M/D		1	34917	BZR	EET ALB	09/19/25 04:53
Total/NA	Prep	300_Prep			34890	RC	EET ALB	09/17/25 16:24
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 23:34

Client Sample ID: WS25-08 at 0-2ft
Lab Sample ID: 885-33156-4
Date Collected: 09/10/25 11:45
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8015M/D		1	35000	KLS	EET ALB	09/19/25 06:59

Lab Chronicle

Client: Vertex
Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

Client Sample ID: WS25-08 at 0-2ft
Lab Sample ID: 885-33156-4

Date Collected: 09/10/25 11:45
Matrix: Solid
Date Received: 09/12/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			34801	JP	EET ALB	09/16/25 18:08
Total/NA	Analysis	8021B		1	34999	KLS	EET ALB	09/19/25 06:59
Total/NA	Prep	SHAKE			34981	BZR	EET ALB	09/18/25 15:11
Total/NA	Analysis	8015M/D		1	35013	EM	EET ALB	09/19/25 11:49
Total/NA	Prep	300_Prep			34890	RC	EET ALB	09/17/25 16:24
Total/NA	Analysis	300.0		10	34808	RC	EET ALB	09/17/25 23:44

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex Job ID: 885-33156-1
Project/Site: Mesa Verde 7 Federal 2

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-27-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics (GRO)-C6-C10
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-26

Chain-of-Custody Record

Client: **Vertex (bill to Devon Energy, Jim Raley)**

Mailing Address: 3101 Boyd Dr
Carlsbad, New Mexico 88220

Phone #: 575.725.5001
email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
X Standard

Project Name:
Mesa Verde 7 Federal 2

Project #:
25A-01341 Work Order (1007044201)

Project Manager:
Sally Carttar
SCarttar@vertexresource.com

Sampler: Sharon Minnix
On Ice: ☑ Yes ☐ No
# of Coolers: 1 (Ashby)
Cooler Temp(including CF): 0.2-0.2=0

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

885-33156 COC

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9.10.25	11:00	Soil	BS25-07 at 2ft	1, 4oz jar	ICE	1	X	X					X			
9.10.25	11:10	Soil	BS25-08 at 2ft	1, 4oz jar	ICE	2	X	X					X			
9.10.25	11:30	Soil	WS25-07 at 2.5ft	1, 4oz jar	ICE	3	X	X					X			
9.10.25	11:45	Soil	WS25-08 at 2ft	1, 4oz jar	ICE	4	X	X					X			

Date	Time	Relinquished by	Received by	Via	Date	Time
9/11/25	900				9/11/25	900
9/11/25	930			Courier	9/12/25	7245

Remarks: **Work Order #1007044201.** Direct Bill to Devon Energy ATTN: Jim Raley CC: Sally Carttar (Scarttar@vertexresource.com), Permian@vertexresource.com, and Sharon Minnix (Sminnix@vertexresource.com) for final report.

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-33156-1

Login Number: 33156 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: McQuiston, Steven

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Report to:

Sally Carttar

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name:	Mesa Verde 7 Federal #002
Work Order:	E509289
Job Number:	01058-0007
Received:	9/26/2025

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
9/30/25

Date Reported: 9/30/25

Sally Carttar
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Mesa Verde 7 Federal #002
Workorder: E509289
Date Received: 9/26/2025 7:00:00AM

Sally Carttar,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 9/26/2025 7:00:00AM, under the Project Name: Mesa Verde 7 Federal #002.

The analytical test results summarized in this report with the Project Name: Mesa Verde 7 Federal #002 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Schwanz
Laboratory Administrator
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Sample Summary

Vertex Resource Services Inc.	Project Name:	Mesa Verde 7 Federal #002	**Reported:**
3101 Boyd Drive	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Sally Carttar	09/30/25 10:45

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Backfill-01 0'	E509289-01A	Soil	09/24/25	09/26/25	Glass Jar, 2 oz.

Sample Data

Vertex Resource Services Inc.	Project Name:	Mesa Verde 7 Federal #002	
3101 Boyd Drive	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Sally Carttar	9/30/2025 10:45:05AM

Backfill-01 0'

E509289-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: SL			Batch: 2539153
Benzene	ND	0.0250	1	09/26/25	09/27/25	
Ethylbenzene	ND	0.0250	1	09/26/25	09/27/25	
Toluene	ND	0.0250	1	09/26/25	09/27/25	
o-Xylene	ND	0.0250	1	09/26/25	09/27/25	
p,m-Xylene	ND	0.0500	1	09/26/25	09/27/25	
Total Xylenes	ND	0.0250	1	09/26/25	09/27/25	
Surrogate: 4-Bromochlorobenzene-PID		*97.4 %*	*70-130*	*09/26/25*	*09/27/25*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: SL			Batch: 2539153
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/26/25	09/27/25	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.6 %*	*70-130*	*09/26/25*	*09/27/25*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: HM			Batch: 2539141
Diesel Range Organics (C10-C28)	ND	25.0	1	09/25/25	09/26/25	
Oil Range Organics (C28-C36)	ND	50.0	1	09/25/25	09/26/25	
Surrogate: n-Nonane		*69.6 %*	*61-141*	*09/25/25*	*09/26/25*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2539149
Chloride	**160**	20.0	1	09/26/25	09/26/25	

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Mesa Verde 7 Federal #002	**Reported:**
3101 Boyd Drive	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Sally Carttar	9/30/2025 10:45:05AM

Volatile Organics by EPA 8021B

Analyst: SL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2539153-BLK1)									Prepared: 09/26/25 Analyzed: 09/26/25
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*7.87*		*8.00*		*98.3*	*70-130*			
LCS (2539153-BS1)									Prepared: 09/26/25 Analyzed: 09/26/25
Benzene	5.16	0.0250	5.00		103	70-130			
Ethylbenzene	5.11	0.0250	5.00		102	70-130			
Toluene	5.15	0.0250	5.00		103	70-130			
o-Xylene	5.13	0.0250	5.00		103	70-130			
p,m-Xylene	10.4	0.0500	10.0		104	70-130			
Total Xylenes	15.5	0.0250	15.0		103	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.78*		*8.00*		*97.2*	*70-130*			
Matrix Spike (2539153-MS1)				**Source: E509287-01**					Prepared: 09/26/25 Analyzed: 09/26/25
Benzene	4.75	0.0250	5.00	ND	95.0	70-130			
Ethylbenzene	4.66	0.0250	5.00	ND	93.2	70-130			
Toluene	4.72	0.0250	5.00	ND	94.5	70-130			
o-Xylene	4.76	0.0250	5.00	ND	95.2	70-130			
p,m-Xylene	9.52	0.0500	10.0	ND	95.2	70-130			
Total Xylenes	14.3	0.0250	15.0	ND	95.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.89*		*8.00*		*98.6*	*70-130*			
Matrix Spike Dup (2539153-MSD1)				**Source: E509287-01**					Prepared: 09/26/25 Analyzed: 09/26/25
Benzene	5.31	0.0250	5.00	ND	106	70-130	11.1	27	
Ethylbenzene	5.25	0.0250	5.00	ND	105	70-130	11.9	26	
Toluene	5.29	0.0250	5.00	ND	106	70-130	11.4	20	
o-Xylene	5.25	0.0250	5.00	ND	105	70-130	9.80	25	
p,m-Xylene	10.6	0.0500	10.0	ND	106	70-130	11.2	23	
Total Xylenes	15.9	0.0250	15.0	ND	106	70-130	10.7	26	
Surrogate: 4-Bromochlorobenzene-PID	*7.48*		*8.00*		*93.6*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Mesa Verde 7 Federal #002	**Reported:**
3101 Boyd Drive	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Sally Carttar	9/30/2025 10:45:05AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2539153-BLK1)									Prepared: 09/26/25 Analyzed: 09/26/25
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.47*		*8.00*		*93.3*	*70-130*			
LCS (2539153-BS2)									Prepared: 09/26/25 Analyzed: 09/26/25
Gasoline Range Organics (C6-C10)	48.1	20.0	50.0		96.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.45*		*8.00*		*93.1*	*70-130*			
Matrix Spike (2539153-MS2)				**Source: E509287-01**					Prepared: 09/26/25 Analyzed: 09/26/25
Gasoline Range Organics (C6-C10)	45.1	20.0	50.0	ND	90.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.70*		*8.00*		*96.2*	*70-130*			
Matrix Spike Dup (2539153-MSD2)				**Source: E509287-01**					Prepared: 09/26/25 Analyzed: 09/26/25
Gasoline Range Organics (C6-C10)	47.9	20.0	50.0	ND	95.8	70-130	5.96	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.33*		*8.00*		*91.7*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Mesa Verde 7 Federal #002	**Reported:**
3101 Boyd Drive	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Sally Carttar	9/30/2025 10:45:05AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: HM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2539141-BLK1)									Prepared: 09/25/25 Analyzed: 09/25/25
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*44.4*		*50.0*		*88.8*	*61-141*			
LCS (2539141-BS1)									Prepared: 09/25/25 Analyzed: 09/25/25
Diesel Range Organics (C10-C28)	256	25.0	250		103	66-144			
Surrogate: n-Nonane	*44.4*		*50.0*		*88.7*	*61-141*			
Matrix Spike (2539141-MS1)				**Source: E509286-05**					Prepared: 09/25/25 Analyzed: 09/25/25
Diesel Range Organics (C10-C28)	257	25.0	250	ND	103	56-156			
Surrogate: n-Nonane	*34.3*		*50.0*		*68.6*	*61-141*			
Matrix Spike Dup (2539141-MSD1)				**Source: E509286-05**					Prepared: 09/25/25 Analyzed: 09/25/25
Diesel Range Organics (C10-C28)	250	25.0	250	ND	100	56-156	2.67	20	
Surrogate: n-Nonane	*32.8*		*50.0*		*65.6*	*61-141*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Mesa Verde 7 Federal #002	**Reported:**
3101 Boyd Drive	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Sally Carttar	9/30/2025 10:45:05AM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2539149-BLK1)									Prepared: 09/26/25 Analyzed: 09/26/25
Chloride	ND	20.0							
LCS (2539149-BS1)									Prepared: 09/26/25 Analyzed: 09/26/25
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2539149-MS1)				**Source: E509287-01**					Prepared: 09/26/25 Analyzed: 09/26/25
Chloride	332	20.0	250	68.9	105	80-120			
Matrix Spike Dup (2539149-MSD1)				**Source: E509287-01**					Prepared: 09/26/25 Analyzed: 09/26/25
Chloride	335	20.0	250	68.9	106	80-120	0.886	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Mesa Verde 7 Federal #002	
3101 Boyd Drive	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Sally Carttar	09/30/25 10:45

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite
DNR	Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Chain of Custody

Page of

Client Information	Invoice Information	Lab Use Only		TAT				State					
Client: **Vertex (bill direct to Devon)**	Company: **Devon Energy Production Company**	Lab WO#	Job Number	1D	2D	3D	Std	NM	CO	UT	TX		
Project Name: **Mesa Verde 7 Federal #002**	Address:	E509289	01058-0007		by	X							
Project Manager: **Sally Carttar**	City, State, Zip:				SC								
Project Number: **25A-01341**	Phone:												
City, State, Zip: **Carlsbad, NM, 88220**	Email:												
Phone: **575.725.5001**	Miscellaneous: **Direct bill to Devon Energy Production Company, LP**												
Email: **scarttar@vertexresource.com**													

Sample Information							Analysis and Method											EPA Program		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals				SDWA	CWA	RCRA
10:00	09.24.2025	Soil	1	Backfill-01 0'		1	X	X	X		X							Compliance	Y or N	
																		PWSID #		
																		Remarks		
																		5.1		

Additional Instructions: Direct bill to Devon Energy Production Company, LP. ATTN: Jim Raley. Work Order #: 1007044201
Please email final report to scarttar@vertexresource.com, jrewis@vertexresource.com, permian@vertexresource.com

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.
Sampled by: J. Rewis

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	9.25.25	1030	Michelle Gonzales	9.25.25	1030
Michelle Gonzales	9.25.25	1330		9-25-25	1330
	9-25-25	1810	Andrew Musso	9.25.25	1810
Andrew Musso	9.25.25	2300		9.26.25	700

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Lab Use Only
Received on ice: Y / N
T1 T2 T3
AVG Temp °C

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory

Printed: 9/26/2025 8:23:29AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	09/26/25 07:00	Work Order ID:	E509289
Phone:	(575) 748-0176	Date Logged In:	09/25/25 14:08	Logged In By:	Caitlin Mars
Email:	scarttar@vertex.ca	Due Date:	09/30/25 17:00 (2 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes	
2. Does the number of samples per sampling site location match the COC	Yes	
3. Were samples dropped off by client or carrier?	Yes	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Comments/Resolution

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT?	Yes

Sample Cooler

7. Was a sample cooler received?	Yes
8. If yes, was cooler received in good condition?	Yes
9. Was the sample(s) received intact, i.e., not broken?	Yes
10. Were custody/security seals present?	No
11. If yes, were custody/security seals intact?	NA
12. Was the sample received on ice? Note: Thermal preservation is not required, if samples are received within 15 minutes of sampling	Yes
13. See COC for individual sample temps. Samples outside of 0°C-6°C will be recorded in comments.	

Sample Container

14. Are aqueous VOC samples present?	No
15. Are VOC samples collected in VOA Vials?	NA
16. Is the head space less than 6-8 mm (pea sized or less)?	NA
17. Was a trip blank (TB) included for VOC analyses?	NA
18. Are non-VOC samples collected in the correct containers?	Yes
19. Is the appropriate volume/weight or number of sample containers collected?	Yes

Field Label

20. Were field sample labels filled out with the minimum information:	
Sample ID?	Yes
Date/Time Collected?	Yes
Collectors name?	No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved?	No
22. Are sample(s) correctly preserved?	NA
24. Is lab filtration required and/or requested for dissolved metals?	No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase?	No
27. If yes, does the COC specify which phase(s) is to be analyzed?	NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory?	No	
29. Was a subcontract laboratory specified by the client and if so who?	NA	Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date

envirotech Inc.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Action 517983

QUESTIONS

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 517983
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nOY1814156697**
Incident Name	**NOY1814156697 MESA VERDE 7 FEDERAL #002 @ 30-025-32399**
Incident Type	**Oil Release**
Incident Status	**Deferral Request Received**
Incident Well	**[30-025-32399] MESA VERDE 7 FEDERAL #002**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Mesa Verde 7 Federal #002
Date Release Discovered	05/02/2018
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Overflow - Tank, Pit, Etc. | Tank (Any) | Crude Oil | Released: 15 BBL | Recovered: 8 BBL | Lost: 7 BBL.
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 517983
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Roni Kidd Title: Business Manager Email: rkidd@buckhornproduction.com Date: 10/20/2025

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QUESTIONS (continued)

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 517983
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	260
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	20200
GRO+DRO (EPA SW-846 Method 8015M)	15300
BTEX (EPA SW-846 Method 8021B or 8260B)	176.2
Benzene (EPA SW-846 Method 8021B or 8260B)	1.2
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	07/01/2025
On what date will (or did) the final sampling or liner inspection occur	10/01/2025
On what date will (or was) the remediation complete(d)	10/01/2025
What is the estimated surface area (in square feet) that will be reclaimed	2420
What is the estimated volume (in cubic yards) that will be reclaimed	449
What is the estimated surface area (in square feet) that will be remediated	2420
What is the estimated volume (in cubic yards) that will be remediated	449
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 517983
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	No
OR is the **off-site** disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Roni Kidd Title: Business Manager Email: rkidd@buckhornproduction.com Date: 10/20/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 517983
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	The remaining contamination is located underneath the tank battery and related equipment. As such, site deconstruction will be required to complete remediation of the release. Such actions would result in excessive cost and time setbacks if completed before the decommission of the location.
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	954
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	71
Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	
Enter the facility ID (f#) on which this deferral should be granted	*Not answered.*
Enter the well API (30-) on which this deferral should be granted	30-025-32399 MESA VERDE 7 FEDERAL #002
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Roni Kidd Title: Business Manager Email: rkidd@buckhornproduction.com Date: 10/20/2025

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QUESTIONS (continued)

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 517983
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**503385**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**09/10/2025**
What was the (estimated) number of samples that were to be gathered	**6**
What was the sampling surface area in square feet	**1200**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Operator: HARVARD PETROLEUM COMPANY, LLC P.O. Box 936 Roswell, NM 88202	OGRID: 10155
	Action Number: 517983
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	Devon's deferral requests final remediation for (Incident Number NOY1814156697) until final reclamation of the well pad or major construction, whichever comes first. Vertex and Devon do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The impacted soil is the area designated as "Deferral Request Area" on figure 2 that is in close proximity to tank batteries and associated infrastructure, where remediation would require a major facility deconstruction. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and placed in the incident file. The release will remain open in OCD database files and reflect an open environmental issue.	11/21/2025