



Incident Number: nRM1933052987

Remediation Closure

Thistle Unit 10 Battery

Section 27, Township 23 South, Range 33 East

Facility: fAPP2130647365

County: Lea

Vertex File Number: 23E-04784

Prepared for:

Devon Energy Production Compny, LP

Prepared by:

Vertex Resource Services Inc.

Date:

June 2025

Devon Energy Production Company, LP
Thistle Unit 10 Battery

Remediation Closure
June 2025

Release Assessment and Closure
Thistle Unit 10 Battery
Section 27, Township 23 South, Range 33 East
Facility: fAPP2130647365
County: Lea

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Lakin Pullman, B.Sc.
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June 3, 2025

Date



Sally Carttar, BA
PROJECT MANAGER, REPORT REVIEW

June 3, 2025

Date

Devon Energy Production Company, LP
Thistle Unit 10 Battery

Remediation Closure
June 2025

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Devon Energy Production Company, LP
Thistle Unit 10 Battery

Remediation Closure
June 2025

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1.0 Introduction

Devon Energy Production Company, LP (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a Remediation Closure for a produced water release that occurred on August 30, 2019, at Thistle Unit 10 Battery (hereafter referred to as the “site”). Devon submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 1 on October 23, 2019. Incident ID number nRM1933052987 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 closure of this release, with the understanding that restoration of the release site will be completed following remediation activities as per NMAC 19.15.29.13.

2.0 Incident Description

The release occurred on August 30, 2019, due to lightning striking the water tanks. The incident was reported on October 23, 2019, and involved the release of approximately 402 barrels (bbl) of produced water into the lined containment. Approximately 402 bbl of free fluid was removed during the 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 C.

3.0 Site Characteristics

The site is located approximately 23 miles west-northwest of Jal, New Mexico. The legal location for the site is Section 27, Township 23 South and Range 33 East in Lea County, New Mexico. The release area is located on State 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 or in proximity to the constructed pad (Figure 1).

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2025) indicates the site’s surface geology primarily comprises Qep – eolian and piedmont deposits (Holocene to middle Pleistocene) and the soil at the site is characterized as fine sands (United States Department of Agriculture, Natural Resources Conservation Service, 2025). Additional soil characteristics include a drainage class of well drained with a runoff class of low. The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018).

The surrounding landscape is associated with plains with elevations ranging between 3,000 to 3,900 feet. The climate is semiarid with average annual precipitation ranging between 10 and 12 inches. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be grasses with shrubs and half shrubs

(United States Department of Agriculture, Natural Resources Conservation Service, 2025). Limited to no vegetation is allowed to grow on the compacted production pad, right-of-way and access road.

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 of the site. The borehole was advanced to a depth of 55 feet. The borehole was left to recover per the requirements on the WR-07 Application for Permit to Drill a Well with No Water Rights, and an interface probe was utilized to determine whether groundwater was present at the conclusion of the 72-hour recovery period. No water was found to be present at that time. The borehole was plugged and abandoned according to the WR-08 permit, Well Plugging Plan of Operations, filed with NMOSE. Documentation related to the exploratory borehole is included in Appendix B.

The nearest active well to the site is a commercial well 0.55 miles to the west. There is no surface water 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 1.9 miles north of the site (United States Fish and Wildlife Service, 2025). At the site, there are no continuously flowing watercourses or significant watercourses, 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

Table 1. Closure Criteria Determination			
Site Name: Thistle Unit 10 Battery			
Spill Coordinates: 32.270765,-103.562696		X: 635367	Y: 3571355
Site Specific Conditions		Value	Unit
1	Depth to Groundwater (nearest reference)	>55	feet
	Distance between release and nearest DTGW reference	153	feet
		0.03	miles
	Date of nearest DTGW reference measurement		December 16, 2024
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	10,076	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	22,615	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	6,314	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	2,916	feet
	ii) Within 1000 feet of any fresh water well or spring	2,916	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	10,191	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	104,310	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest high or critical karst zone	97,680	feet
10	Within a 100-year Floodplain	Undetermined	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	83,391	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	51-100'	<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
51 feet - 100 feet	Chloride	10,000 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

Characterization of the impacted area adjacent to the tank battery containment was completed by Vertex between October 19, 2023, and April 7, 2025, including vertical and horizontal delineation. The total impacted area was determined to be 11,204 square feet. The Daily Field Reports (DFRs) associated with the site visits are included in Appendix C. Characterization sample locations and approximate release areas are presented on Figure 1. Characterization field screening and laboratory results are summarized in Table 3.

Notification that a liner inspection was scheduled to be completed was provided to the NMOCD on August 26, 2020. Visual observation of the liner was completed on all sides and the base of the containment, around equipment, and of all seams in the liner. As evidenced in the DFR (Appendix C), liner integrity was confirmed, and the Liner Inspection Notification email is presented in Appendix D.

Remediation efforts began on April 7, 2025, and were finalized on April 10, 2025. Vertex personnel supervised the excavation of impacted soils to closure criteria. Field screening was completed on a total of four sample points. It consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dextil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and Silver Nitrate Titration (chlorides). Field screening results were used to identify areas requiring further remediation. Soils were removed to a depth of 1 feet below ground surface (bgs). Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. Daily Field Reports documenting various phases of the remediation are presented in Appendix C.

Notifications that confirmatory samples were being collected were provided to the NMOCD and are included in Appendix D. Confirmatory composite samples were collected from the base and walls of the excavation in increments no greater than 200 square feet. A total of four base and wall samples were collected from the excavation for laboratory analysis following NMOCD soil sampling procedures. A composite sample of the backfill material was collected on May 14, 2025. Excavation extent and confirmation sample locations are shown on Figure 2. Laboratory results are presented

in Table 4, and the laboratory data reports are included in Appendix E.

On May 19, 2025, Vertex requested a variance for confirmation samples to represent increments of 400 square feet over the impacted area. The variance was approved on May 19, 2025 and is included in Appendix D. Confirmation samples BS25-03 through BS25-30 were collected between May 22 and 23, 2025, in increments no greater than 400 square feet per the approved variance. The additional samples were collected from the pad surface within the area of impact outside the previously excavated remediation area. The greater impact area was below closure criteria and did not undergo remediation. Samples were submitted to the Eurofins Environment Testing in Albuquerque, New Mexico, 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). Confirmation sample locations are shown on Figure 2. Laboratory results are presented in Table 4, and the laboratory data reports are included in Appendix E. All confirmation samples collected and analyzed were below closure criteria for the site.

Upon completion of remedial actions, approximately 396 square feet and 15 cubic yards of the pad surface was remediated to closure criteria. Approximately 11,204 square feet and 1,480 cubic yards of material on the active facility pad currently meet closure criteria but will require reclamation of upon cessation of oilfield activities.

6.0 Closure Request

Vertex recommends no additional remediation action to address the release at Thistle Unit 10 Battery. Laboratory analyses of the final confirmatory samples showed constituent of concern concentration levels below NMOCD reclamation closure criteria for areas where depth to groundwater is between 51 and 100 feet bgs as shown in Table 2. There are no anticipated risks to human, ecological or hydrological receptors associated with the release sites.

Devon Energy Production Company, LP, requests that this incident (nRM1933052987) be closed as all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. Devon certifies that all information in this report and the attachments is correct, and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain closure on the August 30, 2019, release at Thistle Unit 10 Battery.

Should you have any questions or concerns, please do not hesitate to contact the Project Manager Sally Carttar at 575.361.3561 or Scarttar@vertexresource.com.

7.0 References

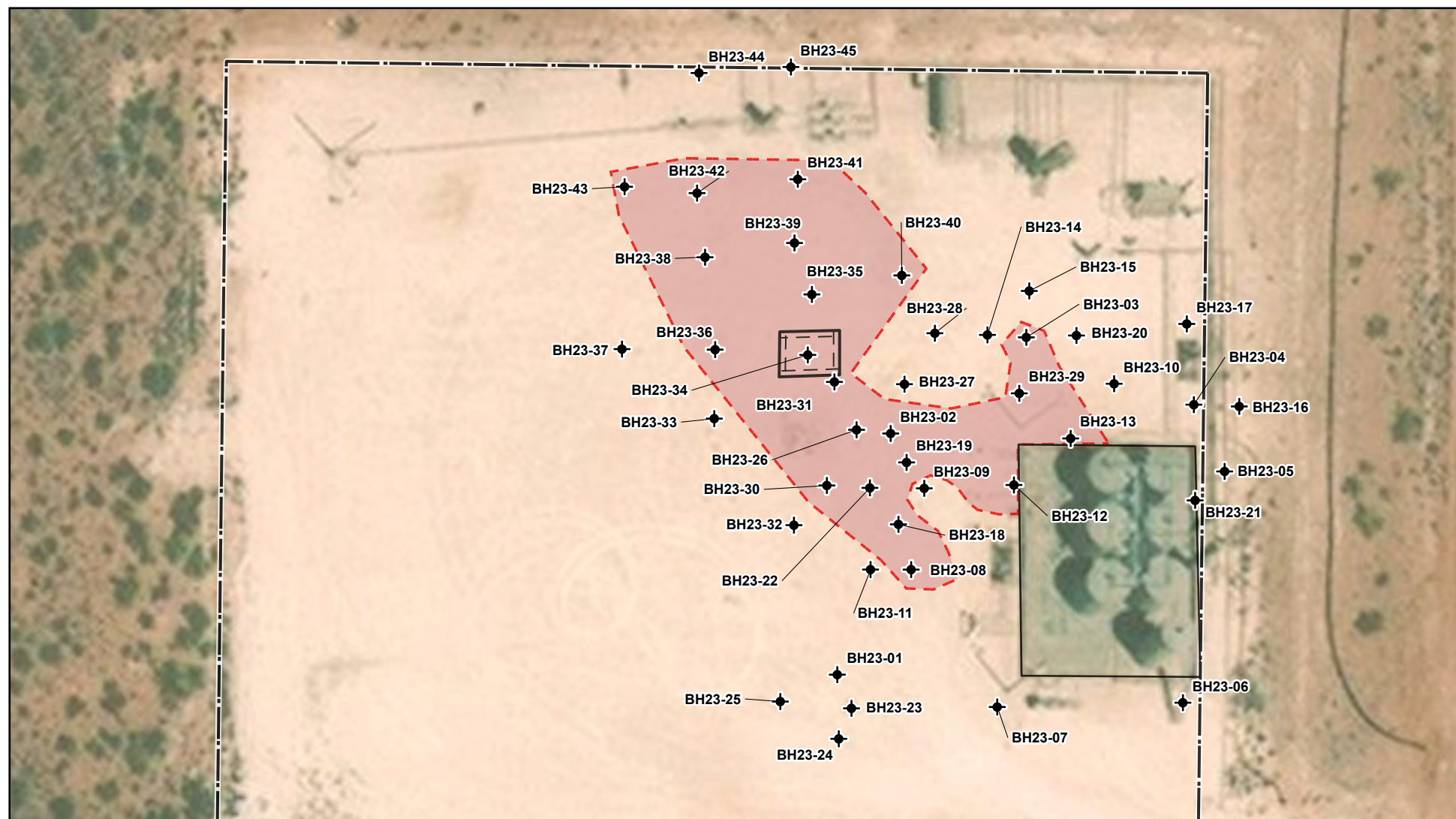
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8.0 Limitations

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 New Mexico State Land Office, 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



- ◆ Borehole
 — Approximate Lease Boundary
 - - - Approximate Release Area (~11,204 sq.ft.)
 [] Infrastructure (Existing)
 [] Proposed Excavation to 1' bgs (~324 sq.ft. | 73 ft.)



0 25 50 ft
 NAD 1983 UTM Zone 13N
 Date: Feb 22/25

Map Center:
 Lat/Long
 32.270781°, -103.562928°



Characterization Sampling and Proposed Excavation Site Schematic Thistle Unit 10 Battery

FIGURE:

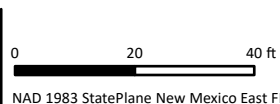
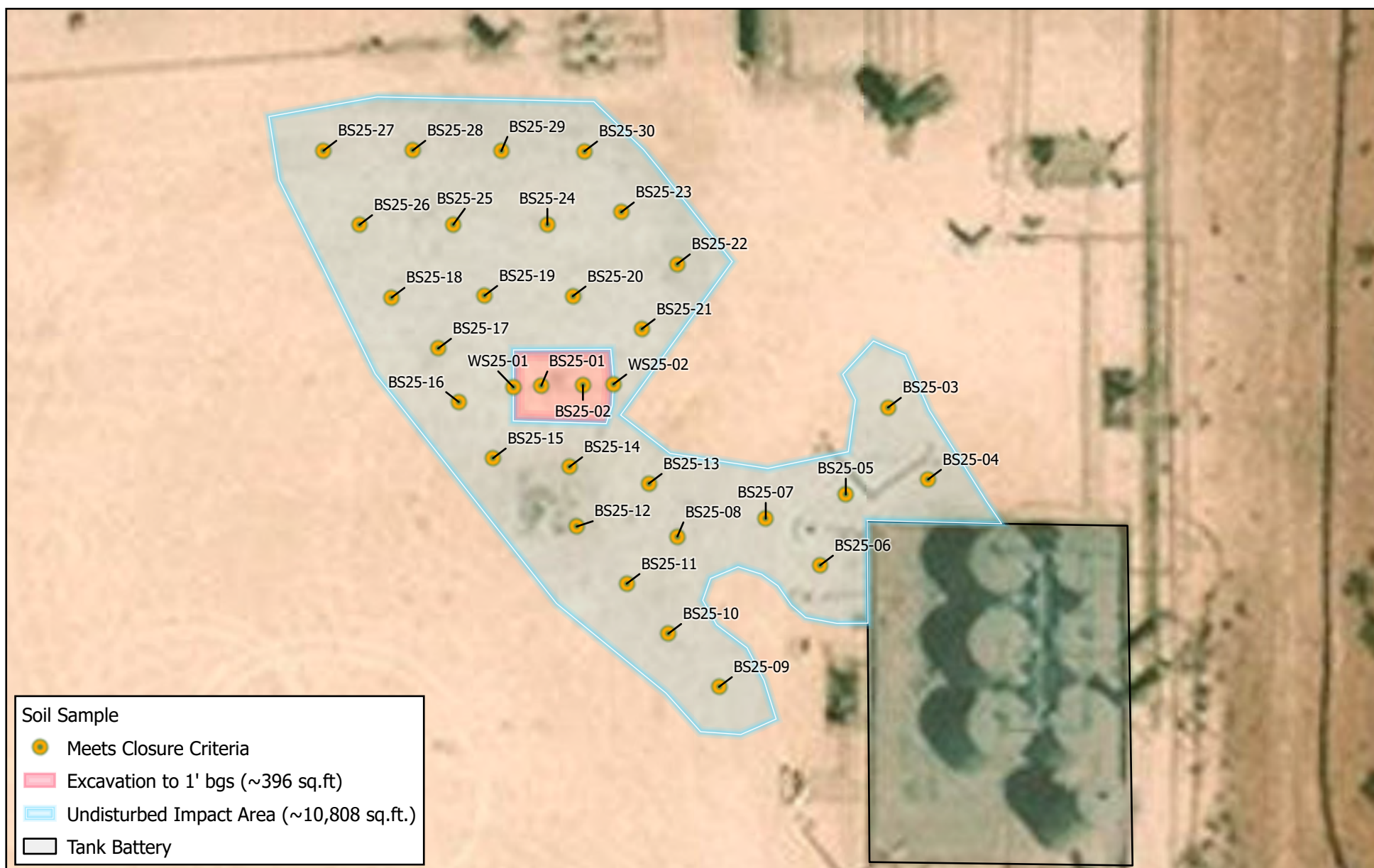
1



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, 2024. Approximate site boundary from sketch by Vertex Professional Services Ltd. (Vertex), 2024. Site features from GPS, Vertex, 2025.

VERSATILITY. EXPERTISE.



Map Center:
Lat/Long: 32.270802°N, 103.562744°W
Date: May 29/25



Confirmation Sampling Location Schematic Thistle Unit 10 Battery

FIGURE:

2



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.

TABLES

Client Name: Devon Energy Production Company, LP

Site Name: Thistle Unit 10 Battery

NMOCD Tracking #: nRM1933052987

Project #: 23E-04784

Lab Reports: 2310A65, 2310B06, 2311452, 2311556, and 885-22848-1

Table 3. Characterization Sample Laboratory Results - Depth to Groundwater 51-100 feet bgs										
Sample Description			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable					
			Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
										(mg/kg)
BH23-01	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	74
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-02	0	October 19, 2023	ND	ND	ND	12	ND	12	12	740
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	450
BH23-03	0	October 19, 2023	ND	ND	ND	20	ND	20	20	1600
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	790
BH23-04	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-05	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	84
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	99
BH23-06	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	120
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-07	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	190
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-08	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	1100
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	220
BH23-09	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	170
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	150
BH23-10	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	64
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	130
BH23-11	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	390
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	330
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	340
BH23-12	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	1400
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	510
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	950
BH23-13	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	6900
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	890
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	2300
BH23-14	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	310
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	390
BH23-15	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	69
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	81
BH23-16	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	76
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-17	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	170
BH23-18	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	1500
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	510

Client Name: Devon Energy Production Company, LP
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Sample ID	Depth (ft)	Sample Date	Volatile		Extractable					
			Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
BH23-19	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	820
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	200
BH23-20	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	97
	1	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-21	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	100
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	74
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	150
BH23-22	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	550
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	970
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	190
BH23-23	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	100
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	4	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	360
BH23-24	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	94
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-25	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	120
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	75
BH23-26	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	1300
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	520
BH23-27	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	170
BH23-28	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	340
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	150
BH23-29	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	1300
	1	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	870
BH23-30	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	1800
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	200
BH23-31	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	1300
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	660
BH23-32	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	80
BH23-33	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	190
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	300
BH23-34	0	November 8, 2023	ND	ND	ND	1800	1600	1800	3400	4100
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	300
	3	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1400
	4	April 7, 2025	ND	ND	ND	ND	ND	ND	ND	1100
	5	April 7, 2025	ND	ND	ND	ND	ND	ND	ND	630
	6	April 7, 2025	ND	ND	ND	ND	ND	ND	ND	150
BH23-35	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	880
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1500

Client Name: Devon Energy Production Company, LP

Site Name: Thistle Unit 10 Battery

NMOCD Tracking #: nRM1933052987

Project #: 23E-04784

Lab Reports: 2310A65, 2310B06, 2311452, 2311556, and 885-22848-1

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Sample Description			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable					
			Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
BH23-36	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1600
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1800
BH23-37	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	130
BH23-38	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	560
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1100
BH23-39	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	430
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1000
BH23-40	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	710
BH23-41	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	2000
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	2400
BH23-42	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	3100
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	2400
BH23-43	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	900
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	750
BH23-44	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	150
BH23-45	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 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

Bold and green shaded indicates exceedance outside of NMOCD Reclamation Closure Criteria

Client Name: Devon Energy Production Company, LP

Site Name: Thistle Unit 10 Battery

NMOCD Tracking #: nRM1933052987

Project #: 23E-04784

Lab Report: 885-23112-1, 885-25053, 885-25492-1, and 885-25565-1

Table 4. Confirmation Sample Laboratory Results																
Sample Description			Petroleum Hydrocarbons							Inorganic						
Sample ID	Depth (ft)	Sample Date	Volatile		Extractable											
			Benzene	bbbbn	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)
											Depth to Groundwater 51-100 feet bgs					
BS25-01	1	April 10, 2025	ND	ND	ND	ND	ND	ND	ND	870						
BS25-02	1	April 10, 2025	ND	ND	ND	ND	ND	ND	ND	860						
BS25-03	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	360						
BS25-04	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	870						
BS25-05	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	1,100						
BS25-06	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	2,400						
BS25-07	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	210						
BS25-08	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	1,000						
BS25-09	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	320						
BS25-10	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	1,200						
BS25-11	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	62						
BS25-12	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	1,300						
BS25-13	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	860						
BS25-14	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	790						
BS25-15	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	380						
BS25-16	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	1,900						
BS25-17	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	2,400						
BS25-18	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	520						
BS25-19	0	May 22, 2025	ND	ND	ND	ND	ND	ND	ND	2,000						
BS25-20	0	May 22, 2025	ND	ND	ND	11	ND	11	11	1,300						
BS25-21	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	1,200						
BS25-22	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	1,400						
BS25-23	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	1,400						
BS25-24	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	1,800						
BS25-25	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	1,900						
BS25-26	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	910						
BS25-27	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	1,200						
BS25-28	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	1,500						
BS25-29	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	2,000						
BS25-30	0	May 23, 2025	ND	ND	ND	ND	ND	ND	ND	1,700						
WS25-01	0-1	April 10, 2025	ND	ND	ND	ND	ND	ND	ND	140						
WS25-02	0-1	April 10, 2025	ND	ND	ND	ND	ND	ND	ND	140						
Backfill Sample																
Backfill	1	May 14, 2025	ND	ND	ND	ND	ND	ND	ND	76						

"ND" Not Detected at the Reporting Limit

"- " indicates not analyzed/assessed

Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria

APPENDIX A - NMOCD C-141 Report

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	NRM1933052987
District RP	1RP-5786
Facility ID	
Application ID	pRM1933053059

Release Notification 3EKP2-191023-C-1410

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: _____)

Xrlm 11/26/2019

Nature and Volume of Release

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

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

Incident ID	NRM1933052987
District RP	1RP-5786
Facility ID	
Application ID	pRM1933053059

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

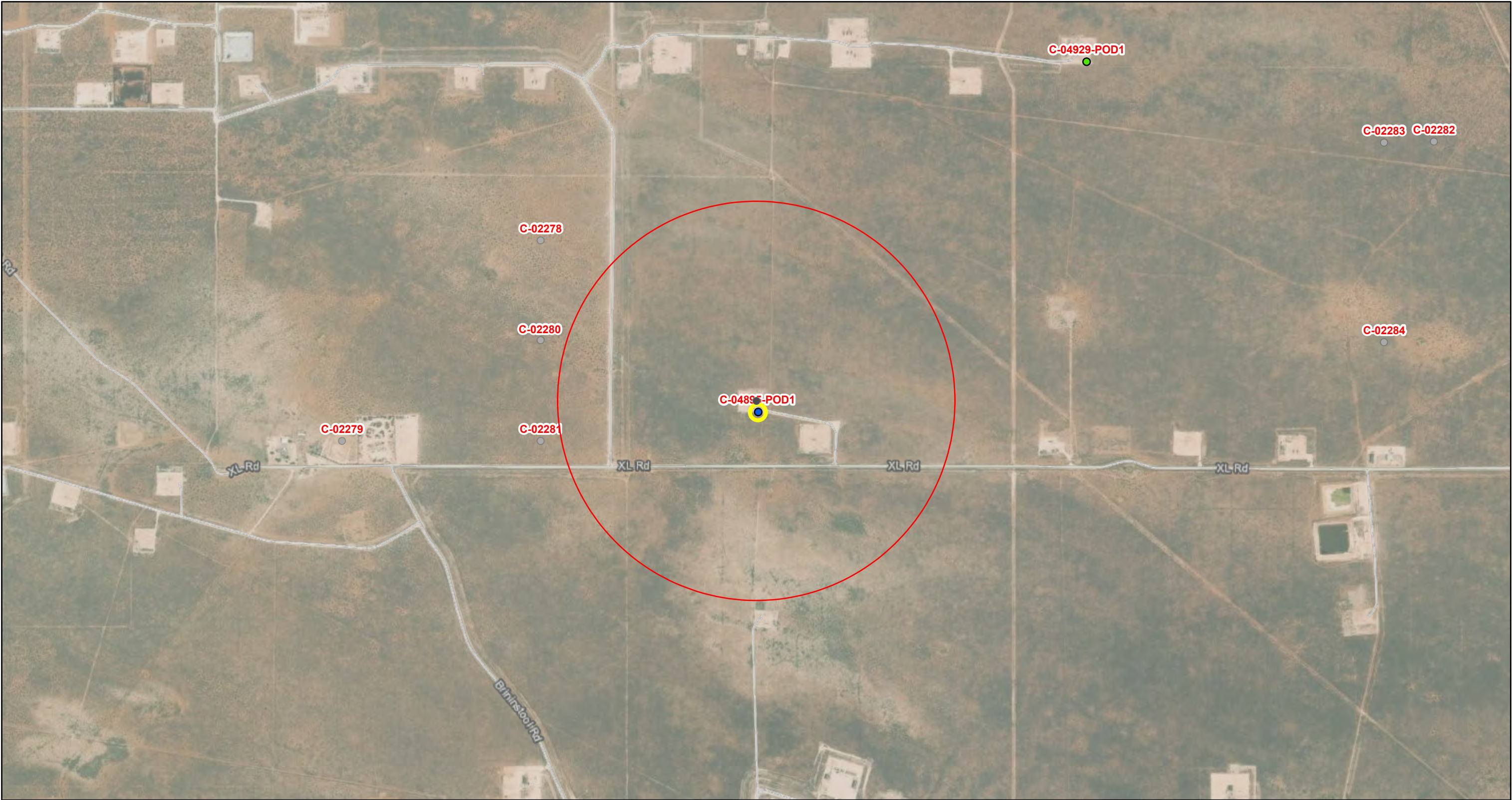
Initial Response

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

<input type="checkbox"/> The source of the release has been stopped.	
<input type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: _____	Title: _____
Signature: <u>Kendra DeHoyos</u>	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>11/26/2019</u>

APPENDIX B – Closure Criteria Research Documentation

OSE POD 0.5 miles



3/12/2025, 8:44:56 AM

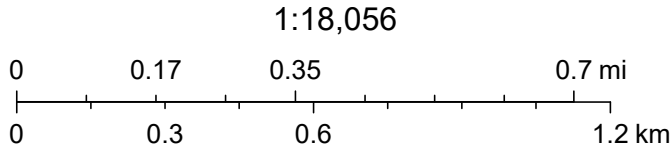
GIS WATERS PODs

- Active
- Pending

OSE District Boundary

Water Right Regulations

- Closure Area
- Artesian Planning Area



Esri, HERE, IPC, Esri, HERE, Garmin, IPC, Maxar

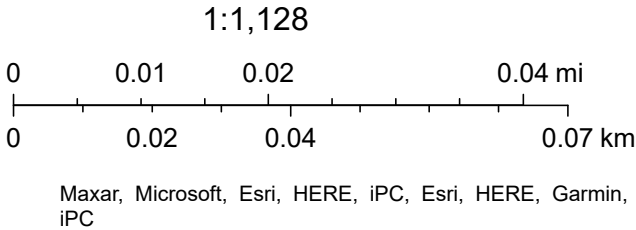
OSE POD Location Map



2/20/2025, 10:44:58 AM

GIS WATERS PODs

- Pending
- OSE District Boundary



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
smallest to largest)

(NAD83 UTM in meters)

(In feet)

(In feet)

(In feet)

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Distance	Well Depth	Depth Water	Water Column
C 04895 POD1		CUB	LE	NW	SE	SW	27	23S	33E	635374.0	3571309.0		46	55		
C 02281		CUB	LE	SW	SE	SE	28	23S	33E	634495.0	3571183.0 *		888	545	400	145
C 02280		CUB	LE	SW	NE	SE	28	23S	33E	634489.0	3571586.0 *		907	650	400	250
C 02278		CUB	LE	SW	SE	NE	28	23S	33E	634484.0	3571989.0 *		1087	650	400	250
C 02279		CUB	LE	SW	SE	SW	28	23S	33E	633691.0	3571173.0 *		1685	650	400	250
C 04595 POD1		CUB	LE	SE	SW	SW	34	23S	33E	635149.5	3569564.9		1803	55		

Average Depth to Water: **400 feet**

Minimum Depth: **400 feet**

Maximum Depth: **400 feet**



Record Count: 6

UTM Filters (in meters):

Easting: 635367
Northing: 3571355
Radius: 002000


* UTM location was derived from PLSS - see Help

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

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
NA	C 04895 POD1	NW	SE	SW	27	23S	33E	635374.0	3571309.0	

* UTM location was derived from PLSS - see Help

Driller License:	1833	Driller Company:	VISION RESOURCES, INC		
Driller Name:	JASON MALEY				
Drill Start Date:	2024-12-16	Drill Finish Date:	2024-12-16	Plug Date:	2024-12-19
Log File Date:	2025-01-02	PCW Rcv Date:		Source:	
Pump Type:		Pipe Discharge Size:		Estimated Yield:	
Casing Size:		Depth Well:	55	Depth Water:	

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

Water Right Summary



[get image](#)
[list](#)

WR File Number:	C 04895	Subbasin:	CUB	Cross Reference:
Primary Purpose:	EXP EXPLORATION			
Primary Status:	PMT Permit			
Total Acres:		Subfile:	Header:	
Total Diversion:	0.000	Cause/Case:		
Owner:	DEVON ENERGY	Owner Class:	User	
Contact:	JIM RALEY			

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
_get images	769743	EXPL	2024-10-30	PMT	APR	C-4895 POD1	T	0.000	0.000	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 04895 POD1	NA		NW	SE	SW	27	23S	33E	635374.0	3571309.0		

* UTM location was derived from PLSS - see Help

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

PROJECT: 23E-04784

THISTLE UNIT 10 BATTERY



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) C-4895-POD1		WELL TAG ID NO.		OSE FILE NO(S) C-4895-POD1			
	WELL OWNER NAME(S) Devon Energy Resources				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 5315 Buena Vista DR				CITY Carlsbad	STATE NM	ZIP 88220	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 16	SECONDS 13.2564 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
	LONGITUDE -103	33	45.453 W	* DATUM REQUIRED: WGS 84				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1833		NAME OF LICENSED DRILLER Jason Maley			NAME OF WELL DRILLING COMPANY Vision Resources		
	DRILLING STARTED 12-16-24		DRILLING ENDED 12-16-24		DEPTH OF COMPLETED WELL (FT) 55'	BORE HOLE DEPTH (FT) 55'	DEPTH WATER FIRST ENCOUNTERED (FT) N/A	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN *add Centralizer info below <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) 0'	DATE STATIC MEASURED 12-16-24	
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:						CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>	
	DEPTH (feet bgl)		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)
	FROM	TO						
	0	45	6"	PVC 2" SCH40	Thread	2"	SCH40	N/A
	45	55	6"	PVC 2" SCH40	Thread	2"	SCH40	.02
3. ANNULAR MATERIAL	DEPTH (feet bgl)		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		
	FROM	TO						
				None pulled and plugged				

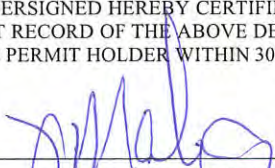
FOR OSE INTERNAL USE

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)		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)
	FROM	TO				
	0	10	10'	Brown sand with caliche	Y ✓ N	
	10	30	20'	Tan fine sand with small rock	Y ✓ N	
	30	55	25'	Tan fine sand	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	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:					TOTAL ESTIMATED WELL YIELD (gpm): 0	
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER – SPECIFY: Dry hole						

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: Jason Maley	

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: <div style="display: flex; justify-content: space-between;"> <div>  SIGNATURE OF DRILLER / PRINT SIGNEE NAME </div> <div> Jason Maley DATE 12/31/24 </div> </div>
--------------	---

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-4895

Well owner: Devon Energy Resources

Phone No.: _____

Mailing address: 205 E. Bender Road

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: 12-19-24 Date well plugging concluded: 12-19-24

5) GPS Well Location: Latitude: 32 deg, 16 min, 13.2564 sec
Longitude: -103 deg, 33 min, 45.453 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 55 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: 10-30-2024

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):

- For each interval plugged, describe within the following columns:**

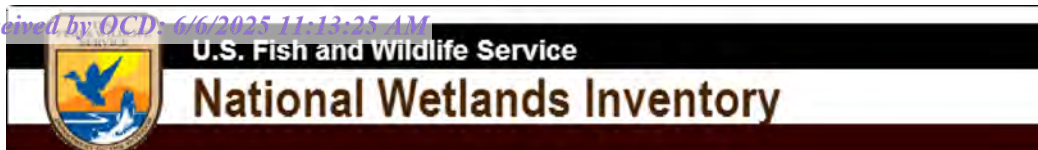
[illegible]

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

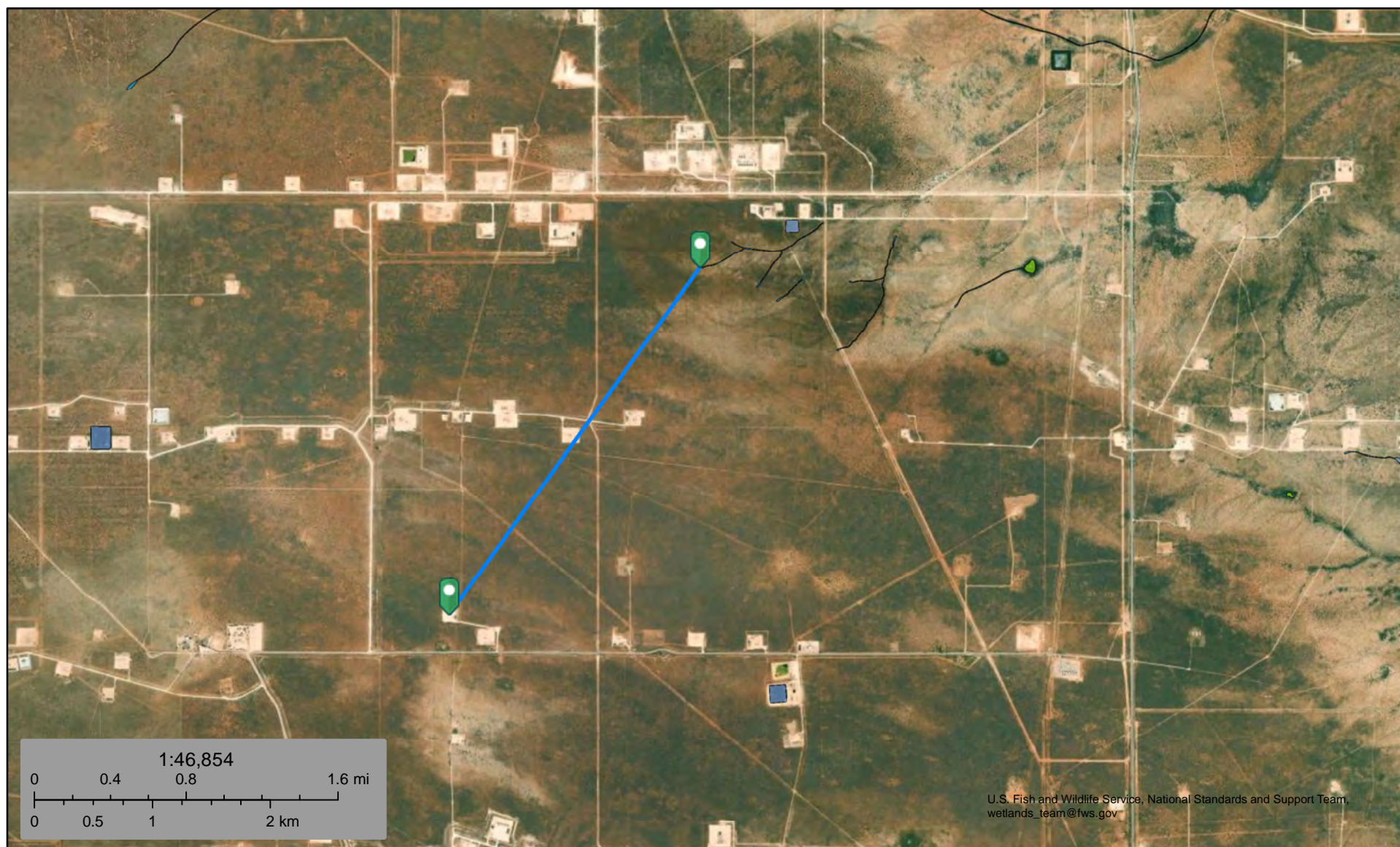
I, Jason Maley, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller

Date _____



Thistle Unit 10 Battery Riverine 10,076 ft.



January 2, 2024

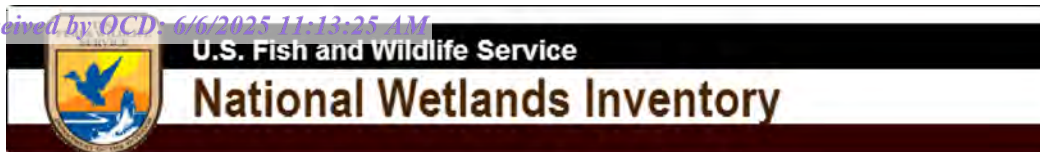
Wetlands

- 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.



Thistle Unit 10 Battery Pond 22,615 ft.



January 2, 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.

Thistle Unit 10 Battery

6,314 ft. to nearest residence

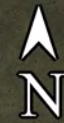
Legend

-  6,314 ft.
-  Residence
-  Thistle Unit 10 Battery



Thistle Unit 10 Battery


Residence



4000 ft

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	C 02281	SW	SE	SE	28	23S	33E	634495.0	3571183.0 *	

* UTM location was derived from PLSS - see Help

Driller License:

Driller Company:

Driller Name:

YANK BRININSTOOL

Drill Start Date:

Drill Finish Date:

1944-12-31

Plug Date:

Log File Date:

PCW Rcv Date:

Source:

Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield:

7

Casing Size:

6.50

Depth Well:

545

Depth Water:

400

Meter Information

Meter Number:	520	Meter Make:	MASTER METER
Meter Serial Number:	1540157	Meter Multiplier:	10.0000
Number of Dials:	6	Meter Type:	Diversion
Unit of Measure:	Gallons	Reading Frequency:	Monthly (No Reading Expected)

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
1999-02-27	1999	9.000	A	ms		0.000	
1999-04-15	1999	9.000	A	ms		0.000	
1999-07-18	1999	9.000	A	ms		0.000	
1999-11-28	1999	9.000	A	ms		0.000	
2000-04-06	2000	85.000	A	mb		0.002	
2000-08-16	2000	85.000	A	mb		0.000	
2000-09-15	2000	85.000	A	RPT		0.000	
2001-01-19	2000	85.000	A	RPT		0.000	
2001-04-27	2001	85.000	A	RPT		0.000	

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2001-07-16	2001	85.000	A	ms		0.000	
2002-01-12	2002	85.000	A	tg		0.000	
2002-04-13	2002	85.000	A	RPT		0.000	
2002-07-12	2002	85.000	A	rm		0.000	
2003-01-01	2002	85.000	A	ms		0.000	
2003-04-23	2003	85.000	A	ms		0.000	
2003-07-11	2003	85.000	A	ms		0.000	
2003-10-01	2003	106.790	A	ab		0.001	
2004-01-08	2003	106.790	A	ab		0.000	
2004-04-07	2004	10679.000	A	RPT		0.324	
2004-07-15	2004	12618.000	A	RPT		0.060	
2004-10-12	2004	14978.000	A	RPT		0.072	
2005-01-26	2004	15771.000	A	RPT		0.024	
2005-04-15	2005	15771.000	A	RPT		0.000	
2005-08-03	2005	15771.000	A	RPT		0.000	
2005-10-31	2005	15771.000	A	RPT		0.000	
2006-01-31	2005	15771.000	A	RPT		0.000	
2006-04-20	2006	15771.000	A	RPT		0.000	
2006-07-19	2006	15771.000	A	tw		0.000	
2006-11-27	2006	15771.000	A	RPT		0.000	
2007-04-16	2006	15771.000	A	tw		0.000	
2007-07-13	2007	15771.000	A	tw		0.000	
2007-11-03	2007	15771.000	A	tw		0.000	
2008-04-15	2008	15771.000	A	tw		0.000	
2008-07-11	2008	15771.000	A	RPT		0.000	
2009-01-12	2009	15771.000	A	RPT		0.000	
2009-05-07	2009	15771.000	A	RPT		0.000	
2009-07-06	2009	15771.000	A	RPT		0.000	
2009-11-12	2009	15771.000	A	tw		0.000	

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2010-05-13	2010	15771.000	A	RPT		0.000	
2010-08-23	2010	15771.000	A	RPT		0.000	
2010-11-09	2010	15771.000	A	RPT		0.000	
2011-02-13	2011	15771.000	A	RPT		0.000	
2011-07-12	2011	15771.000	A	RPT		0.000	
2012-01-10	2012	15771.000	A	RPT		0.000	
2012-04-15	2012	15771.000	A	RPT		0.000	
2013-03-20	2012	15771.000	A	RPT		0.000	
2013-07-18	2013	15771.000	A	RPT		0.000	

YTD Meter Amounts:

Year	Amount
1999	0.000
2000	0.002
2001	0.000
2002	0.000
2003	0.001
2004	0.480
2005	0.000
2006	0.000
2007	0.000
2008	0.000
2009	0.000
2010	0.000
2011	0.000
2012	0.000
2013	0.000

Water Right Summary



[get image list](#)

WR File Number:	C 02281	Subbasin:	CUB	Cross Reference:
Primary Purpose:	COM COMMERCIAL			
Primary Status:	PMT Permit			
Total Acres:	0.000	Subfile:	Header:	
Total Diversion:	11.300	Cause/Case:		
Owner:	BRININSTOOL XL RANCH LLC	Owner Class:	Owner	
Contact:	CHRISTINE BRININSTOOL, MORTGAGEE			
Owner:	HUGHES PROPERTIES LLC	Owner Class:	Owner	
Contact:	TREY HUGHES			

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
_get images	614463	COWNF	2016-09-25	CHG	APR	C 02281	T	0.000	0.000	
	439872	COWNF	2009-07-29	CHG	PRC	C 02281	T	0.000	0.000	
	234012	COWNF	2002-06-25	CHG	PRC	C 02281	T	0.000	0.000	
	169248	ADM	1999-10-29	PMT	MTR	C 02281	T	0.000	11.300	
	198408	DCL	1986-04-07	DCL	PRC	C 02281	T	0.000	11.300	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 02281		Shallow	SW	SE	SE	28	23S	33E	634495.0	3571183.0 *		

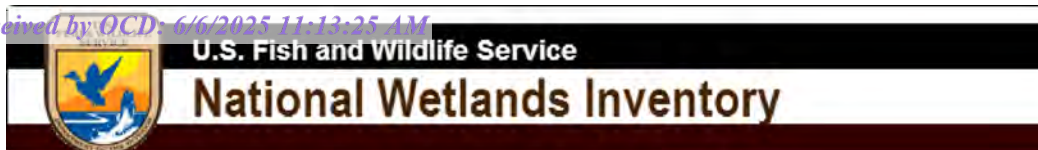
* UTM location was derived from PLSS - see Help

Place of Use

Q256	Q64	Q16	Q4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
							0.000	11.300		COM		DCL	NO PLACE OF USE GIVEN.

Source

Acres	Diversion	CU	Use	Priority	Source	Description
0.000	11.300		COM		GW	



Thistle Unit 10 Battery Wetland 10,191 ft.



January 2, 2024

Wetlands

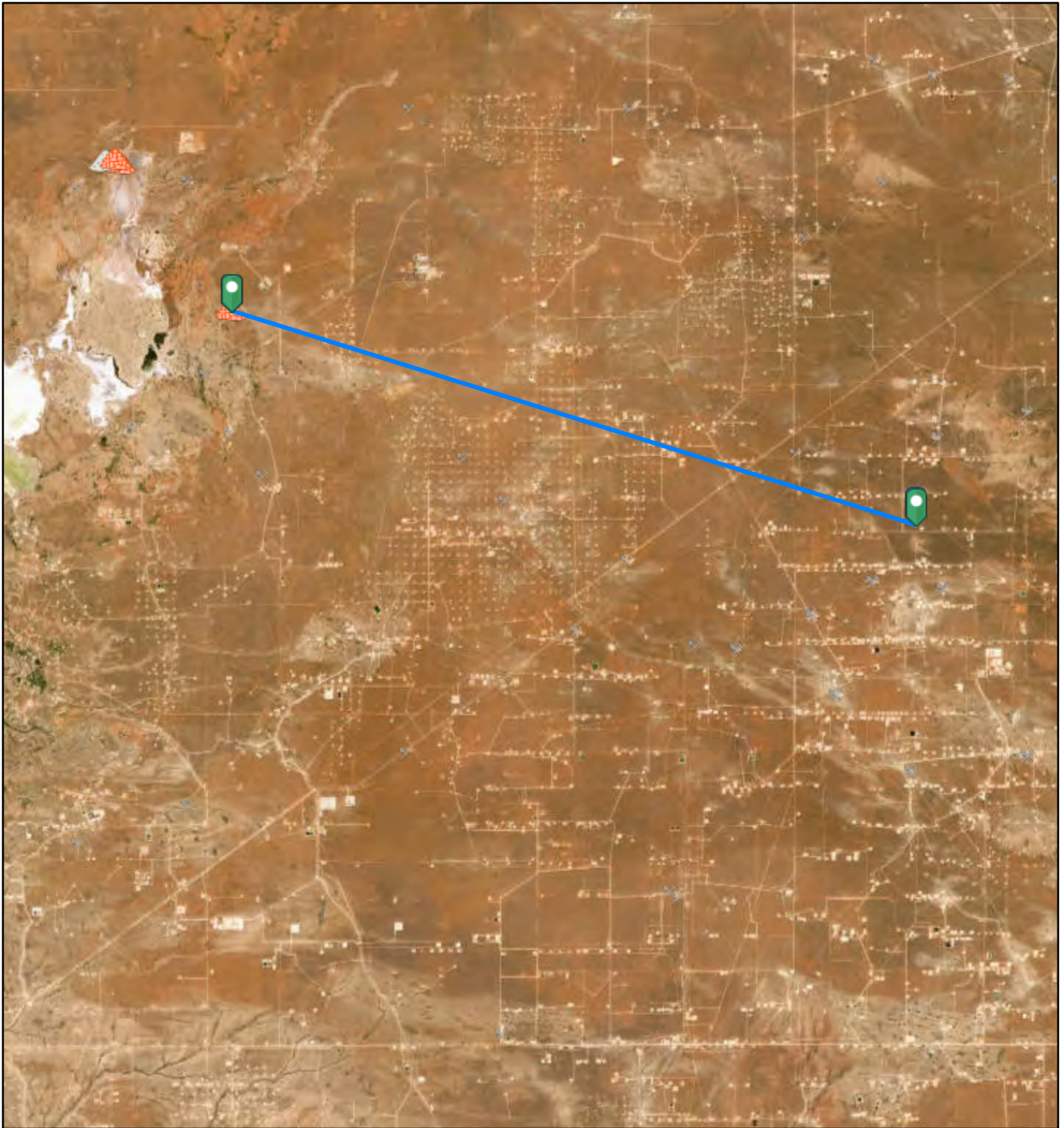
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- 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.

Thistle Unit 10 Battery Mine 104,310ft



4/18/2024, 3:52:47 PM

Registered Mines



Aggregate, Stone etc.



Aggregate, Stone etc.



Aggregate, Stone etc.

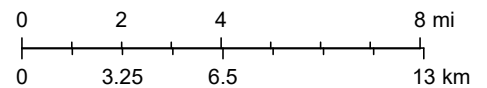


Potash

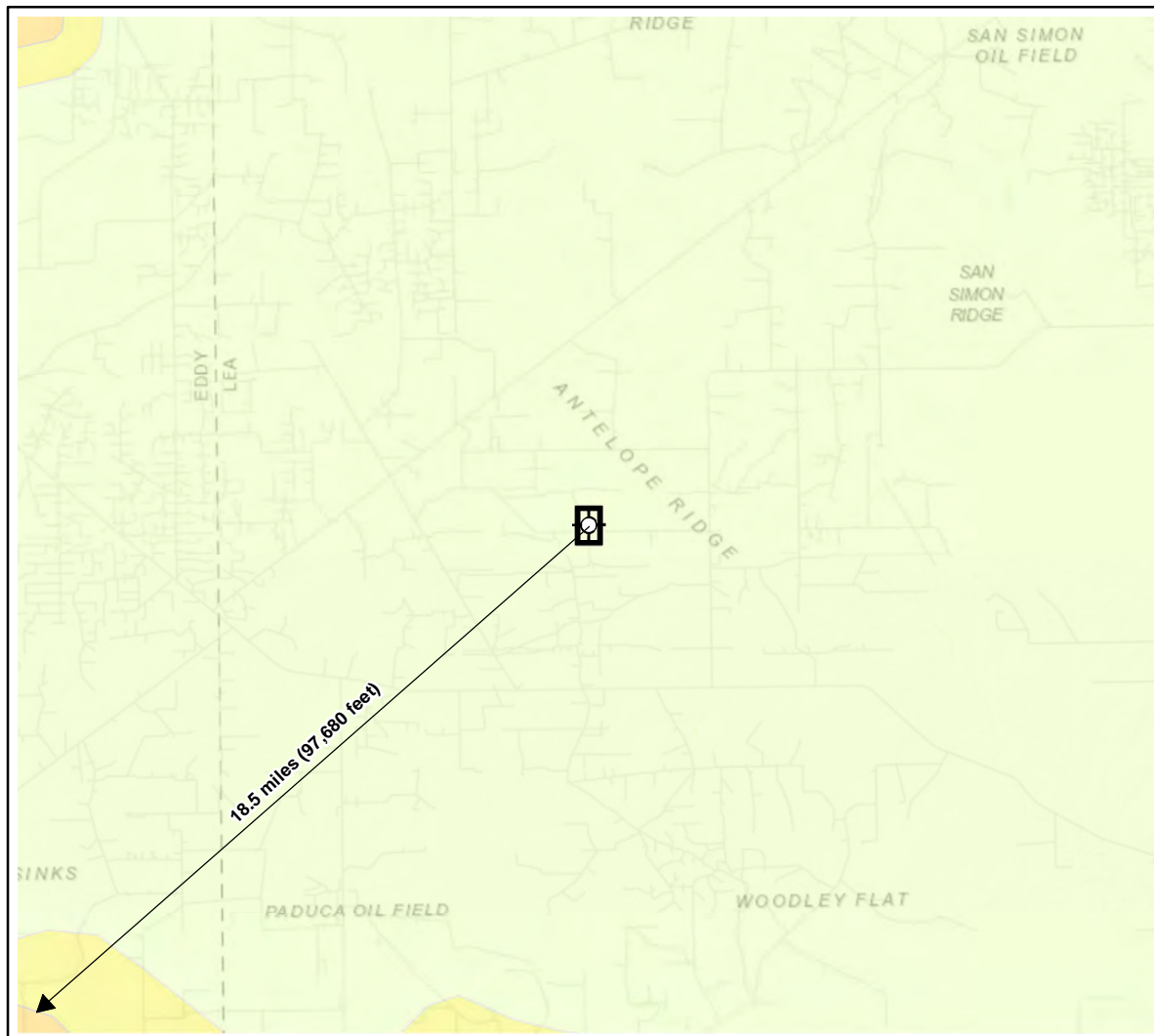


Salt

1:288,895



Earthstar Geographics



Karst Potential

- Critical
- High
- Medium
- Low



Site Location



Site Buffer (1000 ft.)

Overview Map

0 1 2 4 mi



Detail Map

0 150 300 600 ft



Map Center:
32.2708, -103.5630

NAD 1983 UTM Zone 13N
Date: Jan 03/24



**Karst Potential Map
Thistle Unit 10 Battery**

Figure:
X



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: Inset Map, Esri 2022; Overview Map: Esri World Topographic. Karst potential data sources from Roswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management, (2018). Karst Potential.

National Flood Hazard Layer FIRMette



103°34'4"W 32°16'30"N



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

1:6,000

103°33'27"W 32°16'N

Released to Imaging: 6/25/2025 2:43:17 PM

Basemap Imagery Source: USGS National Map 2023

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 Cross Sections with 1% Annual Chance Water Surface Elevation
		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
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



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

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





The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/12/2025 at 3:07 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.

Thistle Unit 10 Battery

83,391 ft to FEMA Flood Zone A

Legend

-  83,391 ft.
-  FEMA Flood Hazard Zone A
-  FEMA Flood Hazard Zone AE
-  Thistle Unit 10 Battery

Thistle Unit 10 Battery



10 km



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**



January 2, 2024


Custom Soil Resource Report
Soil Map (Thistle Unit 10 Battery)



Custom Soil Resource Report


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 20, Sep 6, 2023

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.

Custom Soil Resource Report

Map Unit Legend (Thistle Unit 10 Battery)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BE	Berino-Cacique loamy fine sands association	0.2	3.4%
PU	Pyote and Maljamar fine sands	5.7	96.6%
Totals for Area of Interest		5.9	100.0%

Map Unit Descriptions (Thistle Unit 10 Battery)

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

Custom Soil Resource Report

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.

Custom Soil Resource Report

Lea County, New Mexico**BE—Berino-Cacique loamy fine sands association****Map Unit Setting***National map unit symbol:* dmpd*Elevation:* 3,000 to 3,900 feet*Mean annual precipitation:* 10 to 13 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***Berino and similar soils:* 50 percent*Cacique and similar soils:* 40 percent*Minor components:* 10 percent*Estimates are based on observations, descriptions, and transects of the mapunit.***Description of Berino****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 over calcareous sandy alluvium derived from sedimentary rock**Typical profile***A - 0 to 6 inches:* loamy fine sand*Btk - 6 to 60 inches:* sandy clay loam**Properties and qualities***Slope:* 0 to 3 percent*Depth to restrictive feature:* More than 80 inches*Drainage class:* Well drained*Runoff class:* Low*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 2.00 in/hr)*Depth to water table:* More than 80 inches*Frequency of flooding:* None*Frequency of ponding:* None*Calcium carbonate, maximum content:* 40 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 supply, 0 to 60 inches:* Moderate (about 8.7 inches)**Interpretive groups***Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 7c*Hydrologic Soil Group:* B*Ecological site:* R070BD003NM - Loamy Sand*Hydric soil rating:* No

Custom Soil Resource Report

Description of Cacique**Setting**

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Calcareous eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 12 inches: loamy fine sand

Bt - 12 to 28 inches: sandy clay loam

Bkm - 28 to 38 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 20 to 40 inches to petrocalcic

Drainage class: Well drained

Runoff class: High

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 supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7c

Hydrologic Soil Group: C

Ecological site: R070BD004NM - Sandy

Hydric soil rating: No

Minor Components**Maljamar**

Percent of map unit: 6 percent

Ecological site: R077CY028TX - Limy Upland 16-21" PZ

Hydric soil rating: No

Palomas

Percent of map unit: 4 percent

Ecological site: R070BD003NM - Loamy Sand

Hydric soil rating: No

Custom Soil Resource Report

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 supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A

Custom Soil Resource Report

Ecological site: R070BD003NM - 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 supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 6e

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: R070BD003NM - Loamy Sand

Hydric soil rating: No

Minor Components**Kermit**

Percent of map unit: 10 percent

Ecological site: R070BC022NM - Sandhills

Hydric soil rating: No



Ecological site R070BD003NM

Loamy Sand

Accessed: 01/02/2024

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.

Associated sites

R070BD004NM	Sandy Sandy
R070BD005NM	Deep Sand Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site is on uplands, plains, dunes, fan piedmonts and in inter dunal areas. The parent material consists of mixed alluvium and or eolian sands derived from sedimentary rock. Slope range on this site range from 0 to 9 percent with the average of 5 percent.

Low stabilized dunes may occur occasionally on this site. Elevations range from 2,800 to 5,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Fan piedmont (2) Alluvial fan (3) Dune
Elevation	2,800–5,000 ft
Slope	0–9%
Aspect	Aspect is not a significant factor

Climatic features

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 207 to 220 days. The last killing frost being late March or early April and the first killing frost being in later 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. Strong winds blow from the southwest from January through June, which accelerates soil drying during a critical period 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)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced from water from wetlands or streams.

Soil features

Soils are moderately deep or very deep. Surface textures are loamy fine sand, fine sandy loam, loamy very fine sand or gravelly sandy loam.

Subsurface is a loamy fine sand, coarse sandy loam, fine sandy loam or loam that averages less than 18 percent clay and less than 15 percent carbonates.

Substratum is a fine sandy loam or gravelly fine sandy loam with less than 15 percent gravel and with less than 40 percent calcium carbonate. Some layers high in lime or with caliche fragments may occur at depths of 20 to 30 inches.

These soils, if unprotected by plant cover and organic residue, become wind blown and low hummocks are formed.

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

Characteristic soils are:

Maljamar
Berino
Parjarito
Palomas
Wink
Pyote

Table 4. Representative soil features

Surface texture	(1) Fine sand (2) Fine sandy loam (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderate to moderately rapid

Soil depth	40–72 in
Surface fragment cover ≤3"	0–10%
Surface fragment cover >3"	0%
Available water capacity (0–40in)	5–7 in
Calcium carbonate equivalent (0–40in)	3–40%
Electrical conductivity (0–40in)	2–4 mmhos/cm
Sodium adsorption ratio (0–40in)	0–2
Soil reaction (1:1 water) (0–40in)	6.6–8.4
Subsurface fragment volume ≤3" (Depth not specified)	4–12%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview

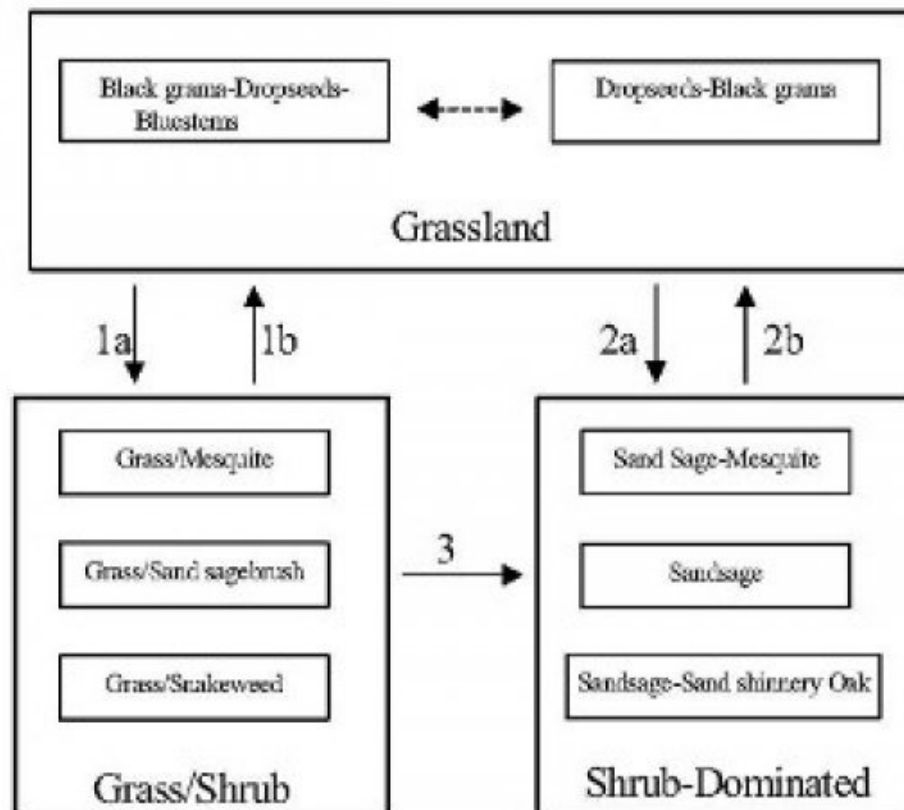
The Loamy Sand site intergrades with the Deep Sand and Sandy sites (SD-3). These sites can be differentiated by surface soil texture and depth to a textural change. Loamy Sand and Deep Sand sites have coarse textured (sands and loamy sand) surface soils while Sandy sites have moderately coarse textured (sandy loam and fine sandy loam) surfaces. Although Loamy Sand and Deep Sand sites have similar surface textures, the depth to a textural change is different—Loamy Sand sub-surface textures typically increase in clay at approximately 20 to 30 inches, and Deep Sand sites not until around 40 inches.

The historic plant community of Loamy Sand sites is dominated by black grama (*Bouteloua eriopoda*), dropseeds (*Sporobolus flexuosus*, *S. contractus*, *S. cryptandrus*), and bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), with scattered shinnery oak (*Quercus havardii*) and sand sage (*Artemisia filifolia*). Perennial and annual forb abundance and distribution are dependent on precipitation. Litter and to a lesser extent, bare ground, are a significant proportion of ground cover while grasses compose the remainder. Decreases in black grama indicate a transition to either a grass/shrub or shrub-dominated state. The grass/shrub state is composed of grasses/honey mesquite (*Prosopis glandulosa*), grasses/broom snakeweed (*Gutierrezia sarothrae*), or grasses/sand sage. The shrub-dominated state occurs after a severe loss of grass cover and a prevalence of sand sage with secondary shinnery oak and mesquite. Heavy grazing intensity and/or drought are influential drivers in decreasing black grama and bluestems and subsequently increasing shrub cover, erosion, and bare patches. Historical fire suppression also encourages shrub pervasiveness and a competitive advantage over grass species (McPherson 1995). Brush and grazing management, however, may reverse grass/shrub and shrub-dominated states toward the grassland-dominated historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram):

MLRA-42, SD-3, Loamy Sand



1a. Drought, over grazing, fire suppression.

1b. Brush control, prescribed grazing

2.a Severe loss of grass cover, fire suppression, erosion.

2b. Brush control, seeding, prescribed grazing.

3. Continued loss of grass cover, erosion.

State 1

Historic Climax Plant Community

Community 1.1

Historic Climax Plant Community

Grassland: The historic plant community is a uniformly distributed grassland dominated by black grama, dropseeds, and bluestems. Sand sage and shinnery oak are evenly dispersed throughout the grassland due to the coarse soil

surface texture. Perennial and annual forbs are common but their abundance and distribution are reflective of precipitation. Bluestems initially, followed by black grama, decrease with drought and heavy grazing intensity. Historical fire frequency is unknown but likely occurred enough to remove small shrubs to the competitive advantage of grass species. Fire suppression, drought conditions, and excessive grazing drive most grass species out of competition with shrub species. Diagnosis: Grassland dominated by black grama, dropseeds, and bluestems. Shrubs, such as sand sage, shinnery oak, and mesquite are dispersed throughout the grassland. Forbs are present and populations fluctuate with precipitation variability.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	442	833	1224
Forb	110	208	306
Shrub/Vine	98	184	270
Total	650	1225	1800

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	28%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	50%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	22%

Figure 5. Plant community growth curve (percent production by month). NM2803, R042XC003NM-Loamy Sand-HCPC. SD-3 Loamy Sand - Warm season plant community .

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

State 2
Grass/Shrub

Community 2.1
Grass/Shrub



Grass/Shrub State: The grass/shrub state is dominated by communities of grasses/mesquite, grasses/snakeweed, or grasses/sand sage. Decreases in black grama and bluestem species lead to an increase in bare patches and mesquite which further competes with grass species. An increase of dropseeds and threeawns occurs. Grass distribution becomes more patchy with an absence or severe decrease in black grama and bluestems. Mesquite provides nitrogen and soil organic matter to co-dominant grasses (Ansley and Jacoby 1998, Ansley et al. 1998). Mesquite mortality when exposed to fire is low due to aggressive resprouting abilities. Herbicide application combined with subsequent prescribed fire may be more effective in mesquite reduction (Britton and Wright 1971). **Diagnosis:** This state is dominated by an increased abundance of communities including grass/mesquite, grass/snakeweed, or grass/sand sage. Dropseeds and threeawns have a patchy distribution. **Transition to Grass/Shrub State (1a):** The historic plant community begins to shift toward the grass/shrub state as drivers such as drought, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by a decrease in black grama with a subsequent increase of dropseeds, threeawns, mesquite, and snakeweed. Snakeweed has been documented to outcompete black grama especially under conditions of fire suppression and drought (McDaniel et al. 1984). **Key indicators of approach to transition:** • Loss of black grama cover • Surface soil erosion • Bare patch expansion • Increased dropseed/threeawn and mesquite, snakeweed, or sand sage abundances **Transition to Historic Plant Community (1b):** Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community.

State 3 Shrub Dominated

Community 3.1 Shrub Dominated

Shrub-Dominated State: The shrub-dominated state results from a severe loss of grass cover. This state's primary species is sand sage. Shinnery oak and mesquite also occur; however, grass cover is limited to intershrub distribution. Sand sage stabilizes light sandy soils from wind erosion, which enhances protected grass/forb cover (Davis and Bonham 1979). However, shinnery oak also responds to the sandy soils with dense stands due to an

aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986). Transition to Shrub-Dominated (2a): Severe loss of grass species with increased erosion and fire suppression will result in a transition to a shrub-dominated state with sand sage, Shin oak, and honey mesquite directly from the grassland-dominated state. Key indicators of approach to transition: • Severe loss of grass species cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite abundance Transition to Historic Plant Community (2b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community. In addition, seeding with native grass species will augment the transition to a grassland-dominated state. Transition to Shrub-Dominated (3): If the grass/shrub site continues to lose grass cover with soil erosion, the site will transition to a shrub-dominated state with sand sage, shinnery oak, and honey mesquite. Key indicators of approach to transition: • Continual loss of dropseeds/threawns cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite/dropseed/threawn and mesquite/snakeweed abundance

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	Warm Season			61–123	
	little bluestem	SCSC	<i>Schizachyrium scoparium</i>	61–123	–
2	Warm Season			37–61	
	sand bluestem	ANHA	<i>Andropogon hallii</i>	37–61	–
3	Warm Season			37–61	
	cane bluestem	BOBA3	<i>Bothriochloa barbinodis</i>	37–61	–
	silver bluestem	BOSA	<i>Bothriochloa saccharoides</i>	37–61	–
4	Warm Season			123–184	
	black grama	BOER4	<i>Bouteloua eriopoda</i>	123–184	–
	bush muhly	MUPO2	<i>Muhlenbergia porteri</i>	123–184	–
5	Warm Season			123–184	
	thin paspalum	PASE5	<i>Paspalum setaceum</i>	123–184	–
	plains bristlegrass	SEVU2	<i>Setaria vulpiseta</i>	123–184	–
	fringed signalgrass	URCI	<i>Urochloa ciliatissima</i>	123–184	–
6	Warm Season			123–184	
	spike dropseed	SPCO4	<i>Sporobolus contractus</i>	123–184	–
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	123–184	–
	mesa dropseed	SPFL2	<i>Sporobolus flexuosus</i>	123–184	–
7	Warm Season			61–123	
	hooded windmill grass	CHCU2	<i>Chloris cucullata</i>	61–123	–
	Arizona cottontop	DICA8	<i>Digitaria californica</i>	61–123	–
9	Other Perennial Grasses			37–61	
	Grass, perennial	2GP	<i>Grass, perennial</i>	37–61	–
Shrub/Vine					
8	Warm Season			37–61	
	New Mexico feathergrass	HENE5	<i>Hesperostipa neomexicana</i>	37–61	–
	giant dropseed	SPGI	<i>Sporobolus giganteus</i>	37–61	–
10	Shrub			61–123	

	sand sagebrush	ARFI2	<i>Artemisia filifolia</i>	61–123	–
	Havard oak	QUHA3	<i>Quercus havardii</i>	61–123	–
11	Shrub			34–61	
	fourwing saltbush	ATCA2	<i>Atriplex canescens</i>	37–61	–
	featherplume	DAFO	<i>Dalea formosa</i>	37–61	–
12	Shrub			37–61	
	jointfir	EPHED	<i>Ephedra</i>	37–61	–
	littleleaf ratany	KRER	<i>Krameria erecta</i>	37–61	–
13	Other Shrubs			37–61	
	Shrub (>.5m)	2SHRUB	<i>Shrub (>.5m)</i>	37–61	–
Forb					
14	Forb			61–123	
	leatherweed	CRPOP	<i>Croton pottsii</i> var. <i>pottsii</i>	61–123	–
	Indian blanket	GAPU	<i>Gaillardia pulchella</i>	61–123	–
	globemallow	SPHAE	<i>Sphaeralcea</i>	61–123	–
15	Forb			12–37	
	woolly groundsel	PACA15	<i>Packera cana</i>	12–37	–
16	Forb			61–123	
	touristplant	DIWI2	<i>Dimorphocarpa wislizeni</i>	61–123	–
	woolly plantain	PLPA2	<i>Plantago patagonica</i>	61–123	–
17	Other Forbs			37–61	
	Forb (herbaceous, not grass nor grass-like)	2FORB	<i>Forb (herbaceous, not grass nor grass-like)</i>	37–61	–

Animal community

This Ecological Site provides habitat which supports a resident animal community that is characterized by pronghorn antelope, desert cottontail, spotted ground squirrel, black-tailed prairie dog, yellow faced pocket gopher, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, roadrunner, meadowlark, burrowing owl, white necked raven, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake, dusty hognose snake and ornate box turtle.

Where mesquite has invaded, most resident birds and scissor-tailed flycatcher, morning dove and Swainson's hawk, nest. Vesper and grasshopper sparrows utilize the site during migration.

Hydrological functions

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

Hydrologic Interpretations

Soil Series Hydrologic Group

Berino B

Kinco A

Maljamar B

Pajarito B

Palomas B

Wink B

Pyote A

Recreational uses

This site offers recreation potential for hiking, borseback riding, nature observation, photography and hunting. During years of abundant spring moisture, this site displays a colorful array of wildflowers during May and June.

Wood products

This site has no potential for wood products.

Other products

This site is suitable for grazing by all kinds and classes of livestock at any time of year. In cases where this site has been invaded by brush species it is especially suited for goats. Mismanagement of this site will cause a decrease in species such as the bluestems, black grama, bush muhly, plains bristlegrass, New Mexico feathergrass, Arizona cottontop and fourwing saltbush. A corresponding increase in the dropseeds, windmill grass, fall witchgrass, silver bluestem, sand sagebrush, shinery oak and ephedra will occur. This will also cause an increase in bare ground which will increase soil erodibility. This site will respond well to a system of management that rotates the season of use.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index Ac/AUM

100 - 76 2.3 – 3.5

75 – 51 3.0 – 4.5

50 – 26 4.6 – 9.0

25 – 0 9.1 +

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, Major Land Resource Areas of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Eddy County, Lea County, and Chaves County.

Other references

Literature Cited:

Ansley, R. J.; Jacoby, P. W. 1998. Manipulation of fire intensity to achieve mesquite management goals in north Texas. In: Pruden, Teresa L.; Brennan, Leonard A., eds. Fire in ecosystem management: shifting the paradigm from suppression to prescription: Proceedings, Tall Timbers fire ecology conference; 1996 May 7-10; Boise, ID. No. 20. Tallahassee, FL: Tall Timbers Research Station: 195-204.

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Britton, Carlton M.; Wright, Henry A. 1971. Correlation of weather and fuel variables to mesquite damage by fire. Journal of Range Management 24:136-141.

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Herbel, C. H, Steger, R, Gould, W. L. 1974. Managing semidesert ranges of the Southwest Circular 456. Las Cruces, NM: New Mexico State University, Cooperative Extension Service. 48 p.

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McPherson, Guy R. 1995. The role of fire in the desert grasslands. In: McClaran, Mitchel P.; Van Devender, Thomas R., eds. The desert grassland. Tucson, AZ: The University of Arizona Press: 130-151.

Pettit, Russell D. 1986. Sand shinnery oak: control and management. Management Note 8. Lubbock, TX: Texas Tech University, College of Agricultural Sciences, Department of Range and Wildlife Management. 5 p.

Contributors

Don Sylvester
Quinn Hodgson

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:

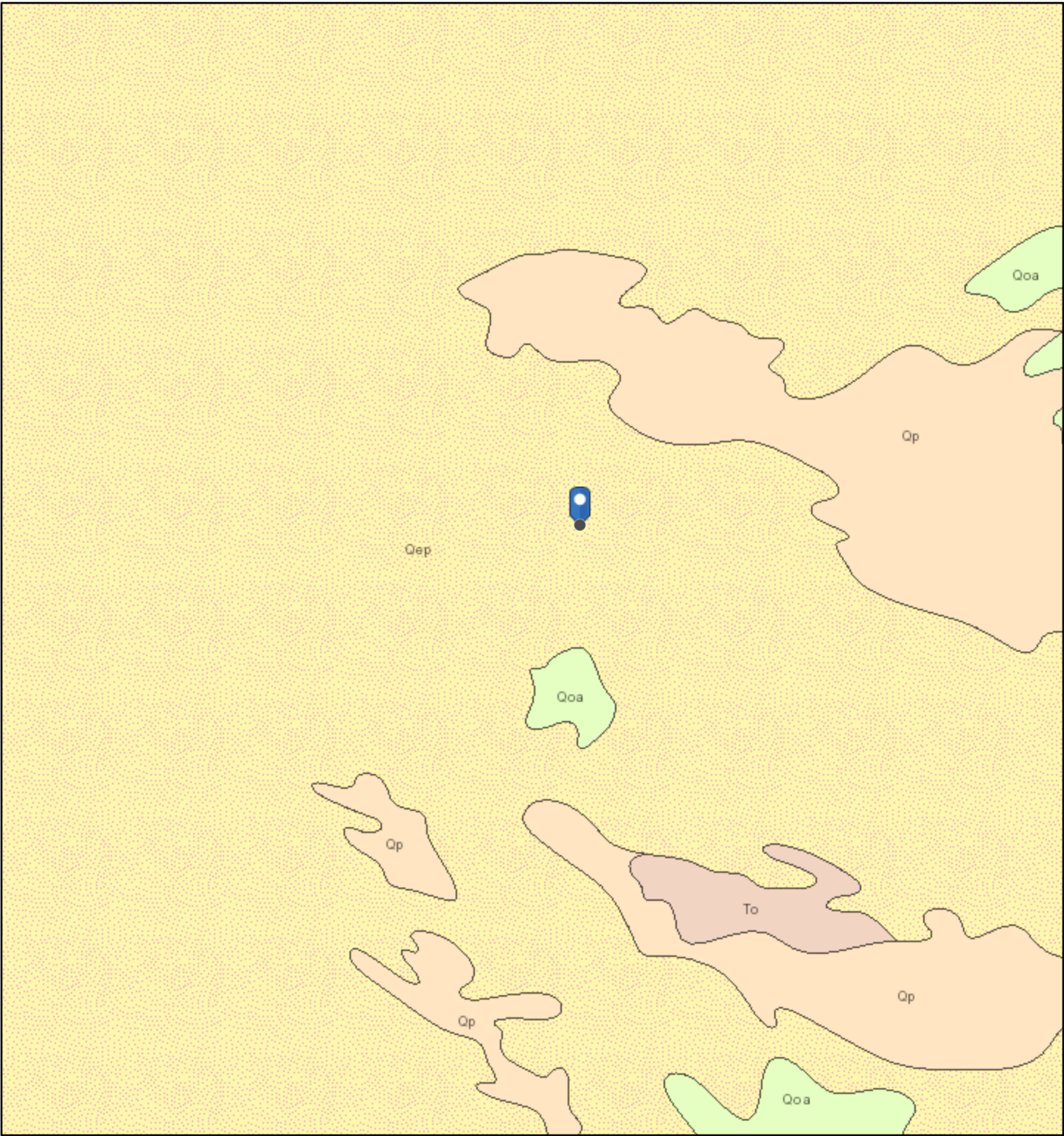
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):

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:**
-

Thistle Unit 10 Battery Geology

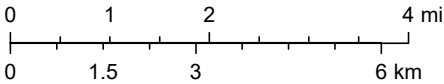


1/2/2024, 2:35:48 PM

1:144,448

Lithologic Units

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



Esri, NASA, NGA, USGS, NMBGMR, 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

ArcGIS Web AppBuilder

APPENDIX C – Daily Field Reports



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	8/31/2020
Site Location Name:	Thistle Unit 10 CTB	Report Run Date:	9/4/2020 4:14 PM
Client Contact Name:	Amanda Davis	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID	-Thistle Unit 10 CTB	Project Owner:	Amanda Davis
Project Reference #	08/30/2019 - 402bbl PW Release	Project Manager:	Natalie Gordon

Summary of Times

Arrived at Site	8/31/2020 10:13 AM
Departed Site	8/31/2020 12:21 PM

Field Notes

16:51 Complete liner inspection

Next Steps & Recommendations

- 1 No cracks, tears or deficiencies were identified in the liner. The integrity of the liner was consistent across entire containment. No visual evidence was found that would support liquids escaping liner.

Daily Site Visit Report



Site Photos

Viewing Direction: South



Descriptive Photo - 1
Viewing Direction: South
Basin Liner Inspection
Created: 6/1/2020 4:53:47 PM
Lat:32.589753, Long:-104.337673

Liner inspection

Viewing Direction: North



Descriptive Photo - 2
Viewing Direction: North
Basin Liner Inspection
Created: 6/1/2020 4:54:03 PM
Lat:32.589753, Long:-104.337673

Liner inspection

Viewing Direction: North



Descriptive Photo - 3
Viewing Direction: West
Basin Liner Inspection
Created: 6/1/2020 4:54:49 PM
Lat:32.589753, Long:-104.337673

Liner inspection

Viewing Direction: West



Descriptive Photo - 4
Viewing Direction: West
Basin Liner Inspection
Created: 6/1/2020 4:55:40 PM
Lat:32.589753, Long:-104.337673

Liner inspection



Daily Site Visit Report

<p>Viewing Direction: East</p>  <p>Descriptive Photo - 8 Viewing Direction: East Event: Liner Inspection Created: 8/1/2020 6:06:00 PM Lat:32.386733, Long:-104.337957</p>	<p>Viewing Direction: Southwest</p>  <p>Descriptive Photo - 8 Viewing Direction: Southwest Event: Liner Inspection Created: 8/1/2020 6:06:00 PM Lat:32.386733, Long:-104.337957</p>
Liner inspection	Liner inspection
<p>Viewing Direction: North</p>  <p>Descriptive Photo - 8 Viewing Direction: North Event: Area adjacent to containment Created: 8/1/2020 6:07:00 PM Lat:32.386733, Long:-104.337957</p>	<p>Viewing Direction: North</p>  <p>Descriptive Photo - 8 Viewing Direction: North Event: Area adjacent to containment Created: 8/1/2020 11:06:00 AM Lat:32.379009, Long:-104.338000</p>
Area adjacent to containment	Area adjacent to containment

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Kevin Smith

Signature:

A handwritten signature in black ink, appearing to read 'Kevin Smith', written over a thin horizontal line. Below the line, the word 'Signature' is printed in a small font.



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/7/2025
Site Location Name:	Thistle Unit 10 CTB	Report Run Date:	4/7/2025 11:55 PM
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	4/7/2025 7:14 AM
Departed Site	4/7/2025 2:57 PM

Field Notes

- 8:12** Completed JSA on arrival. Conducted safety meeting with Devon and Kelley Oilfield Services. On site to execute remediation with excavation.
- 8:19** Swept planned excavation with magnetic locator prior to ground disturbance. Identified anchor and stainless steel line on west edge of excavation. Work crew exposed stainless steel line with hand tools.
- 14:44** Original characterization depths with hand tools did not extend beyond 3 feet bgs due to refusal. Work crew used backhoe to "pothole" BH23-34 to complete vertical delineation. Final pot hole depth was 6 feet bgs. Collected samples at 4, 5, and 6 feet bgs. Field screening results for sample collected at 6 feet bgs were below NMOCD strictest criteria for chloride and TPH.
- 14:48** Work crew excavated planned area to 1 feet bgs. Field screening results for preliminary base and wall samples were below closure criteria.
- 14:51** Excavation tentatively completed. Work crew installed temporary fence. Confirmation sampling will be completed when notification clears in approximately 2 days.

Next Steps & Recommendations

- 1 Collect confirmation samples.

Daily Site Visit Report

Site Photos

Viewing Direction: Northwest



Southeast of wellhead facing northwest.

Viewing Direction: South



North of wellhead facing south. Stainless steel line running north from wellhead to treater.

Viewing Direction: North



North of wellhead facing north. Stainless steel line running north from wellhead to treater.

Viewing Direction: South



North of wellhead facing south. Stainless steel line running north from wellhead to treater.



Daily Site Visit Report

Viewing Direction: East



Northwest of wellhead facing east. Backhoe increased depth of BH23-34 to complete vertical delineation.

Viewing Direction: Northeast



Northwest of wellhead facing northeast. Excavation to 1 feet bgs.

Viewing Direction: Northwest



Northeast of wellhead facing northwest. Excavation to 1 feet bgs.

Viewing Direction: Southwest



Northeast of wellhead facing southwest. Excavation to 1 feet bgs.



Daily Site Visit Report

Viewing Direction: Southeast



Northwest of wellhead facing southeast.
Excavation to 1 feet bgs.

Viewing Direction: West



Northeast of wellhead facing west.

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

A handwritten signature in black ink, appearing to be 'LP', written over a thin horizontal line.

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/10/2025
Site Location Name:	Thistle Unit 10 CTB	Report Run Date:	4/10/2025 9:26 PM
Client Contact Name:	Jim Raley	API #:	
Client Contact Phone #:	575-748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/10/2025 7:50 AM
Departed Site	4/10/2025 12:11 PM

Field Notes

- 8:14** Completed JSA on arrival. On site to collect confirmation samples from excavation to 1 feet bgs.
- 8:15** Swept excavation base and walls with magnetic locator prior to sample collection.
- 8:52** Mapped excavation and confirmation sampling locations in ArcGIS.
- 10:53** Collected confirmation samples from surfaces of excavation to 1 feet bgs. Confirmation samples collected from the excavation base and walls were 5-point composites representing areas no greater than 200 square feet.
- 11:51** Collected excavation wall confirmation samples WS25-01 and WS25-02 from 0 to 1 feet bgs. Field screening results were below NMOCD strictest criteria for chloride and TPH.
- 11:53** Collected excavation base confirmation samples BS25-01 and BS25-02 at 1 feet bgs. Field screening results for chloride and TPH were below closure criteria for DTGW between 51 and 100 feet bgs.

Next Steps & Recommendations

- 1** Submit confirmation samples to laboratory for analyses.

Daily Site Visit Report



Site Photos

Viewing Direction: Northwest



Southeast of wellhead facing northwest.

Viewing Direction: Southeast



Northwest corner of excavation to 1 feet bgs facing southeast.

Viewing Direction: East



West edge of excavation to 1 feet bgs facing east.

Viewing Direction: Northeast



Southwest corner of excavation to 1 feet bgs facing northeast.



Daily Site Visit Report

Viewing Direction: North



South of excavation to 1 feet bgs facing north.

Viewing Direction: Northwest



Southeast corner of excavation to 1 feet bgs facing northwest.

Viewing Direction: West



East edge of excavation to 1 feet bgs facing west.

Viewing Direction: Southwest



Northeast corner of excavation to 1 feet bgs facing southwest.



Daily Site Visit Report

Viewing Direction: South



North of excavation to 1 feet bgs facing south.

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

A handwritten signature in black ink, appearing to be 'LP', written over a horizontal line. Below the line, the word 'Signature' is printed in a small font.



Daily Site Visit Report

Client:	Devon Energy Corporation	Incident ID #:	nRM1933052987
Site Location Name:	Thistle Unit 10 CTB	API #:	
Inspection Date:	5/22/2025		

Summary of Times

Arrived at Site	5/22/2025 6:54 AM
Departed Site	5/22/2025 4:54 PM

Field Notes

- 7:11** Completed JSA on arrival. On site to collect confirmation samples from undisturbed area of impact.
- 7:28** Swept mapped area of impact with magnetic locator prior to sample collection. Samples samples will be collected from the pad surface.
- 15:38** Blue dye present on portions of pad and sampling area. Possibly marking herbicide treatment. Sample grabs from these areas were collected after scraping dyed surface away.
- 15:34** Collected confirmation samples BS25-03 through BS25-20 from surface of pad (0 feet bgs). Confirmation samples collected from the surface were 5-point composites representing areas no greater than 400 square feet per variance approved by NMOCD.
- 16:28** Field screening results for all samples below NMOCD closure criteria for depth to groundwater between 51 and 100 feet bgs.

Next Steps & Recommendations

- 1 Submit samples to laboratory for analyses.
- 2 Collect remaining 8 confirmation samples.

Daily Site Visit Report



Site Photos

Viewing Direction: Northwest



Southeast of wellhead facing northwest.

Viewing Direction: North



Southwest of wellhead facing north. Scraped dyed soil away before collecting sample grabs.

Viewing Direction: South



North of containment facing south. Collected BS25-03 and BS25-04 north of containment.





Viewing Direction: West



North of containment facing west. Collected BS25-03 and BS25-04 north of containment.



Daily Site Visit Report

<p>Viewing Direction: South</p>  <p><small>Descriptive Photo - 8 Viewing Direction: South Date: Northwest of containment facing south. Collected BS25-05, BS25-06, and BS25-07 northwest of containment. Created: 5/22/2025 3:48:56 PM Lat:32.270896, Long:-103.582897</small></p> <p>Northwest of containment facing south. Collected BS25-05, BS25-06, and BS25-07 northwest of containment.</p>	<p>Viewing Direction: Northeast</p>  <p><small>Descriptive Photo - 8 Viewing Direction: Northeast Date: West of containment facing northeast. Collected BS25-06 East of containment. Created: 5/22/2025 3:54:52 PM Lat:32.270896, Long:-103.582896</small></p> <p>West of containment facing northeast. Collected BS25-06 west of containment.</p>
<p>Viewing Direction: Northwest</p>  <p><small>Descriptive Photo - 8 Viewing Direction: Northwest Date: West of containment facing northwest. Collected BS25-08 through BS25-12 west of containment. Created: 5/22/2025 3:58:14 PM Lat:32.270897, Long:-103.582905</small></p> <p>West of containment facing northwest. Collected BS25-08 through BS25-12 west of containment.</p>	<p>Viewing Direction: Southeast</p>  <p><small>Descriptive Photo - 8 Viewing Direction: Southeast Date: Southwest of wellhead facing southeast. Collected BS25-08 through BS25-12 west of containment. Created: 5/22/2025 3:57:50 PM Lat:32.270897, Long:-103.582905</small></p> <p>Southwest of wellhead facing southeast. Collected BS25-08 through BS25-12 west of containment.</p>



Daily Site Visit Report

Viewing Direction: West



Northwest of containment facing west. Collected BS25-13, BS25-14, and BS25-15 northeast, north, and northwest of wellhead.

Viewing Direction: Northwest



West of wellhead facing northwest. Collected BS25-15 through BS25-18 northwest of wellhead.

Viewing Direction: Southeast



North side of pad facing southeast. Collected BS25-19 and BS25-20 northwest and north of remediation area.

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

A handwritten signature in black ink, appearing to be 'LP' with a large loop, written over a horizontal line.

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Incident ID #:	NRM1933052987
Site Location Name:	Thistle Unit 10 CTB	API #:	
Inspection Date:	5/23/2025		

Summary of Times

Arrived at Site	5/23/2025 7:03 AM
Departed Site	5/23/2025 11:36 AM

Field Notes

- 7:12** Completed JSA on arrival. On site to collect remaining confirmation samples from historical impact area on pad surface.
- 7:33** Swept sampling area with magnetic locator prior to sample collection.
- 11:08** Collected confirmation samples BS25-21 through BS25-30 from surface of pad (0 feet bgs). Confirmation samples collected from the surface were 5-point composites representing areas no greater than 400 square feet per variance approved by NMOCD.
- 11:19** Field screening results for all confirmation samples were below NMOCD closure criteria for depth to groundwater between 51 and 100 feet bgs.
- 11:32** Confirmation sampling completed pending laboratory results.

Next Steps & Recommendations

- 1 Send confirmation samples to laboratory for analyses.

Daily Site Visit Report



Site Photos

Viewing Direction: Northwest



Southeast of wellhead facing northwest.




Viewing Direction: North



Northeast of wellhead facing north. Collected confirmation samples from impact area on north side of pad.



Daily Site Visit Report

<p>Viewing Direction: West</p>  <p><small>Descriptive Photo - 3 Viewing Direction: West Date: Northeast of wellhead facing west. Collected confirmation samples from impact area on north side of pad. Created: 5/23/2025 11:12:27 AM Lat:33.270676, Long:-103.582754</small></p> <p>Northeast of wellhead facing west. Collected confirmation samples from impact area on north side of pad.</p>	<p>Viewing Direction: Northwest</p>  <p><small>Descriptive Photo - 4 Viewing Direction: Northwest Date: Northeast of wellhead facing northwest. Collected confirmation samples from impact area on north side of pad. Created: 5/23/2025 11:13:53 AM Lat:33.270680, Long:-103.582731</small></p> <p>Northeast of wellhead facing northwest. Collected confirmation samples from impact area on north side of pad.</p>
<p>Viewing Direction: Southwest</p>  <p><small>Descriptive Photo - 5 Viewing Direction: Southwest Date: North side of pad facing southwest. Collected confirmation samples from impact area on north side of pad. Created: 5/23/2025 11:13:53 AM Lat:33.270680, Long:-103.582750</small></p> <p>North side of pad facing southwest. Collected confirmation samples from impact area on north side of pad.</p>	<p>Viewing Direction: West</p>  <p><small>Descriptive Photo - 6 Viewing Direction: West Date: North side of pad facing west. Collected confirmation samples from impact area on north side of pad. Created: 5/23/2025 11:14:16 AM Lat:33.270675, Long:-103.582760</small></p> <p>North side of pad facing west. Collected confirmation samples from impact area on north side of pad.</p>



Daily Site Visit Report

Viewing Direction: South



North side of pad facing south. Collected confirmation samples from impact area on north side of pad.

Viewing Direction: East



North side of pad facing east. Collected confirmation samples from impact area on north side of pad.

Viewing Direction: Southeast



North side of pad facing southeast. Collected confirmation samples from impact area on north side of pad.

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

A handwritten signature in black ink, appearing to be 'LP', written over a horizontal line.

Signature

APPENDIX D – Notifications

From: [Dhugal Hanton](#)
To: [Enviro, OCD, EMNRD](#); tom.bynum@dyn.com; wesley.mathews@dyn.com; Lupe.Carrasco@dyn.com; amanda.davis@dyn.com
Subject: [EXT] NRM1933052987: Thistle Unit 10 CTB Confirmatory Sampling and Liner Inspection
Date: Wednesday, August 26, 2020 7:34:12 PM

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled final confirmatory sampling and a liner inspection to be conducted at Thistle Unit 10 CTB for the release that occurred on August 30, 2019, incident #NRM1933052987 (1RP-5786).

This work will be completed on behalf of Devon Energy Production Company.

On Monday, August 31, 2020 at approximately 9:00 a.m., Kevin Smith of Vertex will be onsite to conduct the liner inspection and final confirmatory sampling. He can be reached at 575-988-0871. If you need directions to the site, please do not hesitate to contact him.

If you have any questions or concerns regarding this notification, please give me a call at 505-506-0040.

Thank you,
Natalie

Natalie Gordon
Project Manager

Vertex Resource Group Ltd.
213 S. Mesa Street
Carlsbad, NM 88220

P 575.725.5001 ext 709
C 505.506.0040

www.vertex.ca

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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 449435

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 449435
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM1933052987
Incident Name	NRM1933052987 THISTLE UNIT 10 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved
Incident Facility	[fAPP2130647365] THISTLE UNIT 10 BATTERY

Location of Release Source	
Site Name	THISTLE UNIT 10 CTB
Date Release Discovered	08/30/2019
Surface Owner	State

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	325
What is the estimated number of samples that will be gathered	4
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/10/2025
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	Lakin Pullman 701-495-1722, Kent Stallings 346-814-1413
Please provide any information necessary for navigation to sampling site	FROM 128 AND BRENEN STOOL RD HEAD N 4.2MI TURN R ON CR2A E 1.1MI TURN L/N .1MI TURN L/W .2MI TO GPS

Sante Fe Main Office
Phone: (505) 476-3441

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Phone: (505) 629-6116

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<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

CONDITIONS

Action 449435

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 449435
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jralej	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	4/8/2025

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 464773

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 464773
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM1933052987
Incident Name	NRM1933052987 THISTLE UNIT 10 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved
Incident Facility	[fAPP2130647365] THISTLE UNIT 10 BATTERY

Location of Release Source	
Site Name	THISTLE UNIT 10 CTB
Date Release Discovered	08/30/2019
Surface Owner	State

Sampling Event General Information	
<i>Please answer all the questions in this group.</i>	
What is the sampling surface area in square feet	10,808
What is the estimated number of samples that will be gathered	20
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/22/2025
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (scarttar@vertexresource.com, 575.361.3561)
Please provide any information necessary for navigation to sampling site	From the intersection of NM128 and Brininstool Rd, head North on Brininstool Rd for 4.2 miles. Turn right on CR 2-A and proceed East for 1.1 miles. Turn left and proceed North for .1 miles. Turn left and proceed west for .2 miles and arrive.

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

CONDITIONS

Action 464773

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 464773
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jralej	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/19/2025

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 464776

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 464776
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM1933052987
Incident Name	NRM1933052987 THISTLE UNIT 10 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved
Incident Facility	[fAPP2130647365] THISTLE UNIT 10 BATTERY

Location of Release Source	
Site Name	THISTLE UNIT 10 CTB
Date Release Discovered	08/30/2019
Surface Owner	State

Sampling Event General Information	
<i>Please answer all the questions in this group.</i>	
What is the sampling surface area in square feet	10,808
What is the estimated number of samples that will be gathered	20
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/23/2025
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (scarttar@vertexresource.com, 575.361.3561)
Please provide any information necessary for navigation to sampling site	From the intersection of NM128 and Brininstool Rd, head North on Brininstool Rd for 4.2 miles. Turn right on CR 2-A and proceed East for 1.1 miles. Turn left and proceed North for .1 miles. Turn left and proceed west for .2 miles and arrive.

Sante Fe Main Office
Phone: (505) 476-3441

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

CONDITIONS

Action 464776

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 464776
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jralej	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/19/2025



RE: [EXTERNAL] nRM1933052987 Sampling Variance Request

From Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>

Date Mon 5/19/2025 9:18 AM

To Sally Carttar <SCarttar@vertexresource.com>

Cc Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Raley, Jim <jim.rale@dmn.com>; Kent Stallings <kstallings@vertexresource.com>

Caution: This email is from an external sender. Please take care when clicking links or opening attachments. When in doubt, contact your IT Department

Good morning, Ms. Carttar

The request to collect surface samples every 400 sq. ft. at the Thistle Unit 10 Battery, incident ID nRM1933052987 is approved. The incident file has been updated to reflect this for the record.

Thank you,

Mike Buchanan • Environmental Specialist

Environmental Bureau

EMNRD - Oil Conservation Division

5200 Oakland Ave NE, Suite B | Albuquerque, NM 87113

505.490.0798 | michael.buchanan@emnrd.nm.gov

<http://www.emnrd.nm.gov/oed>



From: Sally Carttar <SCarttar@vertexresource.com>

Sent: Monday, May 19, 2025 7:52 AM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Cc: Raley, Jim <Jim.Raley@dmn.com>; Kent Stallings <kstallings@vertexresource.com>

Subject: [EXTERNAL] nRM1933052987 Sampling Variance Request

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good morning,

Devon is requesting a 400 sq.ft. sampling variance for surface samples at the Thistle Unit 10 Battery, incident ID nRM1933052987. The remaining sampling area is approximately 10,808 square feet, all of which is on-pad and was shown during delineation to meet on-pad criteria. Samples of all excavation areas have already been collected, and are each representative of no more than 200 sq.ft.

All samples will be analyzed at an accredited laboratory to ensure that all samples are below NMOCD closure criteria for a release 51-100 feet depth to groundwater.

I have attached the remediation plan for the release.

Best regards,

Sally Carttar

Project Manager

Vertex Resource Services Inc.

3101 Boyd Drive,

Carlsbad, NM 88220

C 575.361.3561

www.vertex.ca

[webpage]Connect with LinkedIn

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APPENDIX E – Laboratory Data Reports and Chain of Custody Forms



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

November 02, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX:

RE: Thistle Unit 10 Battery

OrderNo.: 2310A65

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 20 sample(s) on 10/21/2023 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,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 9:35:00 AM

Lab ID: 2310A65-001

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	10/24/2023 7:34:17 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/24/2023 7:34:17 PM
Surr: DNOP	87.8	69-147		%Rec	1	10/24/2023 7:34:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/24/2023 6:06:00 PM
Surr: BFB	100	15-244		%Rec	1	10/24/2023 6:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	10/24/2023 6:06:00 PM
Toluene	ND	0.047		mg/Kg	1	10/24/2023 6:06:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/24/2023 6:06:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/24/2023 6:06:00 PM
Surr: 4-Bromofluorobenzene	88.2	39.1-146		%Rec	1	10/24/2023 6:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	74	60		mg/Kg	20	10/25/2023 9:07:05 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 9:40:00 AM

Lab ID: 2310A65-002

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/24/2023 7:44:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/24/2023 7:44:57 PM
Surr: DNOP	98.7	69-147		%Rec	1	10/24/2023 7:44:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2023 6:28:00 PM
Surr: BFB	103	15-244		%Rec	1	10/24/2023 6:28:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/24/2023 6:28:00 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2023 6:28:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2023 6:28:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/24/2023 6:28:00 PM
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	10/24/2023 6:28:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	10/25/2023 9:19:30 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 9:45:00 AM

Lab ID: 2310A65-003

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	12	9.4		mg/Kg	1	10/24/2023 7:55:42 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/24/2023 7:55:42 PM
Surr: DNOP	95.5	69-147		%Rec	1	10/24/2023 7:55:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/24/2023 6:49:00 PM
Surr: BFB	106	15-244		%Rec	1	10/24/2023 6:49:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/24/2023 6:49:00 PM
Toluene	ND	0.047		mg/Kg	1	10/24/2023 6:49:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/24/2023 6:49:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/24/2023 6:49:00 PM
Surr: 4-Bromofluorobenzene	88.7	39.1-146		%Rec	1	10/24/2023 6:49:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	740	60		mg/Kg	20	10/25/2023 9:31:54 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 9:50:00 AM

Lab ID: 2310A65-004

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	10/24/2023 8:06:24 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/24/2023 8:06:24 PM
Surr: DNOP	97.1	69-147		%Rec	1	10/24/2023 8:06:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/24/2023 7:11:00 PM
Surr: BFB	104	15-244		%Rec	1	10/24/2023 7:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	10/24/2023 7:11:00 PM
Toluene	ND	0.047		mg/Kg	1	10/24/2023 7:11:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/24/2023 7:11:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/24/2023 7:11:00 PM
Surr: 4-Bromofluorobenzene	89.2	39.1-146		%Rec	1	10/24/2023 7:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	450	60		mg/Kg	20	10/25/2023 10:33:55 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-03 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 9:55:00 AM

Lab ID: 2310A65-005

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	20	9.1		mg/Kg	1	10/24/2023 8:17:06 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/24/2023 8:17:06 PM
Surr: DNOP	87.0	69-147		%Rec	1	10/24/2023 8:17:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2023 7:33:00 PM
Surr: BFB	106	15-244		%Rec	1	10/24/2023 7:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	10/24/2023 7:33:00 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2023 7:33:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2023 7:33:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/24/2023 7:33:00 PM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	10/24/2023 7:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1600	60		mg/Kg	20	10/25/2023 11:11:09 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-03 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:00:00 AM

Lab ID: 2310A65-006

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/24/2023 8:27:47 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/24/2023 8:27:47 PM
Surr: DNOP	98.6	69-147		%Rec	1	10/24/2023 8:27:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/24/2023 7:54:00 PM
Surr: BFB	106	15-244		%Rec	1	10/24/2023 7:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/24/2023 7:54:00 PM
Toluene	ND	0.047		mg/Kg	1	10/24/2023 7:54:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/24/2023 7:54:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/24/2023 7:54:00 PM
Surr: 4-Bromofluorobenzene	91.0	39.1-146		%Rec	1	10/24/2023 7:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	790	60		mg/Kg	20	10/25/2023 11:23:34 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:05:00 AM

Lab ID: 2310A65-007

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/24/2023 9:06:47 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/24/2023 9:06:47 AM
Surr: DNOP	97.0	69-147		%Rec	1	10/24/2023 9:06:47 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2023 11:32:40 AM
Surr: BFB	96.5	15-244		%Rec	1	10/24/2023 11:32:40 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	10/24/2023 11:32:40 AM
Toluene	ND	0.049		mg/Kg	1	10/24/2023 11:32:40 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2023 11:32:40 AM
Xylenes, Total	ND	0.099		mg/Kg	1	10/24/2023 11:32:40 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	10/24/2023 11:32:40 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	10/25/2023 11:35:59 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:10:00 AM

Lab ID: 2310A65-008

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/24/2023 9:38:34 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/24/2023 9:38:34 AM
Surr: DNOP	110	69-147		%Rec	1	10/24/2023 9:38:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/24/2023 11:55:58 AM
Surr: BFB	96.4	15-244		%Rec	1	10/24/2023 11:55:58 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	10/24/2023 11:55:58 AM
Toluene	ND	0.050		mg/Kg	1	10/24/2023 11:55:58 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/24/2023 11:55:58 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/24/2023 11:55:58 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	10/24/2023 11:55:58 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	10/25/2023 11:48:23 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:15:00 AM

Lab ID: 2310A65-009

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/24/2023 9:50:23 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/24/2023 9:50:23 AM
Surr: DNOP	117	69-147		%Rec	1	10/24/2023 9:50:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2023 12:19:21 PM
Surr: BFB	95.0	15-244		%Rec	1	10/24/2023 12:19:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/24/2023 12:19:21 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2023 12:19:21 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2023 12:19:21 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/24/2023 12:19:21 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	10/24/2023 12:19:21 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	84	60		mg/Kg	20	10/26/2023 12:00:47 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:20:00 AM

Lab ID: 2310A65-010

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/24/2023 10:01:00 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/24/2023 10:01:00 AM
Surr: DNOP	91.2	69-147		%Rec	1	10/24/2023 10:01:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2023 12:42:46 PM
Surr: BFB	95.9	15-244		%Rec	1	10/24/2023 12:42:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/24/2023 12:42:46 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2023 12:42:46 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2023 12:42:46 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/24/2023 12:42:46 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	10/24/2023 12:42:46 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	99	60		mg/Kg	20	10/26/2023 12:38:00 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:25:00 AM

Lab ID: 2310A65-011

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/24/2023 10:11:39 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/24/2023 10:11:39 AM
Surr: DNOP	101	69-147		%Rec	1	10/24/2023 10:11:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2023 1:06:06 PM
Surr: BFB	95.9	15-244		%Rec	1	10/24/2023 1:06:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/24/2023 1:06:06 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2023 1:06:06 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2023 1:06:06 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/24/2023 1:06:06 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	10/24/2023 1:06:06 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	120	60		mg/Kg	20	10/26/2023 12:50:25 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:30:00 AM

Lab ID: 2310A65-012

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/24/2023 10:22:18 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/24/2023 10:22:18 AM
Surr: DNOP	126	69-147		%Rec	1	10/24/2023 10:22:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/24/2023 1:29:33 PM
Surr: BFB	96.8	15-244		%Rec	1	10/24/2023 1:29:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	10/24/2023 1:29:33 PM
Toluene	ND	0.047		mg/Kg	1	10/24/2023 1:29:33 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/24/2023 1:29:33 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/24/2023 1:29:33 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	10/24/2023 1:29:33 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	10/26/2023 1:02:50 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-07 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:35:00 AM

Lab ID: 2310A65-013

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/24/2023 10:32:58 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/24/2023 10:32:58 AM
Surr: DNOP	76.8	69-147		%Rec	1	10/24/2023 10:32:58 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/24/2023 1:52:54 PM
Surr: BFB	94.1	15-244		%Rec	1	10/24/2023 1:52:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/24/2023 1:52:54 PM
Toluene	ND	0.047		mg/Kg	1	10/24/2023 1:52:54 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/24/2023 1:52:54 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/24/2023 1:52:54 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	10/24/2023 1:52:54 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	190	60		mg/Kg	20	10/26/2023 1:15:16 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-07 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:40:00 AM

Lab ID: 2310A65-014

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/24/2023 10:54:19 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/24/2023 10:54:19 AM
Surr: DNOP	120	69-147		%Rec	1	10/24/2023 10:54:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2023 2:16:18 PM
Surr: BFB	96.7	15-244		%Rec	1	10/24/2023 2:16:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	10/24/2023 2:16:18 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2023 2:16:18 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2023 2:16:18 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/24/2023 2:16:18 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	10/24/2023 2:16:18 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	10/26/2023 1:27:40 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-08 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:45:00 AM

Lab ID: 2310A65-015

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/24/2023 11:05:01 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/24/2023 11:05:01 AM
Surr: DNOP	85.5	69-147		%Rec	1	10/24/2023 11:05:01 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2023 2:39:47 PM
Surr: BFB	95.1	15-244		%Rec	1	10/24/2023 2:39:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/24/2023 2:39:47 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2023 2:39:47 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2023 2:39:47 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/24/2023 2:39:47 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	10/24/2023 2:39:47 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1100	60		mg/Kg	20	10/26/2023 1:40:05 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-08 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:50:00 AM

Lab ID: 2310A65-016

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/24/2023 11:15:44 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2023 11:15:44 AM
Surr: DNOP	100	69-147		%Rec	1	10/24/2023 11:15:44 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2023 3:03:11 PM
Surr: BFB	94.6	15-244		%Rec	1	10/24/2023 3:03:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/24/2023 3:03:11 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2023 3:03:11 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2023 3:03:11 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/24/2023 3:03:11 PM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	10/24/2023 3:03:11 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	220	60		mg/Kg	20	10/26/2023 1:52:29 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-09 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 10:55:00 AM

Lab ID: 2310A65-017

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/24/2023 11:26:27 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/24/2023 11:26:27 AM
Surr: DNOP	87.8	69-147		%Rec	1	10/24/2023 11:26:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2023 3:49:54 PM
Surr: BFB	93.9	15-244		%Rec	1	10/24/2023 3:49:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	10/24/2023 3:49:54 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2023 3:49:54 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2023 3:49:54 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/24/2023 3:49:54 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	10/24/2023 3:49:54 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	170	60		mg/Kg	20	10/26/2023 2:04:54 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-09 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 11:00:00 AM

Lab ID: 2310A65-018

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/24/2023 11:37:13 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2023 11:37:13 AM
Surr: DNOP	77.5	69-147		%Rec	1	10/24/2023 11:37:13 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2023 4:13:22 PM
Surr: BFB	96.2	15-244		%Rec	1	10/24/2023 4:13:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/24/2023 4:13:22 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2023 4:13:22 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2023 4:13:22 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/24/2023 4:13:22 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	10/24/2023 4:13:22 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	150	60		mg/Kg	20	10/26/2023 2:17:18 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-10 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 11:05:00 AM

Lab ID: 2310A65-019

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/24/2023 11:47:58 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/24/2023 11:47:58 AM
Surr: DNOP	102	69-147		%Rec	1	10/24/2023 11:47:58 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2023 4:36:45 PM
Surr: BFB	98.8	15-244		%Rec	1	10/24/2023 4:36:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/24/2023 4:36:45 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2023 4:36:45 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2023 4:36:45 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/24/2023 4:36:45 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	10/24/2023 4:36:45 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	64	60		mg/Kg	20	10/26/2023 2:29:43 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310A65

Date Reported: 11/2/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-10 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/19/2023 11:10:00 AM

Lab ID: 2310A65-020

Matrix: SOIL

Received Date: 10/21/2023 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/24/2023 11:58:45 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2023 11:58:45 AM
Surr: DNOP	101	69-147		%Rec	1	10/24/2023 11:58:45 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2023 5:00:05 PM
Surr: BFB	101	15-244		%Rec	1	10/24/2023 5:00:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	10/24/2023 5:00:05 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2023 5:00:05 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2023 5:00:05 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/24/2023 5:00:05 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	10/24/2023 5:00:05 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	130	60		mg/Kg	20	10/26/2023 3:06:57 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 Quantitative 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#: 2310A65
02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: MB-78374	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 78374	RunNo: 100717
Prep Date: 10/25/2023	Analysis Date: 10/25/2023	SeqNo: 3695042 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	1.5

Sample ID: LCS-78374	SampType: LCS	TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 78374	RunNo: 100717
Prep Date: 10/25/2023	Analysis Date: 10/25/2023	SeqNo: 3695043 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	14	1.5 15.00 0 91.3 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 Quantitative 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#: 2310A65

02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: 2310A65-007AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-04 0'	Batch ID: 78319	RunNo: 100704								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693042 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.5	47.35	0	86.3	54.2	135			
Surr: DNOP	4.8		4.735		101	69	147			

Sample ID: 2310A65-007AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-04 0'	Batch ID: 78319	RunNo: 100704								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693043 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.1	45.70	0	105	54.2	135	15.9	29.2	
Surr: DNOP	5.9		4.570		129	69	147	0	0	

Sample ID: LCS-78318	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78318	RunNo: 100704								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693070 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	61.9	130			
Surr: DNOP	4.8		5.000		95.8	69	147			

Sample ID: LCS-78319	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78319	RunNo: 100704								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693071 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	105	61.9	130			
Surr: DNOP	5.4		5.000		107	69	147			

Sample ID: MB-78318	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78318	RunNo: 100704								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693072 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	8.9		10.00		89.4	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 Quantitative 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#: 2310A65

02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: MB-78319	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78319	RunNo: 100704								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693073			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		133	69	147			

Sample ID: LCS-78400	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78400	RunNo: 100779								
Prep Date: 10/26/2023	Analysis Date: 10/27/2023	SeqNo: 3697663			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.3		5.000		146	69	147			

Sample ID: MB-78400	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78400	RunNo: 100779								
Prep Date: 10/26/2023	Analysis Date: 10/27/2023	SeqNo: 3697665			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		120	69	147			

Sample ID: MB-78394	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78394	RunNo: 100812								
Prep Date: 10/26/2023	Analysis Date: 10/30/2023	SeqNo: 3698206			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		108	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 Quantitative 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#: 2310A65

02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: ics-78308	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78308			RunNo: 100705						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3692721		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	70	130			
Surr: BFB	2200		1000		223	15	244			

Sample ID: mb-78308	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78308			RunNo: 100705						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3692723		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		104	15	244			

Sample ID: ics-78310	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78310			RunNo: 100707						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3693006		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.6	70	130			
Surr: BFB	2000		1000		199	15	244			

Sample ID: ics-78320	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78320			RunNo: 100707						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3693007		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		199	15	244			

Sample ID: mb-78310	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78310			RunNo: 100707						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3693008		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	950		1000		95.1	15	244			

Sample ID: mb-78320	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78320			RunNo: 100707						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3693009		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.1	15	244			

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 Quantitative 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#: 2310A65

02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: 2310a65-007ams		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-04 0'		Batch ID: 78310		RunNo: 100707							
Prep Date: 10/23/2023		Analysis Date: 10/24/2023		SeqNo: 3693081		Units: mg/Kg					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		26	4.9	24.70	0	104	70	130			
Surr: BFB		2100		988.1		212	15	244			

Sample ID: 2310a65-007amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH23-04 0'		Batch ID: 78310		RunNo: 100707						
Prep Date: 10/23/2023		Analysis Date: 10/24/2023		SeqNo: 3693082		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.61	0	95.1	70	130	8.97	20	
Surr: BFB	2000		984.3		203	15	244	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 Quantitative 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#: 2310A65

02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: LCS-78310	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 78310			RunNo: 100707						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3693018		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	100	70	130			
Toluene	1.0	0.050	1.000	0	100	70	130			
Ethylbenzene	1.0	0.050	1.000	0	100	70	130			
Xylenes, Total	3.0	0.10	3.000	0	101	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	39.1	146			

Sample ID: LCS-78320	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 78320			RunNo: 100707						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3693019		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	39.1	146			

Sample ID: mb-78310	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 78310			RunNo: 100707						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3693020		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	39.1	146			

Sample ID: mb-78320	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 78320			RunNo: 100707						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3693021		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	39.1	146			

Sample ID: 2310a65-008ams	SampType: MS			TestCode: EPA Method 8021B: Volatiles						
Client ID: BH23-04 2'	Batch ID: 78310			RunNo: 100707						
Prep Date: 10/23/2023	Analysis Date: 10/24/2023			SeqNo: 3693114		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9990	0	112	70	130			
Toluene	1.1	0.050	0.9990	0	112	70	130			
Ethylbenzene	1.1	0.050	0.9990	0	113	70	130			
Xylenes, Total	3.4	0.10	2.997	0	113	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 Quantitative 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#: 2310A65

02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: 2310a65-008ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-04 2'	Batch ID: 78310	RunNo: 100707								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693114			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		0.9990		109	39.1	146			

Sample ID: 2310a65-008amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-04 2'	Batch ID: 78310	RunNo: 100707								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693115			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9950	0	107	70	130	4.68	20	
Toluene	1.1	0.050	0.9950	0	109	70	130	3.06	20	
Ethylbenzene	1.1	0.050	0.9950	0	109	70	130	4.32	20	
Xylenes, Total	3.3	0.10	2.985	0	110	70	130	3.52	20	
Surr: 4-Bromofluorobenzene	1.0		0.9950		103	39.1	146	0	0	

Sample ID: lcs-78308	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 78308	RunNo: 100705								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693265			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.4	70	130			
Toluene	0.88	0.050	1.000	0	87.6	70	130			
Ethylbenzene	0.88	0.050	1.000	0	88.1	70	130			
Xylenes, Total	2.7	0.10	3.000	0	88.7	70	130			
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	39.1	146			

Sample ID: mb-78308	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 78308	RunNo: 100705								
Prep Date: 10/23/2023	Analysis Date: 10/24/2023	SeqNo: 3693266			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.3	39.1	146			

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 Quantitative Limit	RL Reporting Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.	

Sample Log-In Check List

Client Name: Devon Energy

Work Order Number: 2310A65

RcptNo: 1

Received By: **Tracy Casarrubias** 10/21/2023 8:00:00 AM

Completed By: Tracy Casarrubias 10/21/2023 9:11:58 AM

Reviewed By: 7/10/23/23

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 <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 5. Sample(s) in proper container(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Sufficient sample volume for indicated test(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Are samples (except VOA and ONG) properly preserved? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Was preservative added to bottles? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 10. Were any sample containers received broken? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| 11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Are matrices correctly identified on Chain of Custody? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| 13. Is it clear what analyses were requested? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 14. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
- # of preserved bottles checked for pH: _____

(<2 or >12 unless noted)

Adjusted? _____

Checked by: Tmc 10/21/2

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: Sample collection times, mailing address, phone number and Email/Fax are missing on C

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Devon

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☐ Rush5 days

Project Name:

Thistle Unit 10 Battery

Project #:

23E-04784

Project Manager:

Kent Stallings

Sampler:

Bryce Mortimer

On Ice:

☒ Yes☐ No400g

of Coolers:

1Cooler Temp (including CF): 2.4 - 0 = 2.4 (°C)

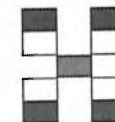
Date	Time	Matrix	Sample Name	Cooler Temp (including CF): 24-24 °C				
				Container Type and #	Preservative Type	HEAL No.		
10/19/23	9:35	soil	BH23-01	0'	4oz jar	Ice	2310AG5	001
	9:40		BH23-01	2'				002
	9:45		BH23-02	0'				003
	9:50		BM23-02	2'				004
	9:55		BH23-03	0'				005
	10:00		BH23-03	2'				006
	10:05		BH23-04	0'				007
	10:10		BH23-04	2'				008
	10:15		BH23-05	0'				009
	10:20		BH23-05	2'				010
	10:25		BH23-06	0'				011
✓	10:30	soil	BH23-06	2'	✓	✓		012

Date: 10/19/23 Time: 10:30 Relinquished by: BM

Received by: [Signature] Via: car Date: 10/19/23 Time: 9:30

Date: 10/20/23 Time: 1:00 Relinquished by: [Signature]

Received by: [Signature] Via: car Date: 10/21/23 Time: 8:00



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTX's MTBE / TMB's (8021)	TPH:8015 (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)										
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>													

Remarks: W0:21206611Please cc Bryce Mortimer at BMortimer@vertex.cc



Environment Testing

Eurofins Environment Testing South
Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 03, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX:

RE: Thistle Unit 10 Battery

OrderNo.: 2310B06

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 28 sample(s) on 10/24/2023 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 do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-11 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 9:00:00 AM

Lab ID: 2310B06-001

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 11:02:25 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2023 11:02:25 AM
Surr: DNOP	89.4	69-147		%Rec	1	10/25/2023 11:02:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2023 11:27:00 AM
Surr: BFB	106	15-244		%Rec	1	10/25/2023 11:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/25/2023 11:27:00 AM
Toluene	ND	0.047		mg/Kg	1	10/25/2023 11:27:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/25/2023 11:27:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/25/2023 11:27:00 AM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	10/25/2023 11:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	390	60		mg/Kg	20	10/28/2023 1:13:51 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-11 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 9:10:00 AM

Lab ID: 2310B06-002

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 11:48:20 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2023 11:48:20 AM
Surr: DNOP	118	69-147		%Rec	1	10/25/2023 11:48:20 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2023 11:49:00 AM
Surr: BFB	107	15-244		%Rec	1	10/25/2023 11:49:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	10/25/2023 11:49:00 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2023 11:49:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2023 11:49:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2023 11:49:00 AM
Surr: 4-Bromofluorobenzene	91.0	39.1-146		%Rec	1	10/25/2023 11:49:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	330	60		mg/Kg	20	10/28/2023 1:51:05 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-11 3'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 9:20:00 AM

Lab ID: 2310B06-003

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 11:59:00 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 11:59:00 AM
Surr: DNOP	122	69-147		%Rec	1	10/25/2023 11:59:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 12:11:00 PM
Surr: BFB	99.7	15-244		%Rec	1	10/25/2023 12:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/25/2023 12:11:00 PM
Toluene	ND	0.048		mg/Kg	1	10/25/2023 12:11:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2023 12:11:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2023 12:11:00 PM
Surr: 4-Bromofluorobenzene	87.3	39.1-146		%Rec	1	10/25/2023 12:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	340	60		mg/Kg	20	10/28/2023 2:28:18 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-12 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 9:30:00 AM

Lab ID: 2310B06-004

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 12:09:42 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2023 12:09:42 PM
Surr: DNOP	109	69-147		%Rec	1	10/25/2023 12:09:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2023 12:32:00 PM
Surr: BFB	98.2	15-244		%Rec	1	10/25/2023 12:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/25/2023 12:32:00 PM
Toluene	ND	0.049		mg/Kg	1	10/25/2023 12:32:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2023 12:32:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2023 12:32:00 PM
Surr: 4-Bromofluorobenzene	87.2	39.1-146		%Rec	1	10/25/2023 12:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1400	60		mg/Kg	20	10/28/2023 3:05:31 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-12 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 9:40:00 AM

Lab ID: 2310B06-005

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 12:31:09 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2023 12:31:09 PM
Surr: DNOP	105	69-147		%Rec	1	10/25/2023 12:31:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2023 12:54:00 PM
Surr: BFB	103	15-244		%Rec	1	10/25/2023 12:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/25/2023 12:54:00 PM
Toluene	ND	0.049		mg/Kg	1	10/25/2023 12:54:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2023 12:54:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2023 12:54:00 PM
Surr: 4-Bromofluorobenzene	88.5	39.1-146		%Rec	1	10/25/2023 12:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	510	60		mg/Kg	20	10/28/2023 3:17:56 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-12 3'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 9:50:00 AM

Lab ID: 2310B06-006

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 12:41:52 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2023 12:41:52 PM
Surr: DNOP	108	69-147		%Rec	1	10/25/2023 12:41:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 1:16:00 PM
Surr: BFB	101	15-244		%Rec	1	10/25/2023 1:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/25/2023 1:16:00 PM
Toluene	ND	0.048		mg/Kg	1	10/25/2023 1:16:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2023 1:16:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2023 1:16:00 PM
Surr: 4-Bromofluorobenzene	88.9	39.1-146		%Rec	1	10/25/2023 1:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	950	60		mg/Kg	20	10/28/2023 3:30:21 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-13 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 10:00:00 AM

Lab ID: 2310B06-007

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 12:52:37 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 12:52:37 PM
Surr: DNOP	118	69-147		%Rec	1	10/25/2023 12:52:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2023 1:37:00 PM
Surr: BFB	103	15-244		%Rec	1	10/25/2023 1:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/25/2023 1:37:00 PM
Toluene	ND	0.047		mg/Kg	1	10/25/2023 1:37:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/25/2023 1:37:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/25/2023 1:37:00 PM
Surr: 4-Bromofluorobenzene	89.2	39.1-146		%Rec	1	10/25/2023 1:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	6900	300		mg/Kg	100	10/31/2023 12:10:56 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-13 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 10:10:00 AM

Lab ID: 2310B06-008

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	10/25/2023 1:14:05 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	10/25/2023 1:14:05 PM
Surr: DNOP	118	69-147		%Rec	1	10/25/2023 1:14:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 1:59:00 PM
Surr: BFB	103	15-244		%Rec	1	10/25/2023 1:59:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/25/2023 1:59:00 PM
Toluene	ND	0.048		mg/Kg	1	10/25/2023 1:59:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2023 1:59:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2023 1:59:00 PM
Surr: 4-Bromofluorobenzene	89.9	39.1-146		%Rec	1	10/25/2023 1:59:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	890	60		mg/Kg	20	10/28/2023 3:55:10 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-13 3'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 10:20:00 AM

Lab ID: 2310B06-009

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	11	9.4		mg/Kg	1	10/25/2023 1:24:53 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 1:24:53 PM
Surr: DNOP	104	69-147		%Rec	1	10/25/2023 1:24:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2023 2:21:00 PM
Surr: BFB	103	15-244		%Rec	1	10/25/2023 2:21:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/25/2023 2:21:00 PM
Toluene	ND	0.047		mg/Kg	1	10/25/2023 2:21:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/25/2023 2:21:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/25/2023 2:21:00 PM
Surr: 4-Bromofluorobenzene	89.8	39.1-146		%Rec	1	10/25/2023 2:21:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	2300	60		mg/Kg	20	10/28/2023 4:07:35 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 10:30:00 AM

Lab ID: 2310B06-010

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 1:35:40 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	10/25/2023 1:35:40 PM
Surr: DNOP	86.0	69-147		%Rec	1	10/25/2023 1:35:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2023 2:43:00 PM
Surr: BFB	102	15-244		%Rec	1	10/25/2023 2:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	10/25/2023 2:43:00 PM
Toluene	ND	0.050		mg/Kg	1	10/25/2023 2:43:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2023 2:43:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/25/2023 2:43:00 PM
Surr: 4-Bromofluorobenzene	86.7	39.1-146		%Rec	1	10/25/2023 2:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	310	60		mg/Kg	20	10/28/2023 4:20:00 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 10:40:00 AM

Lab ID: 2310B06-011

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 1:46:29 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 1:46:29 PM
Surr: DNOP	111	69-147		%Rec	1	10/25/2023 1:46:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 3:26:00 PM
Surr: BFB	106	15-244		%Rec	1	10/25/2023 3:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/26/2023 5:01:00 PM
Toluene	ND	0.048		mg/Kg	1	10/26/2023 5:01:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/26/2023 5:01:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/26/2023 5:01:00 PM
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	10/26/2023 5:01:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	390	60		mg/Kg	20	10/28/2023 4:32:25 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-15 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 10:50:00 AM

Lab ID: 2310B06-012

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	10/25/2023 1:57:19 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/25/2023 1:57:19 PM
Surr: DNOP	83.9	69-147		%Rec	1	10/25/2023 1:57:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 3:48:00 PM
Surr: BFB	104	15-244		%Rec	1	10/25/2023 3:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/26/2023 5:22:00 PM
Toluene	ND	0.048		mg/Kg	1	10/26/2023 5:22:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/26/2023 5:22:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/26/2023 5:22:00 PM
Surr: 4-Bromofluorobenzene	87.6	39.1-146		%Rec	1	10/26/2023 5:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	69	60		mg/Kg	20	10/28/2023 4:44:49 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-15 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 11:00:00 AM

Lab ID: 2310B06-013

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 2:08:17 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/25/2023 2:08:17 PM
Surr: DNOP	113	69-147		%Rec	1	10/25/2023 2:08:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2023 4:10:00 PM
Surr: BFB	102	15-244		%Rec	1	10/25/2023 4:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/26/2023 5:44:00 PM
Toluene	ND	0.049		mg/Kg	1	10/26/2023 5:44:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/26/2023 5:44:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/26/2023 5:44:00 PM
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	10/26/2023 5:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	81	60		mg/Kg	20	10/28/2023 11:03:44 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 11:10:00 AM

Lab ID: 2310B06-014

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 2:19:16 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 2:19:16 PM
Surr: DNOP	83.7	69-147		%Rec	1	10/25/2023 2:19:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2023 4:31:00 PM
Surr: BFB	104	15-244		%Rec	1	10/25/2023 4:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	10/26/2023 6:06:00 PM
Toluene	ND	0.047		mg/Kg	1	10/26/2023 6:06:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/26/2023 6:06:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/26/2023 6:06:00 PM
Surr: 4-Bromofluorobenzene	88.5	39.1-146		%Rec	1	10/26/2023 6:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	76	60		mg/Kg	20	10/28/2023 11:16:09 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 11:20:00 AM

Lab ID: 2310B06-015

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 2:30:11 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 2:30:11 PM
Surr: DNOP	101	69-147		%Rec	1	10/25/2023 2:30:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/25/2023 4:53:00 PM
Surr: BFB	99.7	15-244		%Rec	1	10/25/2023 4:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	10/26/2023 6:27:00 PM
Toluene	ND	0.046		mg/Kg	1	10/26/2023 6:27:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/26/2023 6:27:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/26/2023 6:27:00 PM
Surr: 4-Bromofluorobenzene	87.0	39.1-146		%Rec	1	10/26/2023 6:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	10/28/2023 11:28:33 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-17 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 11:30:00 AM

Lab ID: 2310B06-016

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 2:41:05 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2023 2:41:05 PM
Surr: DNOP	103	69-147		%Rec	1	10/25/2023 2:41:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 5:15:00 PM
Surr: BFB	99.8	15-244		%Rec	1	10/25/2023 5:15:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/26/2023 6:49:00 PM
Toluene	ND	0.048		mg/Kg	1	10/26/2023 6:49:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/26/2023 6:49:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/26/2023 6:49:00 PM
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	10/26/2023 6:49:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	170	60		mg/Kg	20	10/28/2023 11:40:57 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-18 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 11:40:00 AM

Lab ID: 2310B06-017

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 5:58:06 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2023 5:58:06 PM
Surr: DNOP	104	69-147		%Rec	1	10/25/2023 5:58:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/26/2023 3:45:00 AM
Surr: BFB	103	15-244		%Rec	1	10/26/2023 3:45:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/26/2023 11:10:00 PM
Toluene	ND	0.048		mg/Kg	1	10/26/2023 11:10:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/26/2023 11:10:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/26/2023 11:10:00 PM
Surr: 4-Bromofluorobenzene	88.7	39.1-146		%Rec	1	10/26/2023 11:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1500	61		mg/Kg	20	10/28/2023 11:53:22 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-18 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 11:50:00 AM

Lab ID: 2310B06-018

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 6:21:51 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 6:21:51 PM
Surr: DNOP	102	69-147		%Rec	1	10/25/2023 6:21:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/26/2023 4:06:00 AM
Surr: BFB	106	15-244		%Rec	1	10/26/2023 4:06:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/26/2023 11:32:00 PM
Toluene	ND	0.048		mg/Kg	1	10/26/2023 11:32:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/26/2023 11:32:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/26/2023 11:32:00 PM
Surr: 4-Bromofluorobenzene	90.9	39.1-146		%Rec	1	10/26/2023 11:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	510	61		mg/Kg	20	10/28/2023 12:05:46 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-19 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 12:00:00 PM

Lab ID: 2310B06-019

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 6:45:36 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 6:45:36 PM
Surr: DNOP	102	69-147		%Rec	1	10/25/2023 6:45:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/26/2023 4:28:00 AM
Surr: BFB	101	15-244		%Rec	1	10/26/2023 4:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/26/2023 11:53:00 PM
Toluene	ND	0.049		mg/Kg	1	10/26/2023 11:53:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/26/2023 11:53:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/26/2023 11:53:00 PM
Surr: 4-Bromofluorobenzene	89.7	39.1-146		%Rec	1	10/26/2023 11:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	820	60		mg/Kg	20	10/28/2023 12:42:59 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-19 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 12:10:00 PM

Lab ID: 2310B06-020

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/25/2023 7:09:26 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2023 7:09:26 PM
Surr: DNOP	105	69-147		%Rec	1	10/25/2023 7:09:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/26/2023 4:50:00 AM
Surr: BFB	104	15-244		%Rec	1	10/26/2023 4:50:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/27/2023 12:15:00 AM
Toluene	ND	0.048		mg/Kg	1	10/27/2023 12:15:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/27/2023 12:15:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	10/27/2023 12:15:00 AM
Surr: 4-Bromofluorobenzene	91.4	39.1-146		%Rec	1	10/27/2023 12:15:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	200	59		mg/Kg	20	10/28/2023 12:55:24 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-20 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 12:20:00 PM

Lab ID: 2310B06-021

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/27/2023 11:34:42 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/27/2023 11:34:42 AM
Surr: DNOP	96.9	69-147		%Rec	1	10/27/2023 11:34:42 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/27/2023 12:50:00 PM
Surr: BFB	102	15-244		%Rec	1	10/27/2023 12:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/27/2023 12:50:00 PM
Toluene	ND	0.047		mg/Kg	1	10/27/2023 12:50:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/27/2023 12:50:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/27/2023 12:50:00 PM
Surr: 4-Bromofluorobenzene	88.5	39.1-146		%Rec	1	10/27/2023 12:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	97	60		mg/Kg	20	10/28/2023 1:07:48 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-20 1'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 12:30:00 PM

Lab ID: 2310B06-022

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/27/2023 12:46:13 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/27/2023 12:46:13 PM
Surr: DNOP	113	69-147		%Rec	1	10/27/2023 12:46:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/27/2023 1:55:00 PM
Surr: BFB	99.7	15-244		%Rec	1	10/27/2023 1:55:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/27/2023 1:55:00 PM
Toluene	ND	0.047		mg/Kg	1	10/27/2023 1:55:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/27/2023 1:55:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/27/2023 1:55:00 PM
Surr: 4-Bromofluorobenzene	90.0	39.1-146		%Rec	1	10/27/2023 1:55:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	10/28/2023 1:20:12 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-21 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 12:40:00 PM

Lab ID: 2310B06-023

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/27/2023 1:10:01 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/27/2023 1:10:01 PM
Surr: DNOP	118	69-147		%Rec	1	10/27/2023 1:10:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/27/2023 4:27:00 PM
Surr: BFB	103	15-244		%Rec	1	10/27/2023 4:27:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/27/2023 4:27:00 PM
Toluene	ND	0.048		mg/Kg	1	10/27/2023 4:27:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/27/2023 4:27:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/27/2023 4:27:00 PM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	10/27/2023 4:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	100	60		mg/Kg	20	10/28/2023 1:32:37 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-21 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 12:50:00 PM

Lab ID: 2310B06-024

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/27/2023 1:33:55 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/27/2023 1:33:55 PM
Surr: DNOP	108	69-147		%Rec	1	10/27/2023 1:33:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/27/2023 4:49:00 PM
Surr: BFB	100	15-244		%Rec	1	10/27/2023 4:49:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/27/2023 4:49:00 PM
Toluene	ND	0.048		mg/Kg	1	10/27/2023 4:49:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/27/2023 4:49:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/27/2023 4:49:00 PM
Surr: 4-Bromofluorobenzene	90.1	39.1-146		%Rec	1	10/27/2023 4:49:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	74	59		mg/Kg	20	10/28/2023 1:45:01 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-21 3'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 1:00:00 PM

Lab ID: 2310B06-025

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/27/2023 1:57:45 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/27/2023 1:57:45 PM
Surr: DNOP	109	69-147		%Rec	1	10/27/2023 1:57:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/27/2023 5:10:00 PM
Surr: BFB	104	15-244		%Rec	1	10/27/2023 5:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/27/2023 5:10:00 PM
Toluene	ND	0.047		mg/Kg	1	10/27/2023 5:10:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/27/2023 5:10:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/27/2023 5:10:00 PM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	10/27/2023 5:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	150	60		mg/Kg	20	10/28/2023 1:57:26 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-22 0'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 1:10:00 PM

Lab ID: 2310B06-026

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/27/2023 2:21:38 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/27/2023 2:21:38 PM
Surr: DNOP	83.4	69-147		%Rec	1	10/27/2023 2:21:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/27/2023 5:32:00 PM
Surr: BFB	104	15-244		%Rec	1	10/27/2023 5:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/27/2023 5:32:00 PM
Toluene	ND	0.049		mg/Kg	1	10/27/2023 5:32:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/27/2023 5:32:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/27/2023 5:32:00 PM
Surr: 4-Bromofluorobenzene	88.8	39.1-146		%Rec	1	10/27/2023 5:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	550	60		mg/Kg	20	10/28/2023 2:09:51 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-22 2'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 1:20:00 PM

Lab ID: 2310B06-027

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/27/2023 2:45:29 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/27/2023 2:45:29 PM
Surr: DNOP	111	69-147		%Rec	1	10/27/2023 2:45:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/27/2023 5:53:00 PM
Surr: BFB	104	15-244		%Rec	1	10/27/2023 5:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	10/27/2023 5:53:00 PM
Toluene	ND	0.047		mg/Kg	1	10/27/2023 5:53:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/27/2023 5:53:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/27/2023 5:53:00 PM
Surr: 4-Bromofluorobenzene	88.6	39.1-146		%Rec	1	10/27/2023 5:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	970	60		mg/Kg	20	10/28/2023 2:22:16 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2310B06

Date Reported: 11/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-22 3'

Project: Thistle Unit 10 Battery

Collection Date: 10/20/2023 1:30:00 PM

Lab ID: 2310B06-028

Matrix: SOIL

Received Date: 10/24/2023 7:50:00 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	10/27/2023 3:09:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/27/2023 3:09:20 PM
Surr: DNOP	118	69-147		%Rec	1	10/27/2023 3:09:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/27/2023 6:15:00 PM
Surr: BFB	101	15-244		%Rec	1	10/27/2023 6:15:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	10/27/2023 6:15:00 PM
Toluene	ND	0.050		mg/Kg	1	10/27/2023 6:15:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/27/2023 6:15:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/27/2023 6:15:00 PM
Surr: 4-Bromofluorobenzene	88.6	39.1-146		%Rec	1	10/27/2023 6:15:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	190	60		mg/Kg	20	10/28/2023 2:34:41 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 Quantitative 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#: 2310B06

03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: MB-78426	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 78426		RunNo: 100786							
Prep Date: 10/27/2023	Analysis Date: 10/27/2023		SeqNo: 3697349		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-78426	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 78426		RunNo: 100786							
Prep Date: 10/27/2023	Analysis Date: 10/27/2023		SeqNo: 3697350		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.3	90	110			

Sample ID: MB-78427	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 78427		RunNo: 100819							
Prep Date: 10/28/2023	Analysis Date: 10/28/2023		SeqNo: 3698683		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-78427	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 78427		RunNo: 100819							
Prep Date: 10/28/2023	Analysis Date: 10/28/2023		SeqNo: 3698684		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.4	90	110			

Qualifiers:

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

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

WO#: 2310B06

03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: MB-78364	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78364	RunNo: 100744								
Prep Date: 10/25/2023	Analysis Date: 10/25/2023	SeqNo: 3695174 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		99.2	69	147			

Sample ID: LCS-78364	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78364	RunNo: 100744								
Prep Date: 10/25/2023	Analysis Date: 10/25/2023	SeqNo: 3695175 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	51	10	50.00	0	102	61.9	130			
Surr: DNOP	5.1		5.000		103	69	147			

Sample ID: 2310B06-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-11 0'	Batch ID: 78354	RunNo: 100748								
Prep Date: 10/24/2023	Analysis Date: 10/25/2023	SeqNo: 3695332 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	49	9.2	45.87	0	108	54.2	135			
Surr: DNOP	5.3		4.587		115	69	147			

Sample ID: 2310B06-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-11 0'	Batch ID: 78354	RunNo: 100748								
Prep Date: 10/24/2023	Analysis Date: 10/25/2023	SeqNo: 3695333 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	45	8.9	44.56	0	102	54.2	135	8.98	29.2	
Surr: DNOP	4.9		4.456		109	69	147	0	0	

Sample ID: LCS-78336	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78336	RunNo: 100748								
Prep Date: 10/24/2023	Analysis Date: 10/25/2023	SeqNo: 3695349 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	6.1		5.000		122	69	147			
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Sample ID: LCS-78354	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78354	RunNo: 100748								
Prep Date: 10/24/2023	Analysis Date: 10/25/2023	SeqNo: 3695350 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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 Quantitative 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#: 2310B06

03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: LCS-78354	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 78354		RunNo: 100748							
Prep Date: 10/24/2023	Analysis Date: 10/25/2023		SeqNo: 3695350		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	10	50.00	0	128	61.9	130			
Surr: DNOP	6.9		5.000		137	69	147			

Sample ID: MB-78336	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 78336		RunNo: 100748							
Prep Date: 10/24/2023	Analysis Date: 10/25/2023		SeqNo: 3695351		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		107	69	147			

Sample ID: MB-78354	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 78354		RunNo: 100748							
Prep Date: 10/24/2023	Analysis Date: 10/25/2023		SeqNo: 3695352		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		126	69	147			

Sample ID: LCS-78394	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 78394		RunNo: 100806							
Prep Date: 10/26/2023	Analysis Date: 10/27/2023		SeqNo: 3697480		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	50.00	0	118	61.9	130			
Surr: DNOP	5.9		5.000		117	69	147			

Sample ID: 2310B06-021AMS	SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BH23-20 0'	Batch ID: 78394		RunNo: 100806							
Prep Date: 10/26/2023	Analysis Date: 10/27/2023		SeqNo: 3697482		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	49.80	0	118	54.2	135			
Surr: DNOP	5.8		4.980		117	69	147			

Sample ID: 2310B06-021AMSD	SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BH23-20 0'	Batch ID: 78394		RunNo: 100806							
Prep Date: 10/26/2023	Analysis Date: 10/27/2023		SeqNo: 3697483		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2310B06

03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: 2310B06-021AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-20 0'	Batch ID: 78394	RunNo: 100806								
Prep Date: 10/26/2023	Analysis Date: 10/27/2023	SeqNo: 3697483	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.4	47.04	0	103	54.2	135	18.6	29.2	
Surr: DNOP	4.7		4.704		99.2	69	147	0	0	

Sample ID: MB-78394	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78394	RunNo: 100812								
Prep Date: 10/26/2023	Analysis Date: 10/30/2023	SeqNo: 3698206	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		108	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 Quantitative 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

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

WO#: 2310B06

03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: ics-78340	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78340			RunNo: 100731						
Prep Date: 10/24/2023	Analysis Date: 10/25/2023			SeqNo: 3694360		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	94.3	70	130			
Surr: BFB	2200		1000		219	15	244			

Sample ID: mb-78340	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78340			RunNo: 100731						
Prep Date: 10/24/2023	Analysis Date: 10/25/2023			SeqNo: 3694361		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		109	15	244			

Sample ID: ics-78352	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78352			RunNo: 100731						
Prep Date: 10/24/2023	Analysis Date: 10/25/2023			SeqNo: 3694380		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	95.5	70	130			
Surr: BFB	2200		1000		219	15	244			

Sample ID: mb-78352	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78352			RunNo: 100731						
Prep Date: 10/24/2023	Analysis Date: 10/25/2023			SeqNo: 3694381		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	990		1000		99.1	15	244			

Sample ID: ics-78365	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78365			RunNo: 100788						
Prep Date: 10/25/2023	Analysis Date: 10/27/2023			SeqNo: 3696966		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	70	130			
Surr: BFB	2300		1000		229	15	244			

Sample ID: mb-78365	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78365			RunNo: 100788						
Prep Date: 10/25/2023	Analysis Date: 10/27/2023			SeqNo: 3698542		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of 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#: **2310B06****03-Nov-23**

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: mb-78365	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 78365		RunNo: 100788							
Prep Date: 10/25/2023	Analysis Date: 10/27/2023		SeqNo: 3698542		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		105	15	244			

Sample ID: 2310B06-021ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-20 0'	Batch ID: 78365		RunNo: 100788							
Prep Date: 10/25/2023	Analysis Date: 10/27/2023		SeqNo: 3698544		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.7	23.63	0	107	70	130			
Surr: BFB	2100		945.2		227	15	244			

Sample ID: 2310B06-021amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-20 0'	Batch ID: 78365		RunNo: 100788							
Prep Date: 10/25/2023	Analysis Date: 10/27/2023		SeqNo: 3698545		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.7	23.63	0	105	70	130	1.28	20	
Surr: BFB	2100		945.2		222	15	244	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of 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#: 2310B06

03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: ics-78340	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 78340			RunNo: 100731						
Prep Date: 10/24/2023	Analysis Date: 10/25/2023			SeqNo: 3694404		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	84.7	70	130			
Toluene	0.87	0.050	1.000	0	86.6	70	130			
Ethylbenzene	0.87	0.050	1.000	0	87.4	70	130			
Xylenes, Total	2.6	0.10	3.000	0	86.9	70	130			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.5	39.1	146			

Sample ID: mb-78340	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 78340			RunNo: 100731						
Prep Date: 10/24/2023	Analysis Date: 10/25/2023			SeqNo: 3694405		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	39.1	146			

Sample ID: ics-78352	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 78352			RunNo: 100731						
Prep Date: 10/24/2023	Analysis Date: 10/25/2023			SeqNo: 3694424		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	87.7	70	130			
Toluene	0.89	0.050	1.000	0	89.2	70	130			
Ethylbenzene	0.90	0.050	1.000	0	89.6	70	130			
Xylenes, Total	2.7	0.10	3.000	0	89.1	70	130			
Surr: 4-Bromofluorobenzene	0.90		1.000		89.5	39.1	146			

Sample ID: mb-78352	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 78352			RunNo: 100731						
Prep Date: 10/24/2023	Analysis Date: 10/25/2023			SeqNo: 3694425		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	0.88		1.000		88.5	39.1	146			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of 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#: 2310B06

03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: ics-78340	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 78340		RunNo: 100755							
Prep Date: 10/24/2023	Analysis Date: 10/26/2023		SeqNo: 3696781		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	84.9	70	130			
Toluene	0.86	0.050	1.000	0	85.7	70	130			
Ethylbenzene	0.88	0.050	1.000	0	87.6	70	130			
Xylenes, Total	2.6	0.10	3.000	0	86.9	70	130			
Surr: 4-Bromofluorobenzene	0.89		1.000		89.1	39.1	146			

Sample ID: mb-78340	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 78340		RunNo: 100755							
Prep Date: 10/24/2023	Analysis Date: 10/26/2023		SeqNo: 3696782		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	0.87		1.000		87.3	39.1	146			

Sample ID: ics-78352	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 78352		RunNo: 100755							
Prep Date: 10/24/2023	Analysis Date: 10/26/2023		SeqNo: 3696790		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.9	70	130			
Toluene	0.92	0.050	1.000	0	92.1	70	130			
Ethylbenzene	0.93	0.050	1.000	0	93.4	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.0	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.2	39.1	146			

Sample ID: mb-78352	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 78352		RunNo: 100755							
Prep Date: 10/24/2023	Analysis Date: 10/26/2023		SeqNo: 3696791		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		91.6	39.1	146			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of 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#: 2310B06

03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: lcs-78365	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 78365		RunNo: 100788							
Prep Date: 10/25/2023	Analysis Date: 10/27/2023		SeqNo: 3696961		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.5	70	130			
Toluene	0.89	0.050	1.000	0	88.6	70	130			
Ethylbenzene	0.91	0.050	1.000	0	90.7	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.7	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.7	39.1	146			

Sample ID: mb-78365	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 78365		RunNo: 100788							
Prep Date: 10/25/2023	Analysis Date: 10/27/2023		SeqNo: 3698602		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		92.1	39.1	146			

Sample ID: 2310B06-022ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BH23-20 1'	Batch ID: 78365		RunNo: 100788							
Prep Date: 10/25/2023	Analysis Date: 10/27/2023		SeqNo: 3698605		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9497	0	87.4	70	130			
Toluene	0.84	0.047	0.9497	0	88.2	70	130			
Ethylbenzene	0.87	0.047	0.9497	0	91.2	70	130			
Xylenes, Total	2.6	0.095	2.849	0	91.1	70	130			
Surr: 4-Bromofluorobenzene	0.85		0.9497		89.4	39.1	146			

Sample ID: 2310B06-022amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BH23-20 1'	Batch ID: 78365		RunNo: 100788							
Prep Date: 10/25/2023	Analysis Date: 10/27/2023		SeqNo: 3698606		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9452	0	88.1	70	130	0.272	20	
Toluene	0.84	0.047	0.9452	0	89.0	70	130	0.339	20	
Ethylbenzene	0.86	0.047	0.9452	0	90.7	70	130	1.02	20	
Xylenes, Total	2.6	0.095	2.836	0	90.3	70	130	1.33	20	
Surr: 4-Bromofluorobenzene	0.85		0.9452		90.4	39.1	146	0	0	

Qualifiers:

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

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

Sample Log-In Check List

Client Name: Devon Energy

Work Order Number: 2310B06

RcptNo: 1

Received By: Tracy Casarrubias 10/24/2023 7:50:00 AM

Completed By: Tracy Casarrubias 10/24/2023 8:11:16 AM

Reviewed By: *SEM 10/24/23*

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. 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: *SEM 10/24/23*

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: Mailing address, phone number, Email/Fax, time of relinquishment, and times of collection

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes	Morty		

Chain-of-Custody Record

Client: Devon

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 5 day

Project Name:
Thistle Unit 10 Battery

Project #:
23E-04784

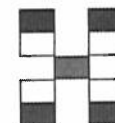
Project Manager:
Kent Stallings

Sampler: Bryce Mortimer

On Ice: ☒ Yes ☐ No morty

of Coolers: 1

Cooler Temp (Including CF): 55-01-54 (°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.	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	CF, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
10/20/23	9:00	Soil	BH23-11	0' 4oz jar	Ice	001										
	9:10		BH23-11	2'		002										
	9:20		BH23-11	3'		003										
	9:30		BH23-12	0'		004										
	9:40		BH23-12	2'		005										
	9:50		BH23-12	3'		006										
	10:00		BH23-13	0'		007										
	10:10		BH23-13	2'		008										
	10:20		BH23-13	3'		009										
	10:30		BH23-14	0'		010										
	10:40		BH23-14	2'		011										
✓	10:50		BH23-15	0'		012										
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time	Remarks: <u>WO: 21206611</u>									
10/20/23		<u>BM</u>	<u>Cummins</u>		10/23/23	1100										
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time	Please cc Bryce Mortimer at <u>BMortimer@vertex.ca</u>									
10/23/23	1900	<u>Cummins</u>	<u>Cummins</u>		10/24/23	7:50										



Environment Testing

Eurofins Environment Testing South
Central, LLC

4901 Hawkins NE

Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

November 22, 2023

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL:

FAX:

RE: Thistle Unit 10 CTB

OrderNo.: 2311452

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 18 sample(s) on 11/9/2023 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 do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-23 0'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 9:00:00 AM

Lab ID: 2311452-001

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/15/2023 7:40:48 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/15/2023 7:40:48 AM
Surr: DNOP	79.5	69-147		%Rec	1	11/15/2023 7:40:48 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/15/2023 2:06:13 PM
Surr: BFB	100	15-244		%Rec	1	11/15/2023 2:06:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	11/15/2023 2:06:13 PM
Toluene	ND	0.046		mg/Kg	1	11/15/2023 2:06:13 PM
Ethylbenzene	ND	0.046		mg/Kg	1	11/15/2023 2:06:13 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/15/2023 2:06:13 PM
Surr: 4-Bromofluorobenzene	95.8	39.1-146		%Rec	1	11/15/2023 2:06:13 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	100	61		mg/Kg	20	11/15/2023 7:05:45 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-23 2'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 9:10:00 AM

Lab ID: 2311452-002

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	11/15/2023 7:51:28 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/15/2023 7:51:28 AM
Surr: DNOP	93.8	69-147		%Rec	1	11/15/2023 7:51:28 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/15/2023 1:19:23 PM
Surr: BFB	102	15-244		%Rec	1	11/15/2023 1:19:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	11/15/2023 1:19:23 PM
Toluene	ND	0.047		mg/Kg	1	11/15/2023 1:19:23 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/15/2023 1:19:23 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/15/2023 1:19:23 PM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	11/15/2023 1:19:23 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	11/15/2023 8:07:48 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-24 0'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 9:20:00 AM

Lab ID: 2311452-003

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	11/15/2023 8:02:03 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/15/2023 8:02:03 AM
Surr: DNOP	91.8	69-147		%Rec	1	11/15/2023 8:02:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/15/2023 2:29:39 PM
Surr: BFB	93.5	15-244		%Rec	1	11/15/2023 2:29:39 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	11/15/2023 2:29:39 PM
Toluene	ND	0.049		mg/Kg	1	11/15/2023 2:29:39 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/15/2023 2:29:39 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/15/2023 2:29:39 PM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	11/15/2023 2:29:39 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	94	60		mg/Kg	20	11/15/2023 8:20:12 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-24 2'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 9:30:00 AM

Lab ID: 2311452-004

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/15/2023 8:12:42 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/15/2023 8:12:42 AM
Surr: DNOP	96.0	69-147		%Rec	1	11/15/2023 8:12:42 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/15/2023 2:52:59 PM
Surr: BFB	93.3	15-244		%Rec	1	11/15/2023 2:52:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	11/15/2023 2:52:59 PM
Toluene	ND	0.046		mg/Kg	1	11/15/2023 2:52:59 PM
Ethylbenzene	ND	0.046		mg/Kg	1	11/15/2023 2:52:59 PM
Xylenes, Total	ND	0.092		mg/Kg	1	11/15/2023 2:52:59 PM
Surr: 4-Bromofluorobenzene	95.2	39.1-146		%Rec	1	11/15/2023 2:52:59 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	59		mg/Kg	20	11/15/2023 8:32:37 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-25 0'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 9:40:00 AM

Lab ID: 2311452-005

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/15/2023 8:23:30 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/15/2023 8:23:30 AM
Surr: DNOP	95.2	69-147		%Rec	1	11/15/2023 8:23:30 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/15/2023 3:16:24 PM
Surr: BFB	94.4	15-244		%Rec	1	11/15/2023 3:16:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	11/15/2023 3:16:24 PM
Toluene	ND	0.048		mg/Kg	1	11/15/2023 3:16:24 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/15/2023 3:16:24 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/15/2023 3:16:24 PM
Surr: 4-Bromofluorobenzene	95.5	39.1-146		%Rec	1	11/15/2023 3:16:24 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	120	60		mg/Kg	20	11/15/2023 8:45:02 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-25 2'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 9:50:00 AM

Lab ID: 2311452-006

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/15/2023 8:34:18 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/15/2023 8:34:18 AM
Surr: DNOP	87.6	69-147		%Rec	1	11/15/2023 8:34:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/15/2023 3:39:49 PM
Surr: BFB	92.6	15-244		%Rec	1	11/15/2023 3:39:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	11/15/2023 3:39:49 PM
Toluene	ND	0.048		mg/Kg	1	11/15/2023 3:39:49 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/15/2023 3:39:49 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/15/2023 3:39:49 PM
Surr: 4-Bromofluorobenzene	95.5	39.1-146		%Rec	1	11/15/2023 3:39:49 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	75	61		mg/Kg	20	11/15/2023 8:57:26 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-26 0'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 10:00:00 AM

Lab ID: 2311452-007

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	11/15/2023 8:45:06 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/15/2023 8:45:06 AM
Surr: DNOP	76.7	69-147		%Rec	1	11/15/2023 8:45:06 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/15/2023 4:26:31 PM
Surr: BFB	94.2	15-244		%Rec	1	11/15/2023 4:26:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	11/15/2023 4:26:31 PM
Toluene	ND	0.048		mg/Kg	1	11/15/2023 4:26:31 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/15/2023 4:26:31 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/15/2023 4:26:31 PM
Surr: 4-Bromofluorobenzene	95.8	39.1-146		%Rec	1	11/15/2023 4:26:31 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	1300	60		mg/Kg	20	11/15/2023 9:09:51 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-26 2'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 10:10:00 AM

Lab ID: 2311452-008

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/15/2023 8:55:54 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/15/2023 8:55:54 AM
Surr: DNOP	84.4	69-147		%Rec	1	11/15/2023 8:55:54 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/15/2023 4:49:47 PM
Surr: BFB	93.5	15-244		%Rec	1	11/15/2023 4:49:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	11/15/2023 4:49:47 PM
Toluene	ND	0.046		mg/Kg	1	11/15/2023 4:49:47 PM
Ethylbenzene	ND	0.046		mg/Kg	1	11/15/2023 4:49:47 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/15/2023 4:49:47 PM
Surr: 4-Bromofluorobenzene	95.9	39.1-146		%Rec	1	11/15/2023 4:49:47 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	520	60		mg/Kg	20	11/15/2023 9:22:15 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-27 0'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 10:20:00 AM

Lab ID: 2311452-009

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 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	11/15/2023 4:01:39 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/15/2023 4:01:39 PM
Surr: DNOP	77.6	69-147		%Rec	1	11/15/2023 4:01:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/15/2023 5:13:00 PM
Surr: BFB	94.1	15-244		%Rec	1	11/15/2023 5:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	11/15/2023 5:13:00 PM
Toluene	ND	0.049		mg/Kg	1	11/15/2023 5:13:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/15/2023 5:13:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/15/2023 5:13:00 PM
Surr: 4-Bromofluorobenzene	96.2	39.1-146		%Rec	1	11/15/2023 5:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	ND	60		mg/Kg	20	11/15/2023 9:34:40 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-27 2'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 10:30:00 AM

Lab ID: 2311452-010

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 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	11/16/2023 12:22:08 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 12:22:08 AM
Surr: DNOP	104	69-147		%Rec	1	11/16/2023 12:22:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/15/2023 12:51:00 PM
Surr: BFB	103	15-244		%Rec	1	11/15/2023 12:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	11/15/2023 12:51:00 PM
Toluene	ND	0.047		mg/Kg	1	11/15/2023 12:51:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/15/2023 12:51:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/15/2023 12:51:00 PM
Surr: 4-Bromofluorobenzene	99.8	39.1-146		%Rec	1	11/15/2023 12:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	170	60		mg/Kg	20	11/15/2023 10:11:53 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-28 0'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 10:40:00 AM

Lab ID: 2311452-011

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 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	11/16/2023 12:45:46 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/16/2023 12:45:46 AM
Surr: DNOP	101	69-147		%Rec	1	11/16/2023 12:45:46 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/15/2023 1:56:00 PM
Surr: BFB	99.9	15-244		%Rec	1	11/15/2023 1:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	11/15/2023 1:56:00 PM
Toluene	ND	0.047		mg/Kg	1	11/15/2023 1:56:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/15/2023 1:56:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/15/2023 1:56:00 PM
Surr: 4-Bromofluorobenzene	99.3	39.1-146		%Rec	1	11/15/2023 1:56:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	340	60		mg/Kg	20	11/15/2023 10:24:18 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-28 2'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 10:50:00 AM

Lab ID: 2311452-012

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 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	11/16/2023 1:09:23 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 1:09:23 AM
Surr: DNOP	102	69-147		%Rec	1	11/16/2023 1:09:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/15/2023 3:01:00 PM
Surr: BFB	104	15-244		%Rec	1	11/15/2023 3:01:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	11/15/2023 3:01:00 PM
Toluene	ND	0.049		mg/Kg	1	11/15/2023 3:01:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/15/2023 3:01:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/15/2023 3:01:00 PM
Surr: 4-Bromofluorobenzene	98.2	39.1-146		%Rec	1	11/15/2023 3:01:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	150	59		mg/Kg	20	11/15/2023 10:36:43 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-29 0'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 11:00:00 AM

Lab ID: 2311452-013

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/16/2023 1:33:00 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/16/2023 1:33:00 AM
Surr: DNOP	106	69-147		%Rec	1	11/16/2023 1:33:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/15/2023 3:23:00 PM
Surr: BFB	103	15-244		%Rec	1	11/15/2023 3:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/15/2023 3:23:00 PM
Toluene	ND	0.047		mg/Kg	1	11/15/2023 3:23:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/15/2023 3:23:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/15/2023 3:23:00 PM
Surr: 4-Bromofluorobenzene	97.5	39.1-146		%Rec	1	11/15/2023 3:23:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	1300	60		mg/Kg	20	11/15/2023 10:49:07 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-29 1'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 11:10:00 AM

Lab ID: 2311452-014

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/16/2023 1:56:38 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/16/2023 1:56:38 AM
Surr: DNOP	105	69-147		%Rec	1	11/16/2023 1:56:38 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/15/2023 3:44:00 PM
Surr: BFB	101	15-244		%Rec	1	11/15/2023 3:44:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/15/2023 3:44:00 PM
Toluene	ND	0.049		mg/Kg	1	11/15/2023 3:44:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/15/2023 3:44:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/15/2023 3:44:00 PM
Surr: 4-Bromofluorobenzene	97.7	39.1-146		%Rec	1	11/15/2023 3:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	870	60		mg/Kg	20	11/15/2023 11:01:32 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-30 0'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 11:20:00 AM

Lab ID: 2311452-015

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/16/2023 2:20:14 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/16/2023 2:20:14 AM
Surr: DNOP	107	69-147		%Rec	1	11/16/2023 2:20:14 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/15/2023 4:06:00 PM
Surr: BFB	101	15-244		%Rec	1	11/15/2023 4:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	11/15/2023 4:06:00 PM
Toluene	ND	0.046		mg/Kg	1	11/15/2023 4:06:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	11/15/2023 4:06:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/15/2023 4:06:00 PM
Surr: 4-Bromofluorobenzene	94.9	39.1-146		%Rec	1	11/15/2023 4:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	1800	60		mg/Kg	20	11/15/2023 11:13:57 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-30 2'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 11:30:00 AM

Lab ID: 2311452-016

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 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	11/16/2023 2:43:49 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 2:43:49 AM
Surr: DNOP	105	69-147		%Rec	1	11/16/2023 2:43:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/15/2023 4:28:00 PM
Surr: BFB	104	15-244		%Rec	1	11/15/2023 4:28:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/15/2023 4:28:00 PM
Toluene	ND	0.049		mg/Kg	1	11/15/2023 4:28:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/15/2023 4:28:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/15/2023 4:28:00 PM
Surr: 4-Bromofluorobenzene	98.0	39.1-146		%Rec	1	11/15/2023 4:28:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	200	60		mg/Kg	20	11/15/2023 11:26:21 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-31 0'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 11:40:00 AM

Lab ID: 2311452-017

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/16/2023 3:07:25 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/16/2023 3:07:25 AM
Surr: DNOP	107	69-147		%Rec	1	11/16/2023 3:07:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/15/2023 4:50:00 PM
Surr: BFB	98.0	15-244		%Rec	1	11/15/2023 4:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/15/2023 4:50:00 PM
Toluene	ND	0.048		mg/Kg	1	11/15/2023 4:50:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/15/2023 4:50:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/15/2023 4:50:00 PM
Surr: 4-Bromofluorobenzene	95.4	39.1-146		%Rec	1	11/15/2023 4:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	1300	61		mg/Kg	20	11/15/2023 11:38:46 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311452

Date Reported: 11/22/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-31 2'

Project: Thistle Unit 10 CTB

Collection Date: 11/7/2023 11:50:00 AM

Lab ID: 2311452-018

Matrix: SOIL

Received Date: 11/9/2023 7:40:00 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	11/16/2023 3:30:57 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/16/2023 3:30:57 AM
Surr: DNOP	107	69-147		%Rec	1	11/16/2023 3:30:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/15/2023 5:11:00 PM
Surr: BFB	99.9	15-244		%Rec	1	11/15/2023 5:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	11/15/2023 5:11:00 PM
Toluene	ND	0.047		mg/Kg	1	11/15/2023 5:11:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/15/2023 5:11:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/15/2023 5:11:00 PM
Surr: 4-Bromofluorobenzene	93.4	39.1-146		%Rec	1	11/15/2023 5:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	660	61		mg/Kg	20	11/15/2023 11:51:10 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 Quantitative 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#: 2311452
22-Nov-23

Client: Vertex Resources Services, Inc.
Project: Thistle Unit 10 CTB

Sample ID: MB-78811		SampType: MBLK		TestCode: EPA Method 300.0: Anions						
Client ID: PBS		Batch ID: 78811		RunNo: 101219						
Prep Date: 11/15/2023		Analysis Date: 11/15/2023		SeqNo: 3720672			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-78811		SampType: LCS		TestCode: EPA Method 300.0: Anions						
Client ID: LCSS		Batch ID: 78811		RunNo: 101219						
Prep Date: 11/15/2023		Analysis Date: 11/15/2023		SeqNo: 3720673			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 Quantitative 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#: 2311452

22-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 CTB

Sample ID: LCS-78757	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 78757			RunNo: 101145						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3717324		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	82.9	61.9	130			
Surr: DNOP	4.2		5.000		84.9	69	147			

Sample ID: MB-78757	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 78757			RunNo: 101145						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3717326		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	9.1		10.00		90.5	69	147			

Sample ID: MB-78774	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 78774			RunNo: 101201						
Prep Date: 11/14/2023	Analysis Date: 11/15/2023			SeqNo: 3719857		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		106	69	147			

Sample ID: LCS-78774	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 78774			RunNo: 101201						
Prep Date: 11/14/2023	Analysis Date: 11/15/2023			SeqNo: 3719858		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	61.9	130			
Surr: DNOP	4.8		5.000		95.9	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 Quantitative 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#: 2311452

22-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 CTB

Sample ID: lcs-78754	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78754			RunNo: 101194						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3718682		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.9	70	130			
Surr: BFB	1900		1000		190	15	244			

Sample ID: mb-78754	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78754			RunNo: 101194						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3718683		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	940		1000		94.0	15	244			

Sample ID: lcs-78756	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78756			RunNo: 101220						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3720827		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.1	70	130			
Surr: BFB	2200		1000		223	15	244			

Sample ID: mb-78756	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78756			RunNo: 101220						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3720828		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	15	244			

Sample ID: 2311452-010ams	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH23-27 2'	Batch ID: 78756			RunNo: 101220						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3720830		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.58	0	102	70	130			
Surr: BFB	2200		943.4		233	15	244			

Sample ID: 2311452-010amsd	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH23-27 2'	Batch ID: 78756			RunNo: 101220						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3720831		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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 Quantitative 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#: 2311452
22-Nov-23

Client: Vertex Resources Services, Inc.
Project: Thistle Unit 10 CTB

Sample ID: 2311452-010amsd		SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range					
Client ID: BH23-27 2'		Batch ID: 78756			RunNo: 101220					
Prep Date: 11/13/2023		Analysis Date: 11/15/2023			SeqNo: 3720831		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.43	0	101	70	130	1.72	20	
Surr: BFB	2100		937.2		224	15	244	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of 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#: 2311452

22-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 CTB

Sample ID: LCS-78754	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 78754			RunNo: 101194						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3718687		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	93.7	70	130			
Toluene	0.94	0.050	1.000	0	94.2	70	130			
Ethylbenzene	0.94	0.050	1.000	0	93.8	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.8	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.5	39.1	146			

Sample ID: mb-78754	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 78754			RunNo: 101194						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3718688		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	0.97		1.000		97.2	39.1	146			

Sample ID: lcs-78756	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 78756			RunNo: 101220						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3720712		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.2	70	130			
Toluene	0.99	0.050	1.000	0	98.7	70	130			
Ethylbenzene	1.0	0.050	1.000	0	99.8	70	130			
Xylenes, Total	3.0	0.10	3.000	0	99.1	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.3	39.1	146			

Sample ID: mb-78756	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 78756			RunNo: 101220						
Prep Date: 11/13/2023	Analysis Date: 11/15/2023			SeqNo: 3720715		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	0.97		1.000		97.5	39.1	146			

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 Quantitative 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#: 2311452

22-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 CTB

Sample ID: 2311452-011ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-28 0'	Batch ID: 78756	RunNo: 101220								
Prep Date: 11/13/2023	Analysis Date: 11/15/2023	SeqNo: 3720721	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.023	0.9363	0	97.1	70	130			
Toluene	0.93	0.047	0.9363	0	99.2	70	130			
Ethylbenzene	0.96	0.047	0.9363	0	102	70	130			
Xylenes, Total	2.9	0.094	2.809	0	102	70	130			
Surr: 4-Bromofluorobenzene	0.93		0.9363		98.9	39.1	146			

Sample ID: 2311452-011amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-28 0'	Batch ID: 78756	RunNo: 101220								
Prep Date: 11/13/2023	Analysis Date: 11/15/2023	SeqNo: 3720723	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.023	0.9328	0	96.5	70	130	0.999	20	
Toluene	0.92	0.047	0.9328	0	98.3	70	130	1.28	20	
Ethylbenzene	0.94	0.047	0.9328	0	101	70	130	1.74	20	
Xylenes, Total	2.8	0.093	2.799	0	100	70	130	1.79	20	
Surr: 4-Bromofluorobenzene	0.92		0.9328		98.2	39.1	146	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 Quantitative Limit	RL Reporting Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.	

Sample Log-In Check List

Client Name: Vertex Resources

Work Order Number: 2311452

RcptNo: 1

Received By: Tracy Casarrubias 11/9/2023 7:40:00 AM

Completed By: Tracy Casarrubias 11/9/2023 8:20:05 AM

Reviewed By: *7u 11/9/23***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 $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. 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: *Sum 11/9/23***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: Mailing address, phone number, and Email/Fax are missing on COC- TMC 11/9/23

16. Additional remarks:

Client did not relinquish chain of custody

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Vertex (Deron)

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 5 Day

Project Name:

Thistle Unit 10 CTB

Project #:

23E-04784

Project Manager:

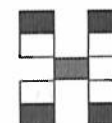
Kent Stallings

Sampler: Zach Eglebert

On Ice: ☒ Yes ☐ No yes

of Coolers: 1

Cooler Temp (including CF): 2.8+0.1=2.9 (°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.	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)
11-7-23	9:00	soil	BH23-23 0'	jar 1	ice	001										
	9:10		BH23-23 2'	jar 1		002										
	9:20		BH23-24 0'	jar 1		003										
	9:30		BH23-24 2'	jar 1		004										
	9:40		BH23-25 0'			005										
	9:50		BH23-25 2'			006										
	10:00		BH23-26 0'			007										
	10:10		BH23-26 2'			008										
	10:20		BH23-27 0'			009										
	10:30		BH23-27 2'			010										
	10:40		BH23-28 0'			011										
	10:50		BH23-28 2'			012										

Date: Time: Relinquished by:

Received by: Via: Date Time

11/10/23 9:45

Date: Time

11/9/23 7:40

Remarks: Direct Bill to Deron
cc Kstallings@vertex.ca



*Eurofins Environment Testing South
Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

November 29, 2023

Kent Stallings
Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL:
FAX:

RE: Thistle Unit 10 Battery

OrderNo.: 2311556

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 30 sample(s) on 11/10/2023 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 do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-23 4'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 9:00:00 AM

Lab ID: 2311556-001

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/15/2023 9:51:33 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/15/2023 9:51:33 PM
Surr: DNOP	99.7	69-147		%Rec	1	11/15/2023 9:51:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/16/2023 10:48:00 PM
Surr: BFB	105	15-244		%Rec	1	11/16/2023 10:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/16/2023 10:48:00 PM
Toluene	ND	0.049		mg/Kg	1	11/16/2023 10:48:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/16/2023 10:48:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/16/2023 10:48:00 PM
Surr: 4-Bromofluorobenzene	100	39.1-146		%Rec	1	11/16/2023 10:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	360	60		mg/Kg	20	11/16/2023 7:51:07 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-32 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 9:10:00 AM

Lab ID: 2311556-002

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/15/2023 10:02:06 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/15/2023 10:02:06 PM
Surr: DNOP	84.1	69-147		%Rec	1	11/15/2023 10:02:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/16/2023 11:53:00 PM
Surr: BFB	102	15-244		%Rec	1	11/16/2023 11:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/16/2023 11:53:00 PM
Toluene	ND	0.049		mg/Kg	1	11/16/2023 11:53:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/16/2023 11:53:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/16/2023 11:53:00 PM
Surr: 4-Bromofluorobenzene	98.2	39.1-146		%Rec	1	11/16/2023 11:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	61		mg/Kg	20	11/16/2023 8:03:32 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-32 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 9:20:00 AM

Lab ID: 2311556-003

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/15/2023 10:12:39 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/15/2023 10:12:39 PM
Surr: DNOP	86.6	69-147		%Rec	1	11/15/2023 10:12:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/17/2023 12:58:00 AM
Surr: BFB	108	15-244		%Rec	1	11/17/2023 12:58:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	11/17/2023 12:58:00 AM
Toluene	ND	0.049		mg/Kg	1	11/17/2023 12:58:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	11/17/2023 12:58:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	11/17/2023 12:58:00 AM
Surr: 4-Bromofluorobenzene	100	39.1-146		%Rec	1	11/17/2023 12:58:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	80	59		mg/Kg	20	11/16/2023 8:40:46 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-33 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 9:30:00 AM

Lab ID: 2311556-004

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/15/2023 10:23:13 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/15/2023 10:23:13 PM
Surr: DNOP	90.1	69-147		%Rec	1	11/15/2023 10:23:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/17/2023 1:20:00 AM
Surr: BFB	107	15-244		%Rec	1	11/17/2023 1:20:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	11/17/2023 1:20:00 AM
Toluene	ND	0.049		mg/Kg	1	11/17/2023 1:20:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	11/17/2023 1:20:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	11/17/2023 1:20:00 AM
Surr: 4-Bromofluorobenzene	99.9	39.1-146		%Rec	1	11/17/2023 1:20:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	190	59		mg/Kg	20	11/16/2023 8:53:11 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-33 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 9:40:00 AM

Lab ID: 2311556-005

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/15/2023 10:33:47 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/15/2023 10:33:47 PM
Surr: DNOP	89.8	69-147		%Rec	1	11/15/2023 10:33:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/17/2023 1:42:00 AM
Surr: BFB	104	15-244		%Rec	1	11/17/2023 1:42:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/17/2023 1:42:00 AM
Toluene	ND	0.048		mg/Kg	1	11/17/2023 1:42:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/17/2023 1:42:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	11/17/2023 1:42:00 AM
Surr: 4-Bromofluorobenzene	98.1	39.1-146		%Rec	1	11/17/2023 1:42:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	300	60		mg/Kg	20	11/16/2023 9:05:35 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-34 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 9:50:00 AM

Lab ID: 2311556-006

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	1800	93		mg/Kg	10	11/15/2023 10:44:23 PM
Motor Oil Range Organics (MRO)	1600	460		mg/Kg	10	11/15/2023 10:44:23 PM
Surr: DNOP	0	69-147	S	%Rec	10	11/15/2023 10:44:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/17/2023 2:04:00 AM
Surr: BFB	106	15-244		%Rec	1	11/17/2023 2:04:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	11/17/2023 2:04:00 AM
Toluene	ND	0.049		mg/Kg	1	11/17/2023 2:04:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	11/17/2023 2:04:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	11/17/2023 2:04:00 AM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	11/17/2023 2:04:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	4100	150		mg/Kg	50	11/17/2023 6:16:40 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-34 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 10:00:00 AM

Lab ID: 2311556-007

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/15/2023 11:24:29 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/15/2023 11:24:29 PM
Surr: DNOP	93.3	69-147		%Rec	1	11/15/2023 11:24:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/17/2023 2:26:00 AM
Surr: BFB	101	15-244		%Rec	1	11/17/2023 2:26:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/17/2023 2:26:00 AM
Toluene	ND	0.049		mg/Kg	1	11/17/2023 2:26:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	11/17/2023 2:26:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	11/17/2023 2:26:00 AM
Surr: 4-Bromofluorobenzene	98.9	39.1-146		%Rec	1	11/17/2023 2:26:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	300	60		mg/Kg	20	11/16/2023 9:30:25 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-34 3'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 10:10:00 AM

Lab ID: 2311556-008

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	11/15/2023 11:35:08 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/15/2023 11:35:08 PM
Surr: DNOP	91.1	69-147		%Rec	1	11/15/2023 11:35:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/17/2023 2:47:00 AM
Surr: BFB	105	15-244		%Rec	1	11/17/2023 2:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/17/2023 2:47:00 AM
Toluene	ND	0.047		mg/Kg	1	11/17/2023 2:47:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	11/17/2023 2:47:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	11/17/2023 2:47:00 AM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	11/17/2023 2:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1400	60		mg/Kg	20	11/17/2023 6:03:09 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-35 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 10:20:00 AM

Lab ID: 2311556-009

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/15/2023 11:45:56 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/15/2023 11:45:56 PM
Surr: DNOP	80.2	69-147		%Rec	1	11/15/2023 11:45:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/17/2023 3:09:00 AM
Surr: BFB	103	15-244		%Rec	1	11/17/2023 3:09:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/17/2023 3:09:00 AM
Toluene	ND	0.048		mg/Kg	1	11/17/2023 3:09:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/17/2023 3:09:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	11/17/2023 3:09:00 AM
Surr: 4-Bromofluorobenzene	99.0	39.1-146		%Rec	1	11/17/2023 3:09:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	880	60		mg/Kg	20	11/17/2023 6:15:34 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-35 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 10:30:00 AM

Lab ID: 2311556-010

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/16/2023 12:07:08 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 12:07:08 AM
Surr: DNOP	85.6	69-147		%Rec	1	11/16/2023 12:07:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/17/2023 3:31:00 AM
Surr: BFB	105	15-244		%Rec	1	11/17/2023 3:31:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/17/2023 3:31:00 AM
Toluene	ND	0.049		mg/Kg	1	11/17/2023 3:31:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	11/17/2023 3:31:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	11/17/2023 3:31:00 AM
Surr: 4-Bromofluorobenzene	100	39.1-146		%Rec	1	11/17/2023 3:31:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1500	60		mg/Kg	20	11/17/2023 6:27:58 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-36 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 10:40:00 AM

Lab ID: 2311556-011

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/16/2023 12:17:52 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/16/2023 12:17:52 AM
Surr: DNOP	77.5	69-147		%Rec	1	11/16/2023 12:17:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/17/2023 4:15:00 AM
Surr: BFB	103	15-244		%Rec	1	11/17/2023 4:15:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	11/17/2023 4:15:00 AM
Toluene	ND	0.047		mg/Kg	1	11/17/2023 4:15:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	11/17/2023 4:15:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	11/17/2023 4:15:00 AM
Surr: 4-Bromofluorobenzene	98.7	39.1-146		%Rec	1	11/17/2023 4:15:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1600	60		mg/Kg	20	11/17/2023 6:40:22 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-36 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 10:50:00 AM

Lab ID: 2311556-012

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/16/2023 12:28:37 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/16/2023 12:28:37 AM
Surr: DNOP	84.9	69-147		%Rec	1	11/16/2023 12:28:37 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/17/2023 4:37:00 AM
Surr: BFB	105	15-244		%Rec	1	11/17/2023 4:37:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/17/2023 4:37:00 AM
Toluene	ND	0.049		mg/Kg	1	11/17/2023 4:37:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	11/17/2023 4:37:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	11/17/2023 4:37:00 AM
Surr: 4-Bromofluorobenzene	99.5	39.1-146		%Rec	1	11/17/2023 4:37:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1800	60		mg/Kg	20	11/17/2023 6:52:47 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-37 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 11:00:00 AM

Lab ID: 2311556-013

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	11/16/2023 12:39:19 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/16/2023 12:39:19 AM
Surr: DNOP	85.5	69-147		%Rec	1	11/16/2023 12:39:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/17/2023 4:58:00 AM
Surr: BFB	104	15-244		%Rec	1	11/17/2023 4:58:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	11/17/2023 4:58:00 AM
Toluene	ND	0.050		mg/Kg	1	11/17/2023 4:58:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/17/2023 4:58:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	11/17/2023 4:58:00 AM
Surr: 4-Bromofluorobenzene	93.7	39.1-146		%Rec	1	11/17/2023 4:58:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	11/17/2023 7:30:00 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-37 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 11:10:00 AM

Lab ID: 2311556-014

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/16/2023 12:50:00 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 12:50:00 AM
Surr: DNOP	82.9	69-147		%Rec	1	11/16/2023 12:50:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/17/2023 5:20:00 AM
Surr: BFB	106	15-244		%Rec	1	11/17/2023 5:20:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	11/17/2023 5:20:00 AM
Toluene	ND	0.049		mg/Kg	1	11/17/2023 5:20:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	11/17/2023 5:20:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	11/17/2023 5:20:00 AM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	11/17/2023 5:20:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	130	60		mg/Kg	20	11/17/2023 7:42:25 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-38 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 11:20:00 AM

Lab ID: 2311556-015

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/16/2023 1:00:40 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/16/2023 1:00:40 AM
Surr: DNOP	80.0	69-147		%Rec	1	11/16/2023 1:00:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/17/2023 5:42:00 AM
Surr: BFB	100	15-244		%Rec	1	11/17/2023 5:42:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/17/2023 5:42:00 AM
Toluene	ND	0.047		mg/Kg	1	11/17/2023 5:42:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	11/17/2023 5:42:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	11/17/2023 5:42:00 AM
Surr: 4-Bromofluorobenzene	98.8	39.1-146		%Rec	1	11/17/2023 5:42:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	560	60		mg/Kg	20	11/16/2023 12:29:03 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-38 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 11:30:00 AM

Lab ID: 2311556-016

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/16/2023 1:11:19 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 1:11:19 AM
Surr: DNOP	93.2	69-147		%Rec	1	11/16/2023 1:11:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/17/2023 6:04:00 AM
Surr: BFB	107	15-244		%Rec	1	11/17/2023 6:04:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	11/17/2023 6:04:00 AM
Toluene	ND	0.050		mg/Kg	1	11/17/2023 6:04:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/17/2023 6:04:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	11/17/2023 6:04:00 AM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	11/17/2023 6:04:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1100	60		mg/Kg	20	11/16/2023 1:31:06 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-39 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 11:40:00 AM

Lab ID: 2311556-017

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/16/2023 1:21:58 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 1:21:58 AM
Surr: DNOP	88.8	69-147		%Rec	1	11/16/2023 1:21:58 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/17/2023 6:26:00 AM
Surr: BFB	105	15-244		%Rec	1	11/17/2023 6:26:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	11/17/2023 6:26:00 AM
Toluene	ND	0.050		mg/Kg	1	11/17/2023 6:26:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/17/2023 6:26:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	11/17/2023 6:26:00 AM
Surr: 4-Bromofluorobenzene	96.1	39.1-146		%Rec	1	11/17/2023 6:26:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	430	59		mg/Kg	20	11/16/2023 1:43:31 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-39 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 11:50:00 AM

Lab ID: 2311556-018

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/16/2023 1:32:34 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/16/2023 1:32:34 AM
Surr: DNOP	86.1	69-147		%Rec	1	11/16/2023 1:32:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/17/2023 6:48:00 AM
Surr: BFB	106	15-244		%Rec	1	11/17/2023 6:48:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	11/17/2023 6:48:00 AM
Toluene	ND	0.050		mg/Kg	1	11/17/2023 6:48:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/17/2023 6:48:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/17/2023 6:48:00 AM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	11/17/2023 6:48:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1000	61		mg/Kg	20	11/16/2023 1:55:55 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-40 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 12:00:00 PM

Lab ID: 2311556-019

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/16/2023 1:43:11 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/16/2023 1:43:11 AM
Surr: DNOP	92.1	69-147		%Rec	1	11/16/2023 1:43:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/17/2023 7:09:00 AM
Surr: BFB	104	15-244		%Rec	1	11/17/2023 7:09:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/17/2023 7:09:00 AM
Toluene	ND	0.048		mg/Kg	1	11/17/2023 7:09:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/17/2023 7:09:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	11/17/2023 7:09:00 AM
Surr: 4-Bromofluorobenzene	98.3	39.1-146		%Rec	1	11/17/2023 7:09:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	11/16/2023 2:08:20 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-40 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 12:10:00 PM

Lab ID: 2311556-020

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/16/2023 1:53:46 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 1:53:46 AM
Surr: DNOP	91.9	69-147		%Rec	1	11/16/2023 1:53:46 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/17/2023 7:31:00 AM
Surr: BFB	102	15-244		%Rec	1	11/17/2023 7:31:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	11/17/2023 7:31:00 AM
Toluene	ND	0.048		mg/Kg	1	11/17/2023 7:31:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/17/2023 7:31:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	11/17/2023 7:31:00 AM
Surr: 4-Bromofluorobenzene	98.0	39.1-146		%Rec	1	11/17/2023 7:31:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	710	60		mg/Kg	20	11/16/2023 2:20:44 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-41 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 12:20:00 PM

Lab ID: 2311556-021

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 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	11/17/2023 2:25:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/17/2023 2:25:51 PM
Surr: DNOP	94.0	69-147		%Rec	1	11/17/2023 2:25:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/17/2023 8:35:00 PM
Surr: BFB	111	15-244		%Rec	1	11/17/2023 8:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	11/17/2023 8:35:00 PM
Toluene	ND	0.047		mg/Kg	1	11/17/2023 8:35:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/17/2023 8:35:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/17/2023 8:35:00 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	11/17/2023 8:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	2000	60		mg/Kg	20	11/16/2023 2:33:08 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-41 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 12:30:00 PM

Lab ID: 2311556-022

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	11/16/2023 5:46:24 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/16/2023 5:46:24 PM
Surr: DNOP	99.7	69-147		%Rec	1	11/16/2023 5:46:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/17/2023 8:57:00 PM
Surr: BFB	108	15-244		%Rec	1	11/17/2023 8:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	11/17/2023 8:57:00 PM
Toluene	ND	0.049		mg/Kg	1	11/17/2023 8:57:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/17/2023 8:57:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/17/2023 8:57:00 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	11/17/2023 8:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2400	150		mg/Kg	50	11/17/2023 4:49:50 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-42 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 12:40:00 PM

Lab ID: 2311556-023

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	11/16/2023 5:57:10 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/16/2023 5:57:10 PM
Surr: DNOP	75.3	69-147		%Rec	1	11/16/2023 5:57:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/17/2023 9:19:00 PM
Surr: BFB	109	15-244		%Rec	1	11/17/2023 9:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	11/17/2023 9:19:00 PM
Toluene	ND	0.048		mg/Kg	1	11/17/2023 9:19:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/17/2023 9:19:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/17/2023 9:19:00 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	11/17/2023 9:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	3100	150		mg/Kg	50	11/17/2023 5:02:14 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-42 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 12:50:00 PM

Lab ID: 2311556-024

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	11/16/2023 6:07:56 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/16/2023 6:07:56 PM
Surr: DNOP	104	69-147		%Rec	1	11/16/2023 6:07:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/17/2023 10:03:00 PM
Surr: BFB	110	15-244		%Rec	1	11/17/2023 10:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	11/17/2023 10:03:00 PM
Toluene	ND	0.048		mg/Kg	1	11/17/2023 10:03:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/17/2023 10:03:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/17/2023 10:03:00 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	11/17/2023 10:03:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	2400	60		mg/Kg	20	11/16/2023 3:35:11 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-43 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 1:00:00 PM

Lab ID: 2311556-025

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 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	11/17/2023 11:39:57 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/17/2023 11:39:57 AM
Surr: DNOP	70.1	69-147		%Rec	1	11/17/2023 11:39:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/17/2023 10:25:00 PM
Surr: BFB	106	15-244		%Rec	1	11/17/2023 10:25:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	11/17/2023 10:25:00 PM
Toluene	ND	0.048		mg/Kg	1	11/17/2023 10:25:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/17/2023 10:25:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/17/2023 10:25:00 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	11/17/2023 10:25:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	900	60		mg/Kg	20	11/16/2023 3:47:36 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-43 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 1:10:00 PM

Lab ID: 2311556-026

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/16/2023 6:29:26 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 6:29:26 PM
Surr: DNOP	108	69-147		%Rec	1	11/16/2023 6:29:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/17/2023 10:47:00 PM
Surr: BFB	109	15-244		%Rec	1	11/17/2023 10:47:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	11/17/2023 10:47:00 PM
Toluene	ND	0.048		mg/Kg	1	11/17/2023 10:47:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/17/2023 10:47:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/17/2023 10:47:00 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	11/17/2023 10:47:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	750	59		mg/Kg	20	11/16/2023 4:00:00 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-44 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 1:20:00 PM

Lab ID: 2311556-027

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	11/16/2023 6:40:09 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/16/2023 6:40:09 PM
Surr: DNOP	124	69-147		%Rec	1	11/16/2023 6:40:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/17/2023 11:09:00 PM
Surr: BFB	108	15-244		%Rec	1	11/17/2023 11:09:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	11/17/2023 11:09:00 PM
Toluene	ND	0.047		mg/Kg	1	11/17/2023 11:09:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/17/2023 11:09:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/17/2023 11:09:00 PM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	11/17/2023 11:09:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	11/16/2023 4:12:25 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-44 2'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 1:30:00 PM

Lab ID: 2311556-028

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/16/2023 6:50:52 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/16/2023 6:50:52 PM
Surr: DNOP	116	69-147		%Rec	1	11/16/2023 6:50:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/17/2023 11:54:00 PM
Surr: BFB	109	15-244		%Rec	1	11/17/2023 11:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	11/17/2023 11:54:00 PM
Toluene	ND	0.047		mg/Kg	1	11/17/2023 11:54:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/17/2023 11:54:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/17/2023 11:54:00 PM
Surr: 4-Bromofluorobenzene	104	39.1-146		%Rec	1	11/17/2023 11:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	150	59		mg/Kg	20	11/16/2023 4:24:50 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-45 0'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 1:40:00 PM

Lab ID: 2311556-029

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	11/16/2023 7:12:10 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/16/2023 7:12:10 PM
Surr: DNOP	124	69-147		%Rec	1	11/16/2023 7:12:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/18/2023 12:16:00 AM
Surr: BFB	107	15-244		%Rec	1	11/18/2023 12:16:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	11/18/2023 12:16:00 AM
Toluene	ND	0.048		mg/Kg	1	11/18/2023 12:16:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/18/2023 12:16:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	11/18/2023 12:16:00 AM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	11/18/2023 12:16:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	11/16/2023 4:37:15 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2311556

Date Reported: 11/29/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH23-45 1'

Project: Thistle Unit 10 Battery

Collection Date: 11/8/2023 1:50:00 PM

Lab ID: 2311556-030

Matrix: SOIL

Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	11/16/2023 12:52:00 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/16/2023 12:52:00 PM
Surr: DNOP	86.1	69-147		%Rec	1	11/16/2023 12:52:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/17/2023 12:11:00 PM
Surr: BFB	107	15-244		%Rec	1	11/17/2023 12:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	11/17/2023 12:11:00 PM
Toluene	ND	0.049		mg/Kg	1	11/17/2023 12:11:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/17/2023 12:11:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/17/2023 12:11:00 PM
Surr: 4-Bromofluorobenzene	101	39.1-146		%Rec	1	11/17/2023 12:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	11/16/2023 4:49:40 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 Quantitative 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#: 2311556

29-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 Battery

Sample ID: MB-78839	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 78839	RunNo: 101256								
Prep Date: 11/16/2023	Analysis Date: 11/16/2023	SeqNo: 3722958 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-78839	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 78839	RunNo: 101256								
Prep Date: 11/16/2023	Analysis Date: 11/16/2023	SeqNo: 3722959 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.6	90	110			

Sample ID: MB-78843	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 78843	RunNo: 101241								
Prep Date: 11/16/2023	Analysis Date: 11/16/2023	SeqNo: 3723318 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-78843	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 78843	RunNo: 101241								
Prep Date: 11/16/2023	Analysis Date: 11/16/2023	SeqNo: 3723319 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Qualifiers:

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

Page 31 of 38

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

WO#: 2311556

29-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 Battery

Sample ID: 2311556-020AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-40 2'	Batch ID: 78804	RunNo: 101145								
Prep Date: 11/15/2023	Analysis Date: 11/16/2023	SeqNo: 3719804 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.4	46.95	0	102	54.2	135			
Surr: DNOP	4.2		4.695		90.2	69	147			

Sample ID: 2311556-020AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-40 2'	Batch ID: 78804	RunNo: 101145								
Prep Date: 11/15/2023	Analysis Date: 11/16/2023	SeqNo: 3719805 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.8	48.97	0	90.6	54.2	135	7.15	29.2	
Surr: DNOP	4.2		4.897		85.7	69	147	0	0	

Sample ID: LCS-78804	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78804	RunNo: 101145								
Prep Date: 11/15/2023	Analysis Date: 11/15/2023	SeqNo: 3719806 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	90.2	61.9	130			
Surr: DNOP	4.2		5.000		84.0	69	147			

Sample ID: MB-78804	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78804	RunNo: 101145								
Prep Date: 11/15/2023	Analysis Date: 11/15/2023	SeqNo: 3719808 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	8.5		10.00		84.7	69	147			

Sample ID: 2311556-021AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-41 0'	Batch ID: 78823	RunNo: 101250								
Prep Date: 11/15/2023	Analysis Date: 11/16/2023	SeqNo: 3722263 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.8	48.97	0	93.9	54.2	135			
Surr: DNOP	5.1		4.897		105	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 Quantitative 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#: 2311556

29-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 Battery

Sample ID: 2311556-021AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-41 0'	Batch ID: 78823	RunNo: 101250								
Prep Date: 11/15/2023	Analysis Date: 11/16/2023	SeqNo: 3722264 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.8	49.16	0	89.7	54.2	135	4.24	29.2	
Surr: DNOP	5.0		4.916		102	69	147	0	0	

Sample ID: LCS-78823	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78823	RunNo: 101250								
Prep Date: 11/15/2023	Analysis Date: 11/16/2023	SeqNo: 3722305 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.3	61.9	130			
Surr: DNOP	4.7		5.000		93.8	69	147			

Sample ID: MB-78823	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78823	RunNo: 101250								
Prep Date: 11/15/2023	Analysis Date: 11/16/2023	SeqNo: 3722307 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		103	69	147			

Sample ID: MB-78826	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 78826	RunNo: 101255								
Prep Date: 11/15/2023	Analysis Date: 11/16/2023	SeqNo: 3722614 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		103	69	147			

Sample ID: LCS-78826	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 78826	RunNo: 101255								
Prep Date: 11/15/2023	Analysis Date: 11/16/2023	SeqNo: 3722615 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	112	61.9	130			
Surr: DNOP	4.5		5.000		89.3	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 Quantitative 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#: 2311556

29-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 Battery

Sample ID: LCS-78879	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 78879		RunNo: 101270							
Prep Date: 11/17/2023	Analysis Date: 11/17/2023		SeqNo: 3725652		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.8	61.9	130			
Surr: DNOP	4.3		5.000		85.3	69	147			

Sample ID: MB-78879	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 78879		RunNo: 101270							
Prep Date: 11/17/2023	Analysis Date: 11/17/2023		SeqNo: 3725654		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		105	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 Quantitative 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

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

WO#: 2311556

29-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 Battery

Sample ID: ics-78796	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78796			RunNo: 101268						
Prep Date: 11/14/2023	Analysis Date: 11/16/2023			SeqNo: 3723596		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	88.8	70	130			
Surr: BFB	2200		1000		217	15	244			

Sample ID: mb-78796	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78796			RunNo: 101268						
Prep Date: 11/14/2023	Analysis Date: 11/16/2023			SeqNo: 3723597		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		105	15	244			

Sample ID: 2311556-001ams	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH23-23 4'	Batch ID: 78796			RunNo: 101268						
Prep Date: 11/14/2023	Analysis Date: 11/16/2023			SeqNo: 3723601		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.56	0	95.8	70	130			
Surr: BFB	2200		982.3		224	15	244			

Sample ID: 2311556-001amsd	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH23-23 4'	Batch ID: 78796			RunNo: 101268						
Prep Date: 11/14/2023	Analysis Date: 11/16/2023			SeqNo: 3723602		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.46	0	96.8	70	130	0.688	20	
Surr: BFB	2100		978.5		215	15	244	0	0	

Sample ID: ics-78820	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 78820			RunNo: 101297						
Prep Date: 11/15/2023	Analysis Date: 11/17/2023			SeqNo: 3725415		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	96.5	70	130			
Surr: BFB	2200		1000		220	15	244			

Sample ID: mb-78820	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 78820			RunNo: 101297						
Prep Date: 11/15/2023	Analysis Date: 11/17/2023			SeqNo: 3725416		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of 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#: 2311556

29-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 Battery

Sample ID: mb-78820	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 78820		RunNo: 101297							
Prep Date: 11/15/2023	Analysis Date: 11/17/2023		SeqNo: 3725416		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		104	15	244			

Sample ID: 2311556-030ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-45 1'	Batch ID: 78820		RunNo: 101297							
Prep Date: 11/15/2023	Analysis Date: 11/17/2023		SeqNo: 3725418		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.56	0	96.7	70	130			
Surr: BFB	2200		982.3		222	15	244			

Sample ID: 2311556-030amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-45 1'	Batch ID: 78820		RunNo: 101297							
Prep Date: 11/15/2023	Analysis Date: 11/17/2023		SeqNo: 3725419		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.49	0	90.9	70	130	6.48	20	
Surr: BFB	2100		979.4		216	15	244	0	0	

Sample ID: lcs-78810	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 78810		RunNo: 101297							
Prep Date: 11/15/2023	Analysis Date: 11/17/2023		SeqNo: 3725421		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.4	70	130			
Surr: BFB	2200		1000		219	15	244			

Sample ID: mb-78810	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 78810		RunNo: 101297							
Prep Date: 11/15/2023	Analysis Date: 11/17/2023		SeqNo: 3725422		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	15	244			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of 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#: 2311556

29-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 Battery

Sample ID: lcs-78796	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 78796		RunNo: 101268							
Prep Date: 11/14/2023	Analysis Date: 11/16/2023		SeqNo: 3723535		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.1	70	130			
Toluene	0.90	0.050	1.000	0	90.2	70	130			
Ethylbenzene	0.92	0.050	1.000	0	92.3	70	130			
Xylenes, Total	2.7	0.10	3.000	0	91.2	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.5	39.1	146			

Sample ID: mb-78796	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 78796		RunNo: 101268							
Prep Date: 11/14/2023	Analysis Date: 11/16/2023		SeqNo: 3723536		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.2	39.1	146			

Sample ID: 2311556-002ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BH23-32 0'	Batch ID: 78796		RunNo: 101268							
Prep Date: 11/14/2023	Analysis Date: 11/17/2023		SeqNo: 3723539		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9775	0	92.1	70	130			
Toluene	0.93	0.049	0.9775	0	95.0	70	130			
Ethylbenzene	0.95	0.049	0.9775	0	97.1	70	130			
Xylenes, Total	2.8	0.098	2.933	0	96.5	70	130			
Surr: 4-Bromofluorobenzene	0.96		0.9775		98.7	39.1	146			

Sample ID: 2311556-002amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BH23-32 0'	Batch ID: 78796		RunNo: 101268							
Prep Date: 11/14/2023	Analysis Date: 11/17/2023		SeqNo: 3723540		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.024	0.9737	0	90.8	70	130	1.79	20	
Toluene	0.91	0.049	0.9737	0	93.6	70	130	1.82	20	
Ethylbenzene	0.92	0.049	0.9737	0	94.7	70	130	2.92	20	
Xylenes, Total	2.7	0.097	2.921	0	93.8	70	130	3.19	20	
Surr: 4-Bromofluorobenzene	0.93		0.9737		95.8	39.1	146	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of 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#: 2311556

29-Nov-23

Client: Vertex Resources Services, Inc.**Project:** Thistle Unit 10 Battery

Sample ID: ics-78820	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 78820			RunNo: 101297						
Prep Date: 11/15/2023	Analysis Date: 11/17/2023			SeqNo: 3725925		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	70	130			
Toluene	0.84	0.050	1.000	0	84.0	70	130			
Ethylbenzene	0.87	0.050	1.000	0	86.8	70	130			
Xylenes, Total	2.6	0.10	3.000	0	86.3	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.7	39.1	146			

Sample ID: mb-78820	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 78820			RunNo: 101297						
Prep Date: 11/15/2023	Analysis Date: 11/17/2023			SeqNo: 3725926		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	39.1	146			

Sample ID: ics-78810	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 78810			RunNo: 101297						
Prep Date: 11/15/2023	Analysis Date: 11/17/2023			SeqNo: 3725929		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.8	70	130			
Toluene	0.93	0.050	1.000	0	93.4	70	130			
Ethylbenzene	0.95	0.050	1.000	0	94.7	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.9	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.6	39.1	146			

Sample ID: mb-78810	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 78810			RunNo: 101297						
Prep Date: 11/15/2023	Analysis Date: 11/17/2023			SeqNo: 3725930		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	39.1	146			

Qualifiers:

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



Environment Testin

Eurofins Environment Testing South
Central, LLC

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

Work Order Number: 2311556

RcptNo: 1

Received By: Juan Rojas

11/10/2023 7:50:00 AM

Guaranga

Completed By: Tracy Casarrubias

11/10/2023 8:39:25 AM

Reviewed By: DAD 11/10/23

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 $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. 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 ☒ *time 11/10/23*
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: *72 11/10/23*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☒ No ☐ NA ☒ *time 11/10/23*

Person Notified:

*Tim C.*Date: *11/10/23*

By Whom:

Tracy Casarrubias

Via:

☐ eMail☒ Phone☐ Fax☐ In Person

Regarding:

Collection time discrepancy.

Client Instructions:

Mailing address, phone number, and Email/Fax are missing on COC- TMC 11/10/23

16. Additional remarks: *COC collection times are accurate. Moving forward with those per client. -me 11/10/23*
- Client did not relinquish chain of custody

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.7	Good	Yes	Yogi		

Chain-of-Custody Record

Client: **Vertex (Devon)**

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 **50mg**

Project Name:

Thistle Unit 10 Battery

Project #:

23E-04784

Project Manager:

Kstallings@vertex.caSampler: **Zach Englebert**On Ice: ☐ Yes ☐ No# of Coolers: **1** **40g**Cooler Temp (including CF): **3.6 + 0.1 = 3.7 (°C)**

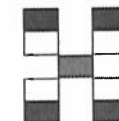
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
11-8-23	9:00	soil	BH23-23 4'	1 jar	ice	001
	9:10		BH23-32 0'			002
	9:20		BH23-32 2'			003
	9:30		BH23-33 0'			004
	9:40		BH23-33 2'			005
	9:50		BH23-34 0'			006
	10:00		BH23-34 2'			007
	10:10		BH23-34 3'			008
	10:20		BH23-35 0'			009
	10:30		BH23-35 2'			010
	10:40		BH23-36 0'			011
	10:50		BH23-36 2'			012

Date: Time: Relinquished by:

Received by: Via: Date Time

Date: Time: Relinquished by:

Received by: Via: Date Time



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

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

Remarks: **Direct Bill to Devon**
cc Kstallings@vertex.ca

Chain-of-Custody Record

Client: Vertex (Devon)

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 5 Day

Project Name:
Thistle Unit 10 Battery

Project #:
23E-04784

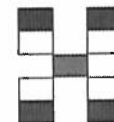
Project Manager:
Kent Stallings

Sampler: Zach Englebert

On Ice: ☐ Yes ☐ No

of Coolers: 1

Cooler Temp (Including CF): 3.6 + 0.1 = 3.7 (°C)

HALL ENVIRONMENTAL
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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 ⁻ , Br ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ⁻ , SO ₄ ⁻	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11-8-23	11:00	Soil	B H23-37 0'	1 jar	ice	013										
	11:10		B H23-37 2'			014										
	11:20		B H23-38 0'			015										
	11:30		B H23-38 2'			016										
	11:40		B H23-39 0'			017										
	11:50		B H23-39 2'			018										
	12:00		B H23-40 0'			019										
	12:10		B H23-40 2'			020										
	12:20		B H23-41 0'			021										
	12:30		B H23-41 2'			022										
	12:40		B H23-42 0'			023										
	12:50		B H23-42 2'			024										

Date: _____ Time: _____ Relinquished by: _____ Received by: _____ Via: _____ Date: _____ Time: _____

Date: 11/9/23 Time: 9:00 Relinquished by: Wm... Received by: ... Via: _____ Date: 11/10/23 Time: 7:50

Remarks: Direct Bill to Devon
cc Kstallings@vertex.ca



Environment Testing

- 1
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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kent Stallings
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 4/16/2025 3:28:25 PM

JOB DESCRIPTION

Thistle Unit 10 CTB

JOB NUMBER

885-22848-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

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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4/16/2025 3:28:25 PM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Laboratory Job ID: 885-22848-1

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Definitions/Glossary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

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
Project: Thistle Unit 10 CTB

Job ID: 885-22848-1

Job ID: 885-22848-1

Eurofins Albuquerque

Job Narrative 885-22848-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 4/9/2025 7:40 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 0.5°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 method blank for preparation batch 885-24116 and analytical batch 885-24185 contained Motor Oil Range Organics [C28-C40] above the method detection limit. This target analyte concentration was above the reporting limit (RL) in the method blank but no samples have the target analyte above the RL and/or do not request it; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015D_DRO: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 885-24116 and analytical batch 885-24185 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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.

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Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

Client Sample ID: BH23-34 4'

Lab Sample ID: 885-22848-1

Date Collected: 04/07/25 08:40

Matrix: Solid

Date Received: 04/09/25 07:40

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		04/10/25 14:24	04/11/25 22:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		35 - 166			04/10/25 14:24	04/11/25 22:09	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		04/10/25 14:24	04/11/25 22:09	1
Ethylbenzene	ND		0.050	mg/Kg		04/10/25 14:24	04/11/25 22:09	1
Toluene	ND		0.050	mg/Kg		04/10/25 14:24	04/11/25 22:09	1
Xylenes, Total	ND		0.10	mg/Kg		04/10/25 14:24	04/11/25 22:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		48 - 145			04/10/25 14:24	04/11/25 22:09	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		04/11/25 11:33	04/15/25 07:13	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		04/11/25 11:33	04/15/25 07:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	105		62 - 134			04/11/25 11:33	04/15/25 07:13	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1100		60	mg/Kg		04/11/25 10:14	04/11/25 11:26	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

Client Sample ID: BH23-34 5'

Lab Sample ID: 885-22848-2

Date Collected: 04/07/25 08:55

Matrix: Solid

Date Received: 04/09/25 07:40

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		04/10/25 14:24	04/11/25 23:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		35 - 166			04/10/25 14:24	04/11/25 23:14	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		04/10/25 14:24	04/11/25 23:14	1
Ethylbenzene	ND		0.050	mg/Kg		04/10/25 14:24	04/11/25 23:14	1
Toluene	ND		0.050	mg/Kg		04/10/25 14:24	04/11/25 23:14	1
Xylenes, Total	ND		0.10	mg/Kg		04/10/25 14:24	04/11/25 23:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		48 - 145			04/10/25 14:24	04/11/25 23:14	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]	ND		9.6	mg/Kg		04/11/25 11:33	04/15/25 07:24	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		04/11/25 11:33	04/15/25 07:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	129		62 - 134			04/11/25 11:33	04/15/25 07:24	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	630		60	mg/Kg		04/11/25 10:14	04/11/25 11:57	20

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Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

Client Sample ID: BH23-34 6'

Lab Sample ID: 885-22848-3

Date Collected: 04/07/25 09:00

Matrix: Solid

Date Received: 04/09/25 07:40

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		04/10/25 14:24	04/12/25 00:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		35 - 166			04/10/25 14:24	04/12/25 00:20	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		04/10/25 14:24	04/12/25 00:20	1
Ethylbenzene	ND		0.048	mg/Kg		04/10/25 14:24	04/12/25 00:20	1
Toluene	ND		0.048	mg/Kg		04/10/25 14:24	04/12/25 00:20	1
Xylenes, Total	ND		0.095	mg/Kg		04/10/25 14:24	04/12/25 00:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		48 - 145			04/10/25 14:24	04/12/25 00:20	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]	ND	F1	10	mg/Kg		04/11/25 11:33	04/15/25 07:36	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		04/11/25 11:33	04/15/25 07:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	127		62 - 134			04/11/25 11:33	04/15/25 07:36	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		60	mg/Kg		04/11/25 10:14	04/11/25 12:28	20

Eurofins Albuquerque

QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-24031/1-A

Matrix: Solid

Analysis Batch: 24179

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24031

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		04/10/25 14:24	04/11/25 21:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		35 - 166			04/10/25 14:24	04/11/25 21:47	1

Lab Sample ID: LCS 885-24031/2-A

Matrix: Solid

Analysis Batch: 24179

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	25.0	26.6		mg/Kg		106	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	216	S1+	35 - 166				

Lab Sample ID: 885-22848-1 MS

Matrix: Solid

Analysis Batch: 24179

Client Sample ID: BH23-34 4'

Prep Type: Total/NA

Prep Batch: 24031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	ND		24.8	28.7		mg/Kg		116	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	217		35 - 166						

Lab Sample ID: 885-22848-1 MSD

Matrix: Solid

Analysis Batch: 24179

Client Sample ID: BH23-34 4'

Prep Type: Total/NA

Prep Batch: 24031

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		24.9	27.8		mg/Kg		112	70 - 130	3	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	212		35 - 166								

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-24031/1-A

Matrix: Solid

Analysis Batch: 24180

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24031

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		04/10/25 14:24	04/11/25 21:47	1
Ethylbenzene	ND		0.050	mg/Kg		04/10/25 14:24	04/11/25 21:47	1
Toluene	ND		0.050	mg/Kg		04/10/25 14:24	04/11/25 21:47	1

Eurofins Albuquerque

QC Sample Results

Client: Vertex

Job ID: 885-22848-1

Project/Site: Thistle Unit 10 CTB

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 885-24031/1-A

Matrix: Solid

Analysis Batch: 24180

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24031

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		0.10	mg/Kg		04/10/25 14:24	04/11/25 21:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		48 - 145			04/10/25 14:24	04/11/25 21:47	1

Lab Sample ID: LCS 885-24031/3-A

Matrix: Solid

Analysis Batch: 24180

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.989		mg/Kg		99	70 - 130
Ethylbenzene	1.00	0.993		mg/Kg		99	70 - 130
m-Xylene & p-Xylene	2.00	2.01		mg/Kg		100	70 - 130
o-Xylene	1.00	0.997		mg/Kg		100	70 - 130
Toluene	1.00	0.978		mg/Kg		98	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	100		48 - 145				

Lab Sample ID: 885-22848-2 MS

Matrix: Solid

Analysis Batch: 24180

Client Sample ID: BH23-34 5'

Prep Type: Total/NA

Prep Batch: 24031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.995	1.01		mg/Kg		101	70 - 130
Ethylbenzene	ND		0.995	1.01		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	ND		1.99	2.02		mg/Kg		101	70 - 130
o-Xylene	ND		0.995	1.03		mg/Kg		104	70 - 130
Toluene	ND		0.995	1.00		mg/Kg		100	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	103		48 - 145						

Lab Sample ID: 885-22848-2 MSD

Matrix: Solid

Analysis Batch: 24180

Client Sample ID: BH23-34 5'

Prep Type: Total/NA

Prep Batch: 24031

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		1.00	0.973		mg/Kg		97	70 - 130	3	20
Ethylbenzene	ND		1.00	0.994		mg/Kg		99	70 - 130	1	20
m-Xylene & p-Xylene	ND		2.00	1.98		mg/Kg		99	70 - 130	2	20
o-Xylene	ND		1.00	1.02		mg/Kg		102	70 - 130	1	20
Toluene	ND		1.00	0.980		mg/Kg		98	70 - 130	2	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	104		48 - 145								

Eurofins Albuquerque

QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-24116/1-A

Matrix: Solid

Analysis Batch: 24185

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24116

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		04/11/25 11:33	04/15/25 06:38	1
Motor Oil Range Organics [C28-C40]	69.8		50	mg/Kg		04/11/25 11:33	04/15/25 06:38	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	127		62 - 134			04/11/25 11:33	04/15/25 06:38	1

Lab Sample ID: LCS 885-24116/2-A

Matrix: Solid

Analysis Batch: 24185

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24116

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	60.8		mg/Kg		122	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	95		62 - 134				

Lab Sample ID: 885-22848-3 MS

Matrix: Solid

Analysis Batch: 24185

Client Sample ID: BH23-34 6'

Prep Type: Total/NA

Prep Batch: 24116

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	ND	F1	48.1	68.7	F1	mg/Kg		143	44 - 136
Surrogate	MS %Recovery	MS Qualifier	Limits						
Di-n-octyl phthalate (Surr)	98		62 - 134						

Lab Sample ID: 885-22848-3 MSD

Matrix: Solid

Analysis Batch: 24185

Client Sample ID: BH23-34 6'

Prep Type: Total/NA

Prep Batch: 24116

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND	F1	47.1	55.1		mg/Kg		117	44 - 136	22	32
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Di-n-octyl phthalate (Surr)	89		62 - 134								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-24097/1-A

Matrix: Solid

Analysis Batch: 24098

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24097

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	mg/Kg		04/11/25 10:14	04/11/25 11:04	1

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QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 885-24097/2-A				Client Sample ID: Lab Control Sample			
Matrix: Solid				Prep Type: Total/NA			
Analysis Batch: 24098				Prep Batch: 24097			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	15.0	14.3		mg/Kg		96	90 - 110

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

GC VOA

Prep Batch: 24031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22848-1	BH23-34 4'	Total/NA	Solid	5030C	
885-22848-2	BH23-34 5'	Total/NA	Solid	5030C	
885-22848-3	BH23-34 6'	Total/NA	Solid	5030C	
MB 885-24031/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-24031/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-24031/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-22848-1 MS	BH23-34 4'	Total/NA	Solid	5030C	
885-22848-1 MSD	BH23-34 4'	Total/NA	Solid	5030C	
885-22848-2 MS	BH23-34 5'	Total/NA	Solid	5030C	
885-22848-2 MSD	BH23-34 5'	Total/NA	Solid	5030C	

Analysis Batch: 24179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22848-1	BH23-34 4'	Total/NA	Solid	8015M/D	24031
885-22848-2	BH23-34 5'	Total/NA	Solid	8015M/D	24031
885-22848-3	BH23-34 6'	Total/NA	Solid	8015M/D	24031
MB 885-24031/1-A	Method Blank	Total/NA	Solid	8015M/D	24031
LCS 885-24031/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24031
885-22848-1 MS	BH23-34 4'	Total/NA	Solid	8015M/D	24031
885-22848-1 MSD	BH23-34 4'	Total/NA	Solid	8015M/D	24031

Analysis Batch: 24180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22848-1	BH23-34 4'	Total/NA	Solid	8021B	24031
885-22848-2	BH23-34 5'	Total/NA	Solid	8021B	24031
885-22848-3	BH23-34 6'	Total/NA	Solid	8021B	24031
MB 885-24031/1-A	Method Blank	Total/NA	Solid	8021B	24031
LCS 885-24031/3-A	Lab Control Sample	Total/NA	Solid	8021B	24031
885-22848-2 MS	BH23-34 5'	Total/NA	Solid	8021B	24031
885-22848-2 MSD	BH23-34 5'	Total/NA	Solid	8021B	24031

GC Semi VOA

Prep Batch: 24116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22848-1	BH23-34 4'	Total/NA	Solid	SHAKE	
885-22848-2	BH23-34 5'	Total/NA	Solid	SHAKE	
885-22848-3	BH23-34 6'	Total/NA	Solid	SHAKE	
MB 885-24116/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-24116/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-22848-3 MS	BH23-34 6'	Total/NA	Solid	SHAKE	
885-22848-3 MSD	BH23-34 6'	Total/NA	Solid	SHAKE	

Analysis Batch: 24185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22848-1	BH23-34 4'	Total/NA	Solid	8015M/D	24116
885-22848-2	BH23-34 5'	Total/NA	Solid	8015M/D	24116
885-22848-3	BH23-34 6'	Total/NA	Solid	8015M/D	24116
MB 885-24116/1-A	Method Blank	Total/NA	Solid	8015M/D	24116
LCS 885-24116/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24116
885-22848-3 MS	BH23-34 6'	Total/NA	Solid	8015M/D	24116

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

GC Semi VOA (Continued)

Analysis Batch: 24185 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22848-3 MSD	BH23-34 6'	Total/NA	Solid	8015M/D	24116

HPLC/IC

Prep Batch: 24097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22848-1	BH23-34 4'	Total/NA	Solid	300_Prep	24097
885-22848-2	BH23-34 5'	Total/NA	Solid	300_Prep	
885-22848-3	BH23-34 6'	Total/NA	Solid	300_Prep	
MB 885-24097/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-24097/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 24098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22848-1	BH23-34 4'	Total/NA	Solid	300.0	24097
885-22848-2	BH23-34 5'	Total/NA	Solid	300.0	24097
885-22848-3	BH23-34 6'	Total/NA	Solid	300.0	24097
MB 885-24097/1-A	Method Blank	Total/NA	Solid	300.0	24097
LCS 885-24097/2-A	Lab Control Sample	Total/NA	Solid	300.0	24097

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

Client Sample ID: BH23-34 4'
Date Collected: 04/07/25 08:40
Date Received: 04/09/25 07:40

Lab Sample ID: 885-22848-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24031	AT	EET ALB	04/10/25 14:24
Total/NA	Analysis	8015M/D		1	24179	AT	EET ALB	04/11/25 22:09
Total/NA	Prep	5030C			24031	AT	EET ALB	04/10/25 14:24
Total/NA	Analysis	8021B		1	24180	AT	EET ALB	04/11/25 22:09
Total/NA	Prep	SHAKE			24116	EM	EET ALB	04/11/25 11:33
Total/NA	Analysis	8015M/D		1	24185	MI	EET ALB	04/15/25 07:13
Total/NA	Prep	300_Prep			24097	DL	EET ALB	04/11/25 10:14
Total/NA	Analysis	300.0		20	24098	JT	EET ALB	04/11/25 11:26

Client Sample ID: BH23-34 5'
Date Collected: 04/07/25 08:55
Date Received: 04/09/25 07:40

Lab Sample ID: 885-22848-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24031	AT	EET ALB	04/10/25 14:24
Total/NA	Analysis	8015M/D		1	24179	AT	EET ALB	04/11/25 23:14
Total/NA	Prep	5030C			24031	AT	EET ALB	04/10/25 14:24
Total/NA	Analysis	8021B		1	24180	AT	EET ALB	04/11/25 23:14
Total/NA	Prep	SHAKE			24116	EM	EET ALB	04/11/25 11:33
Total/NA	Analysis	8015M/D		1	24185	MI	EET ALB	04/15/25 07:24
Total/NA	Prep	300_Prep			24097	DL	EET ALB	04/11/25 10:14
Total/NA	Analysis	300.0		20	24098	JT	EET ALB	04/11/25 11:57

Client Sample ID: BH23-34 6'
Date Collected: 04/07/25 09:00
Date Received: 04/09/25 07:40

Lab Sample ID: 885-22848-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24031	AT	EET ALB	04/10/25 14:24
Total/NA	Analysis	8015M/D		1	24179	AT	EET ALB	04/12/25 00:20
Total/NA	Prep	5030C			24031	AT	EET ALB	04/10/25 14:24
Total/NA	Analysis	8021B		1	24180	AT	EET ALB	04/12/25 00:20
Total/NA	Prep	SHAKE			24116	EM	EET ALB	04/11/25 11:33
Total/NA	Analysis	8015M/D		1	24185	MI	EET ALB	04/15/25 07:36
Total/NA	Prep	300_Prep			24097	DL	EET ALB	04/11/25 10:14
Total/NA	Analysis	300.0		20	24098	JT	EET ALB	04/11/25 12:28

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-22848-1

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



**HALL ENVIRON
ANALYSIS LAB**

www.hallenvironmental.co

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

[illegible]

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-22848-1

Login Number: 22848

List Source: Eurofins Albuquerque

List Number: 1

Creator: Rojas, Juan

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kent Stallings
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 4/18/2025 3:48:41 PM

JOB DESCRIPTION

Thistle Unit 10 CTB

JOB NUMBER

885-23112-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

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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Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Laboratory Job ID: 885-23112-1

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Definitions/Glossary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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
Project: Thistle Unit 10 CTB

Job ID: 885-23112-1

Job ID: 885-23112-1

Eurofins Albuquerque

Job Narrative 885-23112-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 4/12/2025 7:55 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 2.5°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: Surrogate recovery for the following samples were outside the upper control limit: BS25-01 1' (885-23112-1), BS25-02 1' (885-23112-2) and (MB 885-24387/1-A). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015D_DRO: Surrogate recovery for the following samples were outside the upper control limit: WS25-01 0-1' (885-23112-3) and WS25-02 0-1' (885-23112-4). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

Client Sample ID: BS25-01 1'

Lab Sample ID: 885-23112-1

Date Collected: 04/10/25 09:20

Matrix: Solid

Date Received: 04/12/25 07:55

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		04/15/25 10:22	04/17/25 13:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		35 - 166			04/15/25 10:22	04/17/25 13:22	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		04/15/25 10:22	04/17/25 13:22	1
Ethylbenzene	ND		0.048	mg/Kg		04/15/25 10:22	04/17/25 13:22	1
Toluene	ND		0.048	mg/Kg		04/15/25 10:22	04/17/25 13:22	1
Xylenes, Total	ND		0.097	mg/Kg		04/15/25 10:22	04/17/25 13:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		48 - 145			04/15/25 10:22	04/17/25 13:22	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		04/16/25 13:17	04/17/25 13:41	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		04/16/25 13:17	04/17/25 13:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	166	S1+	62 - 134			04/16/25 13:17	04/17/25 13:41	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	870		60	mg/Kg		04/16/25 09:52	04/16/25 16:21	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

Client Sample ID: BS25-02 1'

Lab Sample ID: 885-23112-2

Date Collected: 04/10/25 09:25

Matrix: Solid

Date Received: 04/12/25 07:55

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		04/15/25 10:22	04/17/25 13:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		35 - 166			04/15/25 10:22	04/17/25 13:47	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		04/15/25 10:22	04/17/25 13:47	1
Ethylbenzene	ND		0.050	mg/Kg		04/15/25 10:22	04/17/25 13:47	1
Toluene	ND		0.050	mg/Kg		04/15/25 10:22	04/17/25 13:47	1
Xylenes, Total	ND		0.10	mg/Kg		04/15/25 10:22	04/17/25 13:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		48 - 145			04/15/25 10:22	04/17/25 13:47	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		9.7	mg/Kg		04/16/25 13:17	04/17/25 13:54	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		04/16/25 13:17	04/17/25 13:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	170	S1+	62 - 134			04/16/25 13:17	04/17/25 13:54	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	860		60	mg/Kg		04/16/25 09:52	04/16/25 16:35	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

Client Sample ID: WS25-01 0-1'

Lab Sample ID: 885-23112-3

Date Collected: 04/10/25 09:05

Matrix: Solid

Date Received: 04/12/25 07:55

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		04/15/25 10:22	04/17/25 14:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		35 - 166			04/15/25 10:22	04/17/25 14:12	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		04/15/25 10:22	04/17/25 14:12	1
Ethylbenzene	ND		0.050	mg/Kg		04/15/25 10:22	04/17/25 14:12	1
Toluene	ND		0.050	mg/Kg		04/15/25 10:22	04/17/25 14:12	1
Xylenes, Total	ND		0.099	mg/Kg		04/15/25 10:22	04/17/25 14:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		48 - 145			04/15/25 10:22	04/17/25 14:12	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		9.3	mg/Kg		04/16/25 13:17	04/17/25 12:37	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		04/16/25 13:17	04/17/25 12:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	137	S1+	62 - 134			04/16/25 13:17	04/17/25 12:37	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		60	mg/Kg		04/16/25 09:52	04/16/25 16:49	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

Client Sample ID: WS25-02 0-1'

Lab Sample ID: 885-23112-4

Date Collected: 04/10/25 09:15

Matrix: Solid

Date Received: 04/12/25 07:55

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		04/15/25 10:22	04/17/25 14:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		35 - 166			04/15/25 10:22	04/17/25 14:37	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		04/15/25 10:22	04/17/25 14:37	1
Ethylbenzene	ND		0.048	mg/Kg		04/15/25 10:22	04/17/25 14:37	1
Toluene	ND		0.048	mg/Kg		04/15/25 10:22	04/17/25 14:37	1
Xylenes, Total	ND		0.095	mg/Kg		04/15/25 10:22	04/17/25 14:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		48 - 145			04/15/25 10:22	04/17/25 14:37	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		9.3	mg/Kg		04/16/25 13:17	04/17/25 13:01	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		04/16/25 13:17	04/17/25 13:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	138	S1+	62 - 134			04/16/25 13:17	04/17/25 13:01	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		61	mg/Kg		04/16/25 09:52	04/16/25 17:03	20

Eurofins Albuquerque

QC Sample Results

Client: Vertex

Job ID: 885-23112-1

Project/Site: Thistle Unit 10 CTB

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-24279/1-A

Matrix: Solid

Analysis Batch: 24454

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24279

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		04/15/25 10:22	04/17/25 12:32	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		35 - 166			04/15/25 10:22	04/17/25 12:32	1

Lab Sample ID: LCS 885-24279/2-A

Matrix: Solid

Analysis Batch: 24454

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	25.0	29.8		mg/Kg		119	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	216		35 - 166				

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-24279/1-A

Matrix: Solid

Analysis Batch: 24455

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24279

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		04/15/25 10:22	04/17/25 12:32	1
Ethylbenzene	ND		0.050	mg/Kg		04/15/25 10:22	04/17/25 12:32	1
Toluene	ND		0.050	mg/Kg		04/15/25 10:22	04/17/25 12:32	1
Xylenes, Total	ND		0.10	mg/Kg		04/15/25 10:22	04/17/25 12:32	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		48 - 145			04/15/25 10:22	04/17/25 12:32	1

Lab Sample ID: LCS 885-24279/3-A

Matrix: Solid

Analysis Batch: 24455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.993		mg/Kg		99	70 - 130
Ethylbenzene	1.00	0.997		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	2.00	2.14		mg/Kg		107	70 - 130
o-Xylene	1.00	1.02		mg/Kg		102	70 - 130
Toluene	1.00	0.998		mg/Kg		100	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	118		48 - 145				

Eurofins Albuquerque

QC Sample Results

Client: Vertex

Job ID: 885-23112-1

Project/Site: Thistle Unit 10 CTB

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-24387/1-A

Matrix: Solid

Analysis Batch: 24440

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24387

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		04/16/25 13:17	04/17/25 13:17	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		04/16/25 13:17	04/17/25 13:17	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	159	S1+	62 - 134			04/16/25 13:17	04/17/25 13:17	1

Lab Sample ID: LCS 885-24387/2-A

Matrix: Solid

Analysis Batch: 24440

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	60.3		mg/Kg		121	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	125		62 - 134				

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-24356/1-A

Matrix: Solid

Analysis Batch: 24362

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24356

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	mg/Kg		04/16/25 09:52	04/16/25 12:06	1
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
Chloride	15.0		14.9	mg/Kg		99	90 - 110	

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

GC VOA

Prep Batch: 24279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23112-1	BS25-01 1'	Total/NA	Solid	5030C	
885-23112-2	BS25-02 1'	Total/NA	Solid	5030C	
885-23112-3	WS25-01 0-1'	Total/NA	Solid	5030C	
885-23112-4	WS25-02 0-1'	Total/NA	Solid	5030C	
MB 885-24279/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-24279/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-24279/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 24454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23112-1	BS25-01 1'	Total/NA	Solid	8015M/D	24279
885-23112-2	BS25-02 1'	Total/NA	Solid	8015M/D	24279
885-23112-3	WS25-01 0-1'	Total/NA	Solid	8015M/D	24279
885-23112-4	WS25-02 0-1'	Total/NA	Solid	8015M/D	24279
MB 885-24279/1-A	Method Blank	Total/NA	Solid	8015M/D	24279
LCS 885-24279/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24279

Analysis Batch: 24455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23112-1	BS25-01 1'	Total/NA	Solid	8021B	24279
885-23112-2	BS25-02 1'	Total/NA	Solid	8021B	24279
885-23112-3	WS25-01 0-1'	Total/NA	Solid	8021B	24279
885-23112-4	WS25-02 0-1'	Total/NA	Solid	8021B	24279
MB 885-24279/1-A	Method Blank	Total/NA	Solid	8021B	24279
LCS 885-24279/3-A	Lab Control Sample	Total/NA	Solid	8021B	24279

GC Semi VOA

Prep Batch: 24387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23112-1	BS25-01 1'	Total/NA	Solid	SHAKE	
885-23112-2	BS25-02 1'	Total/NA	Solid	SHAKE	
885-23112-3	WS25-01 0-1'	Total/NA	Solid	SHAKE	
885-23112-4	WS25-02 0-1'	Total/NA	Solid	SHAKE	
MB 885-24387/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-24387/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 24440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23112-1	BS25-01 1'	Total/NA	Solid	8015M/D	24387
885-23112-2	BS25-02 1'	Total/NA	Solid	8015M/D	24387
MB 885-24387/1-A	Method Blank	Total/NA	Solid	8015M/D	24387
LCS 885-24387/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24387

Analysis Batch: 24441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23112-3	WS25-01 0-1'	Total/NA	Solid	8015M/D	24387
885-23112-4	WS25-02 0-1'	Total/NA	Solid	8015M/D	24387

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

HPLC/IC

Prep Batch: 24356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23112-1	BS25-01 1'	Total/NA	Solid	300_Prep	
885-23112-2	BS25-02 1'	Total/NA	Solid	300_Prep	
885-23112-3	WS25-01 0-1'	Total/NA	Solid	300_Prep	
885-23112-4	WS25-02 0-1'	Total/NA	Solid	300_Prep	
MB 885-24356/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-24356/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 24362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23112-1	BS25-01 1'	Total/NA	Solid	300.0	24356
885-23112-2	BS25-02 1'	Total/NA	Solid	300.0	24356
885-23112-3	WS25-01 0-1'	Total/NA	Solid	300.0	24356
885-23112-4	WS25-02 0-1'	Total/NA	Solid	300.0	24356
MB 885-24356/1-A	Method Blank	Total/NA	Solid	300.0	24356
LCS 885-24356/2-A	Lab Control Sample	Total/NA	Solid	300.0	24356

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

Client Sample ID: BS25-01 1'
Date Collected: 04/10/25 09:20
Date Received: 04/12/25 07:55

Lab Sample ID: 885-23112-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24279	AT	EET ALB	04/15/25 10:22
Total/NA	Analysis	8015M/D		1	24454	JP	EET ALB	04/17/25 13:22
Total/NA	Prep	5030C			24279	AT	EET ALB	04/15/25 10:22
Total/NA	Analysis	8021B		1	24455	JP	EET ALB	04/17/25 13:22
Total/NA	Prep	SHAKE			24387	MI	EET ALB	04/16/25 13:17
Total/NA	Analysis	8015M/D		1	24440	EM	EET ALB	04/17/25 13:41
Total/NA	Prep	300_Prep			24356	DL	EET ALB	04/16/25 09:52
Total/NA	Analysis	300.0		20	24362	ES	EET ALB	04/16/25 16:21

Client Sample ID: BS25-02 1'
Date Collected: 04/10/25 09:25
Date Received: 04/12/25 07:55

Lab Sample ID: 885-23112-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24279	AT	EET ALB	04/15/25 10:22
Total/NA	Analysis	8015M/D		1	24454	JP	EET ALB	04/17/25 13:47
Total/NA	Prep	5030C			24279	AT	EET ALB	04/15/25 10:22
Total/NA	Analysis	8021B		1	24455	JP	EET ALB	04/17/25 13:47
Total/NA	Prep	SHAKE			24387	MI	EET ALB	04/16/25 13:17
Total/NA	Analysis	8015M/D		1	24440	EM	EET ALB	04/17/25 13:54
Total/NA	Prep	300_Prep			24356	DL	EET ALB	04/16/25 09:52
Total/NA	Analysis	300.0		20	24362	ES	EET ALB	04/16/25 16:35

Client Sample ID: WS25-01 0-1'
Date Collected: 04/10/25 09:05
Date Received: 04/12/25 07:55

Lab Sample ID: 885-23112-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24279	AT	EET ALB	04/15/25 10:22
Total/NA	Analysis	8015M/D		1	24454	JP	EET ALB	04/17/25 14:12
Total/NA	Prep	5030C			24279	AT	EET ALB	04/15/25 10:22
Total/NA	Analysis	8021B		1	24455	JP	EET ALB	04/17/25 14:12
Total/NA	Prep	SHAKE			24387	MI	EET ALB	04/16/25 13:17
Total/NA	Analysis	8015M/D		1	24441	EM	EET ALB	04/17/25 12:37
Total/NA	Prep	300_Prep			24356	DL	EET ALB	04/16/25 09:52
Total/NA	Analysis	300.0		20	24362	ES	EET ALB	04/16/25 16:49

Client Sample ID: WS25-02 0-1'
Date Collected: 04/10/25 09:15
Date Received: 04/12/25 07:55

Lab Sample ID: 885-23112-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24279	AT	EET ALB	04/15/25 10:22
Total/NA	Analysis	8015M/D		1	24454	JP	EET ALB	04/17/25 14:37

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

Client Sample ID: WS25-02 0-1'

Lab Sample ID: 885-23112-4

Date Collected: 04/10/25 09:15

Matrix: Solid

Date Received: 04/12/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24279	AT	EET ALB	04/15/25 10:22
Total/NA	Analysis	8021B		1	24455	JP	EET ALB	04/17/25 14:37
Total/NA	Prep	SHAKE			24387	MI	EET ALB	04/16/25 13:17
Total/NA	Analysis	8015M/D		1	24441	EM	EET ALB	04/17/25 13:01
Total/NA	Prep	300_Prep			24356	DL	EET ALB	04/16/25 09:52
Total/NA	Analysis	300.0		20	24362	ES	EET ALB	04/16/25 17:03

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-23112-1

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



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

885-23112 COC

Turn-Around Time:

Client:

Vertex

~~X-extended~~ 72-hr Rush

Project Name:

Mailing Address:

Thistle Unit 10 CTB

Project #:

23E-04784

email or Fax#:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Sampler: L. Pullman

On Ice:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
---------	---	-----------------------------

of Coolers:

Cooler Temp_(including CF): $73 + 0.7 = 73.7$ Cooler Temp_(including CF): $73 + 0.7 = 73.7$ [illegible]

Date	Time	Matrix	Sample Name
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Matrix

Sample Name

Type

Container	Preservative	HEAL No.
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4/18/2025

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.

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- 8
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Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-23112-1

Login Number: 23112

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

- 1
- 2
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ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 5/21/2025 3:24:40 PM

JOB DESCRIPTION

Thistle Unit 10 Battery

JOB NUMBER

885-25053-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

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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5/21/2025 3:24:40 PM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: Thistle Unit 10 Battery

Laboratory Job ID: 885-25053-1

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Definitions/Glossary

Client: Vertex
Project/Site: Thistle Unit 10 Battery

Job ID: 885-25053-1

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
Project: Thistle Unit 10 Battery

Job ID: 885-25053-1

Job ID: 885-25053-1

Eurofins Albuquerque

Job Narrative 885-25053-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 5/16/2025 7:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.4°C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 Battery

Job ID: 885-25053-1

Client Sample ID: Backfill

Lab Sample ID: 885-25053-1

Date Collected: 05/14/25 09:00

Matrix: Solid

Date Received: 05/16/25 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		05/16/25 11:37	05/19/25 16:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		15 - 150			05/16/25 11:37	05/19/25 16:29	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		05/16/25 11:37	05/20/25 14:33	1
Ethylbenzene	ND		0.049	mg/Kg		05/16/25 11:37	05/20/25 14:33	1
Toluene	ND		0.049	mg/Kg		05/16/25 11:37	05/20/25 14:33	1
Xylenes, Total	ND		0.098	mg/Kg		05/16/25 11:37	05/20/25 14:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		15 - 150			05/16/25 11:37	05/20/25 14:33	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		8.4	mg/Kg		05/16/25 13:35	05/19/25 13:46	1
Motor Oil Range Organics [C28-C40]	ND		42	mg/Kg		05/16/25 13:35	05/19/25 13:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	91		62 - 134			05/16/25 13:35	05/19/25 13:46	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	76		60	mg/Kg		05/19/25 08:26	05/19/25 17:38	20

Eurofins Albuquerque

QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 Battery

Job ID: 885-25053-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-26341/1-A

Matrix: Solid

Analysis Batch: 26476

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26341

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		05/16/25 11:36	05/19/25 12:51	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		15 - 150			05/16/25 11:36	05/19/25 12:51	1

Lab Sample ID: LCS 885-26341/2-A

Matrix: Solid

Analysis Batch: 26476

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	25.0	29.6		mg/Kg		118	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	235		15 - 150				

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-26341/1-A

Matrix: Solid

Analysis Batch: 26529

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26341

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/16/25 11:36	05/20/25 11:18	1
Ethylbenzene	ND		0.050	mg/Kg		05/16/25 11:36	05/20/25 11:18	1
Toluene	ND		0.050	mg/Kg		05/16/25 11:36	05/20/25 11:18	1
Xylenes, Total	ND		0.10	mg/Kg		05/16/25 11:36	05/20/25 11:18	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		15 - 150			05/16/25 11:36	05/20/25 11:18	1

Lab Sample ID: LCS 885-26341/3-A

Matrix: Solid

Analysis Batch: 26529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.880		mg/Kg		88	70 - 130
Ethylbenzene	1.00	0.901		mg/Kg		90	70 - 130
m-Xylene & p-Xylene	2.00	1.84		mg/Kg		92	70 - 130
o-Xylene	1.00	0.900		mg/Kg		90	70 - 130
Toluene	1.00	0.885		mg/Kg		89	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	95		15 - 150				

Eurofins Albuquerque

QC Sample Results

Client: Vertex

Job ID: 885-25053-1

Project/Site: Thistle Unit 10 Battery

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-26350/1-A

Matrix: Solid

Analysis Batch: 26453

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26350

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		05/16/25 13:35	05/19/25 11:49	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		05/16/25 13:35	05/19/25 11:49	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	111		62 - 134			05/16/25 13:35	05/19/25 11:49	1

Lab Sample ID: LCS 885-26350/2-A

Matrix: Solid

Analysis Batch: 26453

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26350

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	56.5		mg/Kg		113	51 - 148
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	122		62 - 134				

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-26422/1-A

Matrix: Solid

Analysis Batch: 26430

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26422

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	mg/Kg		05/19/25 08:26	05/19/25 14:20	1
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
Chloride	15.0		15.3	mg/Kg		102	90 - 110	

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 Battery

Job ID: 885-25053-1

GC VOA

Prep Batch: 26341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25053-1	Backfill	Total/NA	Solid	5030C	
MB 885-26341/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-26341/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-26341/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 26476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25053-1	Backfill	Total/NA	Solid	8015M/D	26341
MB 885-26341/1-A	Method Blank	Total/NA	Solid	8015M/D	26341
LCS 885-26341/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	26341

Analysis Batch: 26529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25053-1	Backfill	Total/NA	Solid	8021B	26341
MB 885-26341/1-A	Method Blank	Total/NA	Solid	8021B	26341
LCS 885-26341/3-A	Lab Control Sample	Total/NA	Solid	8021B	26341

GC Semi VOA

Prep Batch: 26350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25053-1	Backfill	Total/NA	Solid	SHAKE	
MB 885-26350/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-26350/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 26453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25053-1	Backfill	Total/NA	Solid	8015M/D	26350
MB 885-26350/1-A	Method Blank	Total/NA	Solid	8015M/D	26350
LCS 885-26350/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	26350

HPLC/IC

Prep Batch: 26422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25053-1	Backfill	Total/NA	Solid	300_Prep	
MB 885-26422/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-26422/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 26430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25053-1	Backfill	Total/NA	Solid	300.0	26422
MB 885-26422/1-A	Method Blank	Total/NA	Solid	300.0	26422
LCS 885-26422/2-A	Lab Control Sample	Total/NA	Solid	300.0	26422

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 Battery

Job ID: 885-25053-1

Client Sample ID: Backfill
Date Collected: 05/14/25 09:00
Date Received: 05/16/25 07:45

Lab Sample ID: 885-25053-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26341	JE	EET ALB	05/16/25 11:37
Total/NA	Analysis	8015M/D		1	26476	AT	EET ALB	05/19/25 16:29
Total/NA	Prep	5030C			26341	JE	EET ALB	05/16/25 11:37
Total/NA	Analysis	8021B		1	26529	AT	EET ALB	05/20/25 14:33
Total/NA	Prep	SHAKE			26350	JM	EET ALB	05/16/25 13:35
Total/NA	Analysis	8015M/D		1	26453	MB	EET ALB	05/19/25 13:46
Total/NA	Prep	300_Prep			26422	DL	EET ALB	05/19/25 08:26
Total/NA	Analysis	300.0		20	26430	MA	EET ALB	05/19/25 17:38

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

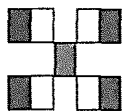
Client: Vertex
Project/Site: Thistle Unit 10 Battery

Job ID: 885-25053-1

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



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

885-25053 COC

4901 Hawkins NE - Albuquerque, NM 87101

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

Analysis Request

[illegible]

Remarks: bill to devon, WO: 21206611

ATTN

CC: bhadrina.taylor@vertex.ca,
KStallings@vertex.ca

Chain-of-Custody Record

[illegible]

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.

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-25053-1

Login Number: 25053

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
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?	False	Refer to Job Narrative for details.
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kent Stallings
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 6/3/2025 11:13:39 AM

JOB DESCRIPTION

Thistle Unit 10 CTB

JOB NUMBER

885-25492-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

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
6/3/2025 11:13:39 AM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Laboratory Job ID: 885-25492-1

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Definitions/Glossary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1+	Surrogate recovery exceeds control limits, high biased.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

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
Project: Thistle Unit 10 CTB

Job ID: 885-25492-1

Job ID: 885-25492-1**Eurofins Albuquerque****Job Narrative
885-25492-1**

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 5/24/2025 8:00 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 0.5°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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 885-27083 and analytical batch 885-27142 recovered outside control limits for the following analytes: Diesel Range Organics [C10-C28]. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. Samples with hits will be re-extracted or re-ran with the LCS.

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-03 0'

Lab Sample ID: 885-25492-1

Date Collected: 05/22/25 08:00

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 13:37	05/28/25 21:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		15 - 150			05/27/25 13:37	05/28/25 21:51	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		05/27/25 13:37	05/28/25 21:51	1
Ethylbenzene	ND		0.049	mg/Kg		05/27/25 13:37	05/28/25 21:51	1
Toluene	ND		0.049	mg/Kg		05/27/25 13:37	05/28/25 21:51	1
Xylenes, Total	ND		0.097	mg/Kg		05/27/25 13:37	05/28/25 21:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		15 - 150			05/27/25 13:37	05/28/25 21:51	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		05/28/25 13:58	05/29/25 18:18	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		05/28/25 13:58	05/29/25 18:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	109		62 - 134			05/28/25 13:58	05/29/25 18:18	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	360		60	mg/Kg		05/28/25 09:15	05/28/25 19:55	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-034 0'

Lab Sample ID: 885-25492-2

Date Collected: 05/22/25 08:05

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 13:37	05/28/25 22:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		15 - 150			05/27/25 13:37	05/28/25 22:15	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 13:37	05/28/25 22:15	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 22:15	1
Toluene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 22:15	1
Xylenes, Total	ND		0.10	mg/Kg		05/27/25 13:37	05/28/25 22:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		15 - 150			05/27/25 13:37	05/28/25 22:15	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	*+	9.8	mg/Kg		05/28/25 13:58	05/29/25 18:50	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		05/28/25 13:58	05/29/25 18:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	111		62 - 134			05/28/25 13:58	05/29/25 18:50	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	870		60	mg/Kg		05/28/25 09:15	05/30/25 13:02	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-05 0'

Lab Sample ID: 885-25492-3

Date Collected: 05/22/25 08:10

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 13:37	05/28/25 22:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		15 - 150			05/27/25 13:37	05/28/25 22:38	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 13:37	05/28/25 22:38	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 22:38	1
Toluene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 22:38	1
Xylenes, Total	ND		0.10	mg/Kg		05/27/25 13:37	05/28/25 22:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		15 - 150			05/27/25 13:37	05/28/25 22:38	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		9.7	mg/Kg		05/30/25 12:47	06/02/25 11:19	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		05/30/25 12:47	06/02/25 11:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	109		62 - 134			05/30/25 12:47	06/02/25 11:19	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1100		60	mg/Kg		05/28/25 09:15	05/30/25 13:15	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-06 0'

Lab Sample ID: 885-25492-4

Date Collected: 05/22/25 08:15

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 13:37	05/28/25 23:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		15 - 150			05/27/25 13:37	05/28/25 23:01	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 13:37	05/28/25 23:01	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 23:01	1
Toluene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 23:01	1
Xylenes, Total	ND		0.10	mg/Kg		05/27/25 13:37	05/28/25 23:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		15 - 150			05/27/25 13:37	05/28/25 23:01	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	*+	9.3	mg/Kg		05/28/25 13:58	05/29/25 19:12	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/28/25 13:58	05/29/25 19:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	103		62 - 134			05/28/25 13:58	05/29/25 19:12	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2400		60	mg/Kg		05/28/25 09:15	05/30/25 13:28	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-07 0'

Lab Sample ID: 885-25492-5

Date Collected: 05/22/25 08:25

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 13:37	05/28/25 23:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		15 - 150			05/27/25 13:37	05/28/25 23:25	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 13:37	05/28/25 23:25	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 23:25	1
Toluene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 23:25	1
Xylenes, Total	ND		0.099	mg/Kg		05/27/25 13:37	05/28/25 23:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		15 - 150			05/27/25 13:37	05/28/25 23:25	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	*+	9.9	mg/Kg		05/28/25 13:58	05/29/25 19:23	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		05/28/25 13:58	05/29/25 19:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	105		62 - 134			05/28/25 13:58	05/29/25 19:23	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	210		60	mg/Kg		05/28/25 09:15	05/30/25 13:41	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-08 0'

Lab Sample ID: 885-25492-6

Date Collected: 05/22/25 08:30

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 13:37	05/28/25 23:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		15 - 150			05/27/25 13:37	05/28/25 23:48	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 13:37	05/28/25 23:48	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 23:48	1
Toluene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 23:48	1
Xylenes, Total	ND		0.099	mg/Kg		05/27/25 13:37	05/28/25 23:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		15 - 150			05/27/25 13:37	05/28/25 23:48	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		05/28/25 13:58	05/29/25 19:34	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		05/28/25 13:58	05/29/25 19:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	122		62 - 134			05/28/25 13:58	05/29/25 19:34	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1000		60	mg/Kg		05/28/25 09:15	05/30/25 13:54	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-09 0'
Date Collected: 05/22/25 08:35
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-7
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		5.0	mg/Kg		05/27/25 13:37	05/29/25 00:12	1
Surrogate								
4-Bromofluorobenzene (Surr)	93		15 - 150			05/27/25 13:37	05/29/25 00:12	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 13:37	05/29/25 00:12	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 13:37	05/29/25 00:12	1
Toluene	ND		0.050	mg/Kg		05/27/25 13:37	05/29/25 00:12	1
Xylenes, Total	ND		0.099	mg/Kg		05/27/25 13:37	05/29/25 00:12	1
Surrogate								
4-Bromofluorobenzene (Surr)	96		15 - 150			05/27/25 13:37	05/29/25 00:12	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	*+	9.5	mg/Kg		05/28/25 13:58	05/29/25 19:45	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		05/28/25 13:58	05/29/25 19:45	1
Surrogate								
Di-n-octyl phthalate (Surr)	114		62 - 134			05/28/25 13:58	05/29/25 19:45	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	320		60	mg/Kg		05/28/25 09:15	05/30/25 14:07	20

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-10 0'

Lab Sample ID: 885-25492-8

Date Collected: 05/22/25 08:40

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 13:37	05/29/25 00:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		15 - 150			05/27/25 13:37	05/29/25 00:35	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 13:37	05/29/25 00:35	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 13:37	05/29/25 00:35	1
Toluene	ND		0.050	mg/Kg		05/27/25 13:37	05/29/25 00:35	1
Xylenes, Total	ND		0.10	mg/Kg		05/27/25 13:37	05/29/25 00:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		15 - 150			05/27/25 13:37	05/29/25 00:35	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		05/28/25 13:58	05/29/25 19:56	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/28/25 13:58	05/29/25 19:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	132		62 - 134			05/28/25 13:58	05/29/25 19:56	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1200		60	mg/Kg		05/28/25 09:15	05/30/25 14:21	20

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Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-11 0'

Lab Sample ID: 885-25492-9

Date Collected: 05/22/25 08:50

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 13:37	05/29/25 00:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		15 - 150			05/27/25 13:37	05/29/25 00:58	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		05/27/25 13:37	05/29/25 00:58	1
Ethylbenzene	ND		0.049	mg/Kg		05/27/25 13:37	05/29/25 00:58	1
Toluene	ND		0.049	mg/Kg		05/27/25 13:37	05/29/25 00:58	1
Xylenes, Total	ND		0.098	mg/Kg		05/27/25 13:37	05/29/25 00:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		15 - 150			05/27/25 13:37	05/29/25 00:58	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		05/28/25 13:58	05/29/25 20:18	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/28/25 13:58	05/29/25 20:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	115		62 - 134			05/28/25 13:58	05/29/25 20:18	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	62		60	mg/Kg		05/28/25 09:15	05/30/25 14:34	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-12 0'

Lab Sample ID: 885-25492-10

Date Collected: 05/22/25 08:55

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 16:43	05/29/25 02:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		15 - 150			05/27/25 16:43	05/29/25 02:56	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 16:43	05/29/25 02:56	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 02:56	1
Toluene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 02:56	1
Xylenes, Total	ND		0.10	mg/Kg		05/27/25 16:43	05/29/25 02:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		15 - 150			05/27/25 16:43	05/29/25 02:56	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]	ND	*+	10	mg/Kg		05/28/25 13:58	05/29/25 20:29	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		05/28/25 13:58	05/29/25 20:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	130		62 - 134			05/28/25 13:58	05/29/25 20:29	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1300		60	mg/Kg		05/28/25 09:15	05/30/25 14:47	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-13 0'

Lab Sample ID: 885-25492-11

Date Collected: 05/22/25 09:00

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 16:43	05/29/25 04:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		15 - 150			05/27/25 16:43	05/29/25 04:07	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 16:43	05/29/25 04:07	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 04:07	1
Toluene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 04:07	1
Xylenes, Total	ND		0.10	mg/Kg		05/27/25 16:43	05/29/25 04:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		15 - 150			05/27/25 16:43	05/29/25 04:07	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]	ND	*+	9.3	mg/Kg		05/28/25 13:58	05/29/25 20:40	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		05/28/25 13:58	05/29/25 20:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	133		62 - 134			05/28/25 13:58	05/29/25 20:40	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	860		60	mg/Kg		05/28/25 09:15	05/30/25 15:00	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-14 0'

Lab Sample ID: 885-25492-12

Date Collected: 05/22/25 10:00

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 16:43	05/29/25 05:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		15 - 150			05/27/25 16:43	05/29/25 05:17	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 16:43	05/29/25 05:17	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 05:17	1
Toluene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 05:17	1
Xylenes, Total	ND		0.099	mg/Kg		05/27/25 16:43	05/29/25 05:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		15 - 150			05/27/25 16:43	05/29/25 05:17	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		05/28/25 13:58	05/29/25 20:51	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		05/28/25 13:58	05/29/25 20:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	93		62 - 134			05/28/25 13:58	05/29/25 20:51	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	790		59	mg/Kg		05/28/25 09:15	05/30/25 15:39	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-15 0'

Lab Sample ID: 885-25492-13

Date Collected: 05/22/25 10:05

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 16:43	05/29/25 05:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		15 - 150			05/27/25 16:43	05/29/25 05:41	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 16:43	05/29/25 05:41	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 05:41	1
Toluene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 05:41	1
Xylenes, Total	ND		0.10	mg/Kg		05/27/25 16:43	05/29/25 05:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		15 - 150			05/27/25 16:43	05/29/25 05:41	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	*+	9.7	mg/Kg		05/28/25 13:58	05/29/25 21:02	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		05/28/25 13:58	05/29/25 21:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	119		62 - 134			05/28/25 13:58	05/29/25 21:02	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	380		60	mg/Kg		05/28/25 09:15	05/30/25 15:53	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-16 0'

Lab Sample ID: 885-25492-14

Date Collected: 05/22/25 10:10

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 16:43	05/29/25 06:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		15 - 150			05/27/25 16:43	05/29/25 06:04	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		05/27/25 16:43	05/29/25 06:04	1
Ethylbenzene	ND		0.048	mg/Kg		05/27/25 16:43	05/29/25 06:04	1
Toluene	ND		0.048	mg/Kg		05/27/25 16:43	05/29/25 06:04	1
Xylenes, Total	ND		0.095	mg/Kg		05/27/25 16:43	05/29/25 06:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		15 - 150			05/27/25 16:43	05/29/25 06:04	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		05/28/25 13:58	05/29/25 21:13	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		05/28/25 13:58	05/29/25 21:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	103		62 - 134			05/28/25 13:58	05/29/25 21:13	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		60	mg/Kg		05/28/25 09:15	05/30/25 16:06	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-17 0'

Lab Sample ID: 885-25492-15

Date Collected: 05/22/25 10:15

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 16:43	05/29/25 06:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		15 - 150			05/27/25 16:43	05/29/25 06:27	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 16:43	05/29/25 06:27	1
Ethylbenzene	ND		0.049	mg/Kg		05/27/25 16:43	05/29/25 06:27	1
Toluene	ND		0.049	mg/Kg		05/27/25 16:43	05/29/25 06:27	1
Xylenes, Total	ND		0.099	mg/Kg		05/27/25 16:43	05/29/25 06:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		15 - 150			05/27/25 16:43	05/29/25 06:27	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		05/28/25 13:58	05/29/25 21:24	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/28/25 13:58	05/29/25 21:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	112		62 - 134			05/28/25 13:58	05/29/25 21:24	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2400		60	mg/Kg		05/28/25 09:15	05/30/25 16:19	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-18 0'

Lab Sample ID: 885-25492-16

Date Collected: 05/22/25 10:25

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 16:43	05/29/25 06:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		15 - 150			05/27/25 16:43	05/29/25 06:51	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		05/27/25 16:43	05/29/25 06:51	1
Ethylbenzene	ND		0.048	mg/Kg		05/27/25 16:43	05/29/25 06:51	1
Toluene	ND		0.048	mg/Kg		05/27/25 16:43	05/29/25 06:51	1
Xylenes, Total	ND		0.097	mg/Kg		05/27/25 16:43	05/29/25 06:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		15 - 150			05/27/25 16:43	05/29/25 06:51	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		05/28/25 13:58	05/29/25 21:35	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		05/28/25 13:58	05/29/25 21:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	88		62 - 134			05/28/25 13:58	05/29/25 21:35	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	520		60	mg/Kg		05/28/25 09:15	05/30/25 16:32	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-19 0'

Lab Sample ID: 885-25492-17

Date Collected: 05/22/25 10:30

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 16:43	05/29/25 07:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		15 - 150			05/27/25 16:43	05/29/25 07:14	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		05/27/25 16:43	05/29/25 07:14	1
Ethylbenzene	ND		0.048	mg/Kg		05/27/25 16:43	05/29/25 07:14	1
Toluene	ND		0.048	mg/Kg		05/27/25 16:43	05/29/25 07:14	1
Xylenes, Total	ND		0.097	mg/Kg		05/27/25 16:43	05/29/25 07:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		15 - 150			05/27/25 16:43	05/29/25 07:14	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]	ND	*+	9.2	mg/Kg		05/28/25 13:58	05/29/25 21:46	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		05/28/25 13:58	05/29/25 21:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	96		62 - 134			05/28/25 13:58	05/29/25 21:46	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2000		60	mg/Kg		05/28/25 09:15	05/30/25 16:45	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-20 0'

Lab Sample ID: 885-25492-18

Date Collected: 05/22/25 10:35

Matrix: Solid

Date Received: 05/24/25 08:00

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		05/27/25 16:43	05/29/25 07:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		15 - 150			05/27/25 16:43	05/29/25 07:37	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 16:43	05/29/25 07:37	1
Ethylbenzene	ND		0.049	mg/Kg		05/27/25 16:43	05/29/25 07:37	1
Toluene	ND		0.049	mg/Kg		05/27/25 16:43	05/29/25 07:37	1
Xylenes, Total	ND		0.098	mg/Kg		05/27/25 16:43	05/29/25 07:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		15 - 150			05/27/25 16:43	05/29/25 07:37	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]	11		9.4	mg/Kg		05/30/25 12:47	06/02/25 11:30	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/30/25 12:47	06/02/25 11:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	111		62 - 134			05/30/25 12:47	06/02/25 11:30	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1300		60	mg/Kg		05/28/25 09:15	05/30/25 16:58	20

Eurofins Albuquerque

QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-26981/1-A

Matrix: Solid

Analysis Batch: 27139

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26981

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		05/27/25 13:37	05/28/25 20:41	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		15 - 150			05/27/25 13:37	05/28/25 20:41	1

Lab Sample ID: LCS 885-26981/2-A

Matrix: Solid

Analysis Batch: 27139

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26981

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	25.0	25.4		mg/Kg		102	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	193		15 - 150				

Lab Sample ID: MB 885-27006/1-A

Matrix: Solid

Analysis Batch: 27141

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27006

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		05/27/25 16:43	05/29/25 02:33	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		15 - 150			05/27/25 16:43	05/29/25 02:33	1

Lab Sample ID: LCS 885-27006/2-A

Matrix: Solid

Analysis Batch: 27141

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27006

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	25.0	25.9		mg/Kg		103	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	186		15 - 150				

Lab Sample ID: 885-25492-10 MS

Matrix: Solid

Analysis Batch: 27141

Client Sample ID: BS25-12 0'

Prep Type: Total/NA

Prep Batch: 27006

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	26.7		mg/Kg		107	70 - 130

Eurofins Albuquerque

QC Sample Results

Client: Vertex

Job ID: 885-25492-1

Project/Site: Thistle Unit 10 CTB

Method: 8015M/D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: 885-25492-10 MS

Matrix: Solid

Analysis Batch: 27141

Client Sample ID: BS25-12 0'

Prep Type: Total/NA

Prep Batch: 27006

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	192		15 - 150

Lab Sample ID: 885-25492-10 MSD

Matrix: Solid

Analysis Batch: 27141

Client Sample ID: BS25-12 0'

Prep Type: Total/NA

Prep Batch: 27006

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		25.0	28.5		mg/Kg		114	70 - 130	7	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	198		15 - 150								

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-26981/1-A

Matrix: Solid

Analysis Batch: 27138

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26981

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 13:37	05/28/25 20:41	1
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 20:41	1
Toluene	ND		0.050	mg/Kg		05/27/25 13:37	05/28/25 20:41	1
Xylenes, Total	ND		0.10	mg/Kg		05/27/25 13:37	05/28/25 20:41	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		15 - 150			05/27/25 13:37	05/28/25 20:41	1

Lab Sample ID: LCS 885-26981/3-A

Matrix: Solid

Analysis Batch: 27138

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26981

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	1.06		mg/Kg		106	70 - 130
Ethylbenzene	1.00	1.04		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	2.00	2.19		mg/Kg		109	70 - 130
o-Xylene	1.00	1.05		mg/Kg		105	70 - 130
Toluene	1.00	1.05		mg/Kg		105	70 - 130
	LCS	LCS					
Surrogate	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene (Surr)	97		15 - 150				

Lab Sample ID: MB 885-27006/1-A

Matrix: Solid

Analysis Batch: 27140

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27006

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/27/25 16:43	05/29/25 02:33	1

Eurofins Albuquerque

QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 885-27006/1-A

Matrix: Solid

Analysis Batch: 27140

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27006

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Ethylbenzene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 02:33	1
Toluene	ND		0.050	mg/Kg		05/27/25 16:43	05/29/25 02:33	1
Xylenes, Total	ND		0.10	mg/Kg		05/27/25 16:43	05/29/25 02:33	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene (Surr)	97		15 - 150			05/27/25 16:43	05/29/25 02:33	1

Lab Sample ID: LCS 885-27006/3-A

Matrix: Solid

Analysis Batch: 27140

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27006

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	1.00	1.06		mg/Kg		106	70 - 130
Ethylbenzene	1.00	1.01		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	2.00	2.13		mg/Kg		106	70 - 130
o-Xylene	1.00	1.01		mg/Kg		101	70 - 130
Toluene	1.00	1.03		mg/Kg		103	70 - 130
Surrogate	LCS	LCS	Limits			%Recovery	Qualifier
	%Recovery	Qualifier					
4-Bromofluorobenzene (Surr)	97		15 - 150				

Lab Sample ID: 885-25492-11 MS

Matrix: Solid

Analysis Batch: 27140

Client Sample ID: BS25-13 0'

Prep Type: Total/NA

Prep Batch: 27006

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Benzene	ND		0.997	1.07		mg/Kg		107	70 - 130
Ethylbenzene	ND		0.997	1.02		mg/Kg		103	70 - 130
m-Xylene & p-Xylene	ND		1.99	2.15		mg/Kg		108	70 - 130
o-Xylene	ND		0.997	1.04		mg/Kg		105	70 - 130
Toluene	ND		0.997	1.04		mg/Kg		105	70 - 130
Surrogate	MS	MS	Limits			%Recovery	Qualifier		
	%Recovery	Qualifier							
4-Bromofluorobenzene (Surr)	95		15 - 150						

Lab Sample ID: 885-25492-11 MSD

Matrix: Solid

Analysis Batch: 27140

Client Sample ID: BS25-13 0'

Prep Type: Total/NA

Prep Batch: 27006

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
	Result	Qualifier		Result	Qualifier						
Benzene	ND		0.999	1.10		mg/Kg		110	70 - 130	3	20
Ethylbenzene	ND		0.999	1.08		mg/Kg		108	70 - 130	5	20
m-Xylene & p-Xylene	ND		2.00	2.21		mg/Kg		110	70 - 130	2	20
o-Xylene	ND		0.999	1.06		mg/Kg		106	70 - 130	2	20
Toluene	ND		0.999	1.07		mg/Kg		107	70 - 130	3	20

Eurofins Albuquerque

QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 885-25492-11 MSD

Matrix: Solid

Analysis Batch: 27140

Client Sample ID: BS25-13 0'

Prep Type: Total/NA

Prep Batch: 27006

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		15 - 150

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-27083/1-A

Matrix: Solid

Analysis Batch: 27142

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27083

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		05/28/25 13:58	05/29/25 12:28	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		05/28/25 13:58	05/29/25 12:28	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	133		62 - 134			05/28/25 13:58	05/29/25 12:28	1

Lab Sample ID: LCS 885-27083/2-A

Matrix: Solid

Analysis Batch: 27142

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27083

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	83.7	*+	mg/Kg		167	51 - 148
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	187	S1+	62 - 134				

Lab Sample ID: 885-25492-1 MS

Matrix: Solid

Analysis Batch: 27142

Client Sample ID: BS25-03 0'

Prep Type: Total/NA

Prep Batch: 27083

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	ND	*+	49.6	48.3		mg/Kg		80	44 - 136
Surrogate	MS %Recovery	MS Qualifier	Limits						
Di-n-octyl phthalate (Surr)	96		62 - 134						

Lab Sample ID: 885-25492-1 MSD

Matrix: Solid

Analysis Batch: 27142

Client Sample ID: BS25-03 0'

Prep Type: Total/NA

Prep Batch: 27083

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Diesel Range Organics [C10-C28]	ND	*+	47.4	40.9		mg/Kg		68	44 - 136	17	32
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Di-n-octyl phthalate (Surr)	80		62 - 134								

Eurofins Albuquerque

QC Sample Results

Client: Vertex

Job ID: 885-25492-1

Project/Site: Thistle Unit 10 CTB

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 885-27265/1-A

Matrix: Solid

Analysis Batch: 27351

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27265

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		05/30/25 12:47	06/02/25 10:58	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		05/30/25 12:47	06/02/25 10:58	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	108		62 - 134			05/30/25 12:47	06/02/25 10:58	1

Lab Sample ID: LCS 885-27265/2-A

Matrix: Solid

Analysis Batch: 27351

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	55.9		mg/Kg		112	51 - 148
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	109		62 - 134				

Lab Sample ID: 885-25492-18 MS

Matrix: Solid

Analysis Batch: 27351

Client Sample ID: BS25-20 0'

Prep Type: Total/NA

Prep Batch: 27265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	11		49.1	51.2		mg/Kg		83	44 - 136
Surrogate	MS %Recovery	MS Qualifier	Limits						
Di-n-octyl phthalate (Surr)	117		62 - 134						

Lab Sample ID: 885-25492-18 MSD

Matrix: Solid

Analysis Batch: 27351

Client Sample ID: BS25-20 0'

Prep Type: Total/NA

Prep Batch: 27265

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	11		49.1	57.0		mg/Kg		94	44 - 136	11	32
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Di-n-octyl phthalate (Surr)	120		62 - 134								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-27035/1-A

Matrix: Solid

Analysis Batch: 27034

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27035

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	mg/Kg		05/28/25 09:15	05/28/25 10:04	1

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QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 885-27035/2-A				Client Sample ID: Lab Control Sample							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 27034				Prep Batch: 27035							
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			15.0	15.2		mg/Kg		101	90 - 110		

Lab Sample ID: 885-25492-1 MSD				Client Sample ID: BS25-03 0'							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 27034				Prep Batch: 27035							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	360		30.2	403	4	mg/Kg		140	50 - 150	16	20

QC Association Summary

Client: Vertex

Job ID: 885-25492-1

Project/Site: Thistle Unit 10 CTB

GC VOA

Prep Batch: 26981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-1	BS25-03 0'	Total/NA	Solid	5030C	
885-25492-2	BS25-034 0'	Total/NA	Solid	5030C	
885-25492-3	BS25-05 0'	Total/NA	Solid	5030C	
885-25492-4	BS25-06 0'	Total/NA	Solid	5030C	
885-25492-5	BS25-07 0'	Total/NA	Solid	5030C	
885-25492-6	BS25-08 0'	Total/NA	Solid	5030C	
885-25492-7	BS25-09 0'	Total/NA	Solid	5030C	
885-25492-8	BS25-10 0'	Total/NA	Solid	5030C	
885-25492-9	BS25-11 0'	Total/NA	Solid	5030C	
MB 885-26981/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-26981/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-26981/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 27006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-10	BS25-12 0'	Total/NA	Solid	5030C	
885-25492-11	BS25-13 0'	Total/NA	Solid	5030C	
885-25492-12	BS25-14 0'	Total/NA	Solid	5030C	
885-25492-13	BS25-15 0'	Total/NA	Solid	5030C	
885-25492-14	BS25-16 0'	Total/NA	Solid	5030C	
885-25492-15	BS25-17 0'	Total/NA	Solid	5030C	
885-25492-16	BS25-18 0'	Total/NA	Solid	5030C	
885-25492-17	BS25-19 0'	Total/NA	Solid	5030C	
885-25492-18	BS25-20 0'	Total/NA	Solid	5030C	
MB 885-27006/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-27006/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-27006/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-25492-10 MS	BS25-12 0'	Total/NA	Solid	5030C	
885-25492-10 MSD	BS25-12 0'	Total/NA	Solid	5030C	
885-25492-11 MS	BS25-13 0'	Total/NA	Solid	5030C	
885-25492-11 MSD	BS25-13 0'	Total/NA	Solid	5030C	

Analysis Batch: 27138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-1	BS25-03 0'	Total/NA	Solid	8021B	26981
885-25492-2	BS25-034 0'	Total/NA	Solid	8021B	26981
885-25492-3	BS25-05 0'	Total/NA	Solid	8021B	26981
885-25492-4	BS25-06 0'	Total/NA	Solid	8021B	26981
885-25492-5	BS25-07 0'	Total/NA	Solid	8021B	26981
885-25492-6	BS25-08 0'	Total/NA	Solid	8021B	26981
885-25492-7	BS25-09 0'	Total/NA	Solid	8021B	26981
885-25492-8	BS25-10 0'	Total/NA	Solid	8021B	26981
885-25492-9	BS25-11 0'	Total/NA	Solid	8021B	26981
MB 885-26981/1-A	Method Blank	Total/NA	Solid	8021B	26981
LCS 885-26981/3-A	Lab Control Sample	Total/NA	Solid	8021B	26981

Analysis Batch: 27139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-1	BS25-03 0'	Total/NA	Solid	8015M/D	26981
885-25492-2	BS25-034 0'	Total/NA	Solid	8015M/D	26981
885-25492-3	BS25-05 0'	Total/NA	Solid	8015M/D	26981

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QC Association Summary

Client: Vertex

Job ID: 885-25492-1

GC VOA (Continued)

Analysis Batch: 27139 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-4	BS25-06 0'	Total/NA	Solid	8015M/D	26981
885-25492-5	BS25-07 0'	Total/NA	Solid	8015M/D	26981
885-25492-6	BS25-08 0'	Total/NA	Solid	8015M/D	26981
885-25492-7	BS25-09 0'	Total/NA	Solid	8015M/D	26981
885-25492-8	BS25-10 0'	Total/NA	Solid	8015M/D	26981
885-25492-9	BS25-11 0'	Total/NA	Solid	8015M/D	26981
MB 885-26981/1-A	Method Blank	Total/NA	Solid	8015M/D	26981
LCS 885-26981/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	26981

Analysis Batch: 27140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-10	BS25-12 0'	Total/NA	Solid	8021B	27006
885-25492-11	BS25-13 0'	Total/NA	Solid	8021B	27006
885-25492-12	BS25-14 0'	Total/NA	Solid	8021B	27006
885-25492-13	BS25-15 0'	Total/NA	Solid	8021B	27006
885-25492-14	BS25-16 0'	Total/NA	Solid	8021B	27006
885-25492-15	BS25-17 0'	Total/NA	Solid	8021B	27006
885-25492-16	BS25-18 0'	Total/NA	Solid	8021B	27006
885-25492-17	BS25-19 0'	Total/NA	Solid	8021B	27006
885-25492-18	BS25-20 0'	Total/NA	Solid	8021B	27006
MB 885-27006/1-A	Method Blank	Total/NA	Solid	8021B	27006
LCS 885-27006/3-A	Lab Control Sample	Total/NA	Solid	8021B	27006
885-25492-11 MS	BS25-13 0'	Total/NA	Solid	8021B	27006
885-25492-11 MSD	BS25-13 0'	Total/NA	Solid	8021B	27006

Analysis Batch: 27141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-10	BS25-12 0'	Total/NA	Solid	8015M/D	27006
885-25492-11	BS25-13 0'	Total/NA	Solid	8015M/D	27006
885-25492-12	BS25-14 0'	Total/NA	Solid	8015M/D	27006
885-25492-13	BS25-15 0'	Total/NA	Solid	8015M/D	27006
885-25492-14	BS25-16 0'	Total/NA	Solid	8015M/D	27006
885-25492-15	BS25-17 0'	Total/NA	Solid	8015M/D	27006
885-25492-16	BS25-18 0'	Total/NA	Solid	8015M/D	27006
885-25492-17	BS25-19 0'	Total/NA	Solid	8015M/D	27006
885-25492-18	BS25-20 0'	Total/NA	Solid	8015M/D	27006
MB 885-27006/1-A	Method Blank	Total/NA	Solid	8015M/D	27006
LCS 885-27006/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	27006
885-25492-10 MS	BS25-12 0'	Total/NA	Solid	8015M/D	27006
885-25492-10 MSD	BS25-12 0'	Total/NA	Solid	8015M/D	27006

GC Semi VOA

Prep Batch: 27083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-1	BS25-03 0'	Total/NA	Solid	SHAKE	
885-25492-2	BS25-034 0'	Total/NA	Solid	SHAKE	
885-25492-4	BS25-06 0'	Total/NA	Solid	SHAKE	
885-25492-5	BS25-07 0'	Total/NA	Solid	SHAKE	
885-25492-6	BS25-08 0'	Total/NA	Solid	SHAKE	
885-25492-7	BS25-09 0'	Total/NA	Solid	SHAKE	

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

GC Semi VOA (Continued)

Prep Batch: 27083 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-8	BS25-10 0'	Total/NA	Solid	SHAKE	
885-25492-9	BS25-11 0'	Total/NA	Solid	SHAKE	
885-25492-10	BS25-12 0'	Total/NA	Solid	SHAKE	
885-25492-11	BS25-13 0'	Total/NA	Solid	SHAKE	
885-25492-12	BS25-14 0'	Total/NA	Solid	SHAKE	
885-25492-13	BS25-15 0'	Total/NA	Solid	SHAKE	
885-25492-14	BS25-16 0'	Total/NA	Solid	SHAKE	
885-25492-15	BS25-17 0'	Total/NA	Solid	SHAKE	
885-25492-16	BS25-18 0'	Total/NA	Solid	SHAKE	
885-25492-17	BS25-19 0'	Total/NA	Solid	SHAKE	
MB 885-27083/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-27083/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-25492-1 MS	BS25-03 0'	Total/NA	Solid	SHAKE	
885-25492-1 MSD	BS25-03 0'	Total/NA	Solid	SHAKE	

Analysis Batch: 27142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-1	BS25-03 0'	Total/NA	Solid	8015M/D	27083
885-25492-2	BS25-034 0'	Total/NA	Solid	8015M/D	27083
885-25492-4	BS25-06 0'	Total/NA	Solid	8015M/D	27083
885-25492-5	BS25-07 0'	Total/NA	Solid	8015M/D	27083
885-25492-6	BS25-08 0'	Total/NA	Solid	8015M/D	27083
885-25492-7	BS25-09 0'	Total/NA	Solid	8015M/D	27083
885-25492-8	BS25-10 0'	Total/NA	Solid	8015M/D	27083
885-25492-9	BS25-11 0'	Total/NA	Solid	8015M/D	27083
885-25492-10	BS25-12 0'	Total/NA	Solid	8015M/D	27083
885-25492-11	BS25-13 0'	Total/NA	Solid	8015M/D	27083
885-25492-12	BS25-14 0'	Total/NA	Solid	8015M/D	27083
885-25492-13	BS25-15 0'	Total/NA	Solid	8015M/D	27083
885-25492-14	BS25-16 0'	Total/NA	Solid	8015M/D	27083
885-25492-15	BS25-17 0'	Total/NA	Solid	8015M/D	27083
885-25492-16	BS25-18 0'	Total/NA	Solid	8015M/D	27083
885-25492-17	BS25-19 0'	Total/NA	Solid	8015M/D	27083
MB 885-27083/1-A	Method Blank	Total/NA	Solid	8015M/D	27083
LCS 885-27083/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	27083
885-25492-1 MS	BS25-03 0'	Total/NA	Solid	8015M/D	27083
885-25492-1 MSD	BS25-03 0'	Total/NA	Solid	8015M/D	27083

Prep Batch: 27265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-3	BS25-05 0'	Total/NA	Solid	SHAKE	
885-25492-18	BS25-20 0'	Total/NA	Solid	SHAKE	
MB 885-27265/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-27265/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-25492-18 MS	BS25-20 0'	Total/NA	Solid	SHAKE	
885-25492-18 MSD	BS25-20 0'	Total/NA	Solid	SHAKE	

Analysis Batch: 27351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-3	BS25-05 0'	Total/NA	Solid	8015M/D	27265
885-25492-18	BS25-20 0'	Total/NA	Solid	8015M/D	27265

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Job ID: 885-25492-1

GC Semi VOA (Continued)

Analysis Batch: 27351 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-27265/1-A	Method Blank	Total/NA	Solid	8015M/D	27265
LCS 885-27265/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	27265
885-25492-18 MS	BS25-20 0'	Total/NA	Solid	8015M/D	27265
885-25492-18 MSD	BS25-20 0'	Total/NA	Solid	8015M/D	27265

HPLC/IC

Analysis Batch: 27034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-1	BS25-03 0'	Total/NA	Solid	300.0	27035
MB 885-27035/1-A	Method Blank	Total/NA	Solid	300.0	27035
LCS 885-27035/2-A	Lab Control Sample	Total/NA	Solid	300.0	27035
885-25492-1 MSD	BS25-03 0'	Total/NA	Solid	300.0	27035

Prep Batch: 27035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-1	BS25-03 0'	Total/NA	Solid	300_Prep	
885-25492-2	BS25-034 0'	Total/NA	Solid	300_Prep	
885-25492-3	BS25-05 0'	Total/NA	Solid	300_Prep	
885-25492-4	BS25-06 0'	Total/NA	Solid	300_Prep	
885-25492-5	BS25-07 0'	Total/NA	Solid	300_Prep	
885-25492-6	BS25-08 0'	Total/NA	Solid	300_Prep	
885-25492-7	BS25-09 0'	Total/NA	Solid	300_Prep	
885-25492-8	BS25-10 0'	Total/NA	Solid	300_Prep	
885-25492-9	BS25-11 0'	Total/NA	Solid	300_Prep	
885-25492-10	BS25-12 0'	Total/NA	Solid	300_Prep	
885-25492-11	BS25-13 0'	Total/NA	Solid	300_Prep	
885-25492-12	BS25-14 0'	Total/NA	Solid	300_Prep	
885-25492-13	BS25-15 0'	Total/NA	Solid	300_Prep	
885-25492-14	BS25-16 0'	Total/NA	Solid	300_Prep	
885-25492-15	BS25-17 0'	Total/NA	Solid	300_Prep	
885-25492-16	BS25-18 0'	Total/NA	Solid	300_Prep	
885-25492-17	BS25-19 0'	Total/NA	Solid	300_Prep	
885-25492-18	BS25-20 0'	Total/NA	Solid	300_Prep	
MB 885-27035/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-27035/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-25492-1 MSD	BS25-03 0'	Total/NA	Solid	300_Prep	

Analysis Batch: 27235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-2	BS25-034 0'	Total/NA	Solid	300.0	27035
885-25492-3	BS25-05 0'	Total/NA	Solid	300.0	27035
885-25492-4	BS25-06 0'	Total/NA	Solid	300.0	27035
885-25492-5	BS25-07 0'	Total/NA	Solid	300.0	27035
885-25492-6	BS25-08 0'	Total/NA	Solid	300.0	27035
885-25492-7	BS25-09 0'	Total/NA	Solid	300.0	27035
885-25492-8	BS25-10 0'	Total/NA	Solid	300.0	27035
885-25492-9	BS25-11 0'	Total/NA	Solid	300.0	27035
885-25492-10	BS25-12 0'	Total/NA	Solid	300.0	27035
885-25492-11	BS25-13 0'	Total/NA	Solid	300.0	27035
885-25492-12	BS25-14 0'	Total/NA	Solid	300.0	27035

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

HPLC/IC (Continued)

Analysis Batch: 27235 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25492-13	BS25-15 0'	Total/NA	Solid	300.0	27035
885-25492-14	BS25-16 0'	Total/NA	Solid	300.0	27035
885-25492-15	BS25-17 0'	Total/NA	Solid	300.0	27035
885-25492-16	BS25-18 0'	Total/NA	Solid	300.0	27035
885-25492-17	BS25-19 0'	Total/NA	Solid	300.0	27035
885-25492-18	BS25-20 0'	Total/NA	Solid	300.0	27035

Lab Chronicle

Client: Vertex

Job ID: 885-25492-1

Project/Site: Thistle Unit 10 CTB

Client Sample ID: BS25-03 0'

Lab Sample ID: 885-25492-1

Date Collected: 05/22/25 08:00

Matrix: Solid

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8015M/D		1	27139	JP	EET ALB	05/28/25 21:51
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8021B		1	27138	JP	EET ALB	05/28/25 21:51
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 18:18
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27034	DL	EET ALB	05/28/25 19:55

Client Sample ID: BS25-034 0'

Lab Sample ID: 885-25492-2

Date Collected: 05/22/25 08:05

Matrix: Solid

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8015M/D		1	27139	JP	EET ALB	05/28/25 22:15
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8021B		1	27138	JP	EET ALB	05/28/25 22:15
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 18:50
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 13:02

Client Sample ID: BS25-05 0'

Lab Sample ID: 885-25492-3

Date Collected: 05/22/25 08:10

Matrix: Solid

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8015M/D		1	27139	JP	EET ALB	05/28/25 22:38
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8021B		1	27138	JP	EET ALB	05/28/25 22:38
Total/NA	Prep	SHAKE			27265	KR	EET ALB	05/30/25 12:47
Total/NA	Analysis	8015M/D		1	27351	EM	EET ALB	06/02/25 11:19
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 13:15

Client Sample ID: BS25-06 0'

Lab Sample ID: 885-25492-4

Date Collected: 05/22/25 08:15

Matrix: Solid

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8015M/D		1	27139	JP	EET ALB	05/28/25 23:01

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-06 0'
Date Collected: 05/22/25 08:15
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8021B		1	27138	JP	EET ALB	05/28/25 23:01
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 19:12
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 13:28

Client Sample ID: BS25-07 0'
Date Collected: 05/22/25 08:25
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8015M/D		1	27139	JP	EET ALB	05/28/25 23:25
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8021B		1	27138	JP	EET ALB	05/28/25 23:25
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 19:23
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 13:41

Client Sample ID: BS25-08 0'
Date Collected: 05/22/25 08:30
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8015M/D		1	27139	JP	EET ALB	05/28/25 23:48
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8021B		1	27138	JP	EET ALB	05/28/25 23:48
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 19:34
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 13:54

Client Sample ID: BS25-09 0'
Date Collected: 05/22/25 08:35
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8015M/D		1	27139	JP	EET ALB	05/29/25 00:12
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8021B		1	27138	JP	EET ALB	05/29/25 00:12

Eurofins Albuquerque

Lab Chronicle

Client: Vertex

Job ID: 885-25492-1

Project/Site: Thistle Unit 10 CTB

Client Sample ID: BS25-09 0'

Lab Sample ID: 885-25492-7

Date Collected: 05/22/25 08:35

Matrix: Solid

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 19:45
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 14:07

Client Sample ID: BS25-10 0'

Lab Sample ID: 885-25492-8

Date Collected: 05/22/25 08:40

Matrix: Solid

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8015M/D		1	27139	JP	EET ALB	05/29/25 00:35
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8021B		1	27138	JP	EET ALB	05/29/25 00:35
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 19:56
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 14:21

Client Sample ID: BS25-11 0'

Lab Sample ID: 885-25492-9

Date Collected: 05/22/25 08:50

Matrix: Solid

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8015M/D		1	27139	JP	EET ALB	05/29/25 00:58
Total/NA	Prep	5030C			26981	JE	EET ALB	05/27/25 13:37
Total/NA	Analysis	8021B		1	27138	JP	EET ALB	05/29/25 00:58
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 20:18
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 14:34

Client Sample ID: BS25-12 0'

Lab Sample ID: 885-25492-10

Date Collected: 05/22/25 08:55

Matrix: Solid

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8015M/D		1	27141	JP	EET ALB	05/29/25 02:56
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8021B		1	27140	JP	EET ALB	05/29/25 02:56
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 20:29

Lab Chronicle

Client: Vertex

Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-12 0'

Date Collected: 05/22/25 08:55

Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 14:47

Client Sample ID: BS25-13 0'

Date Collected: 05/22/25 09:00

Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8015M/D		1	27141	JP	EET ALB	05/29/25 04:07
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8021B		1	27140	JP	EET ALB	05/29/25 04:07
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 20:40
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 15:00

Client Sample ID: BS25-14 0'

Date Collected: 05/22/25 10:00

Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8015M/D		1	27141	JP	EET ALB	05/29/25 05:17
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8021B		1	27140	JP	EET ALB	05/29/25 05:17
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 20:51
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 15:39

Client Sample ID: BS25-15 0'

Date Collected: 05/22/25 10:05

Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8015M/D		1	27141	JP	EET ALB	05/29/25 05:41
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8021B		1	27140	JP	EET ALB	05/29/25 05:41
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 21:02
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 15:53

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-16 0'
Date Collected: 05/22/25 10:10
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8015M/D		1	27141	JP	EET ALB	05/29/25 06:04
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8021B		1	27140	JP	EET ALB	05/29/25 06:04
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 21:13
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 16:06

Client Sample ID: BS25-17 0'
Date Collected: 05/22/25 10:15
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8015M/D		1	27141	JP	EET ALB	05/29/25 06:27
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8021B		1	27140	JP	EET ALB	05/29/25 06:27
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 21:24
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 16:19

Client Sample ID: BS25-18 0'
Date Collected: 05/22/25 10:25
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8015M/D		1	27141	JP	EET ALB	05/29/25 06:51
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8021B		1	27140	JP	EET ALB	05/29/25 06:51
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 21:35
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 16:32

Client Sample ID: BS25-19 0'
Date Collected: 05/22/25 10:30
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8015M/D		1	27141	JP	EET ALB	05/29/25 07:14

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

Client Sample ID: BS25-19 0'
Date Collected: 05/22/25 10:30
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8021B		1	27140	JP	EET ALB	05/29/25 07:14
Total/NA	Prep	SHAKE			27083	MI	EET ALB	05/28/25 13:58
Total/NA	Analysis	8015M/D		1	27142	MI	EET ALB	05/29/25 21:46
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 16:45

Client Sample ID: BS25-20 0'
Date Collected: 05/22/25 10:35
Date Received: 05/24/25 08:00

Lab Sample ID: 885-25492-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8015M/D		1	27141	JP	EET ALB	05/29/25 07:37
Total/NA	Prep	5030C			27006	JE	EET ALB	05/27/25 16:43
Total/NA	Analysis	8021B		1	27140	JP	EET ALB	05/29/25 07:37
Total/NA	Prep	SHAKE			27265	KR	EET ALB	05/30/25 12:47
Total/NA	Analysis	8015M/D		1	27351	EM	EET ALB	06/02/25 11:30
Total/NA	Prep	300_Prep			27035	DL	EET ALB	05/28/25 09:15
Total/NA	Analysis	300.0		20	27235	RC	EET ALB	05/30/25 16:58

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25492-1

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



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Turn-Around Time: X 72-hour		Project Name: Thistle Unit 10 CTB		Project #: 23E-04784		Project Manager: Kent Stallings, Sally Carttar kstallings@vertexresource.com		Sampler: L. Pullman		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>mgd</i>		# of Coolers: <i>1</i>		Cooler Temp (including CF): <i>0.3 + 0.2 = 0.5</i>		Container Type and #		Preservative Type		HEAL No.			
Date		Time		Matrix		Sample Name		Date		Time		Matrix		Sample Name		Date		Time		Matrix		Sample Name	
05.22.25		10:05		Soil		BS25-15 0'		05.22.25		10:05		Soil		BS25-15 0'		05.22.25		10:05		Soil		BS25-15 0'	
05.22.25		10:10		Soil		BS25-16 0'		05.22.25		10:10		Soil		BS25-16 0'		05.22.25		10:10		Soil		BS25-16 0'	
05.22.25		10:15		Soil		BS25-17 0'		05.22.25		10:15		Soil		BS25-17 0'		05.22.25		10:15		Soil		BS25-17 0'	
05.22.25		10:25		Soil		BS25-18 0'		05.22.25		10:25		Soil		BS25-18 0'		05.22.25		10:25		Soil		BS25-18 0'	
05.22.25		10:30		Soil		BS25-19 0'		05.22.25		10:30		Soil		BS25-19 0'		05.22.25		10:30		Soil		BS25-19 0'	
05.22.25		10:35		Soil		BS25-20 0'		05.22.25		10:35		Soil		BS25-20 0'		05.22.25		10:35		Soil		BS25-20 0'	
Date		Time		Relinquished by:		Date		Time		Relinquished by:		Date		Time		Relinquished by:		Date		Time		Relinquished by:	
5-23-25		0700		Sally Carttar		5/23/25		700		Sally Carttar		5/23/25		700		Sally Carttar		5/23/25		700		Sally Carttar	
Date		Time		Relinquished by:		Date		Time		Relinquished by:		Date		Time		Relinquished by:		Date		Time		Relinquished by:	
5/23/25		1900		Sally Carttar		5/23/25		1900		Sally Carttar		5/23/25		1900		Sally Carttar		5/23/25		1900		Sally Carttar	

Remarks: ATTN Jim Raley
Direct bill to Devon work order 21206611 Jim Raley
cc. permain@vertexresource.com, SCarttar@vertexresource.com,
kstallings@vertexresource.com, SMCarty@vertexresource.com,
and LPullman@vertexresource.com 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.



Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-25492-1

Login Number: 25492

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kent Stallings
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 6/2/2025 4:59:30 PM

JOB DESCRIPTION

Thistle Unit 10 CTB

JOB NUMBER

885-25565-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

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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6/2/2025 4:59:30 PM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Laboratory Job ID: 885-25565-1

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Definitions/Glossary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

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
Project: Thistle Unit 10 CTB

Job ID: 885-25565-1

Job ID: 885-25565-1

Eurofins Albuquerque

Job Narrative 885-25565-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 5/28/2025 7:50 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 1.2°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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-21 0'

Lab Sample ID: 885-25565-1

Date Collected: 05/23/25 08:00

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	05/31/25 23:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		15 - 150			05/28/25 12:34	05/31/25 23:31	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	05/31/25 23:31	1
Ethylbenzene	ND		0.050	mg/Kg		05/28/25 12:34	05/31/25 23:31	1
Toluene	ND		0.050	mg/Kg		05/28/25 12:34	05/31/25 23:31	1
Xylenes, Total	ND		0.10	mg/Kg		05/28/25 12:34	05/31/25 23:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		15 - 150			05/28/25 12:34	05/31/25 23:31	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]	ND		9.5	mg/Kg		05/29/25 16:16	05/29/25 22:57	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/29/25 16:16	05/29/25 22:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	112		62 - 134			05/29/25 16:16	05/29/25 22:57	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1200		60	mg/Kg		05/29/25 07:06	05/29/25 10:09	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-22 0'

Lab Sample ID: 885-25565-2

Date Collected: 05/23/25 08:05

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	06/01/25 00:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		15 - 150			05/28/25 12:34	06/01/25 00:37	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	06/01/25 00:37	1
Ethylbenzene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 00:37	1
Toluene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 00:37	1
Xylenes, Total	ND		0.099	mg/Kg		05/28/25 12:34	06/01/25 00:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		15 - 150			05/28/25 12:34	06/01/25 00:37	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		9.6	mg/Kg		05/29/25 16:16	05/29/25 23:21	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		05/29/25 16:16	05/29/25 23:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	114		62 - 134			05/29/25 16:16	05/29/25 23:21	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1400		60	mg/Kg		05/29/25 07:06	05/29/25 10:50	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-23 0'

Lab Sample ID: 885-25565-3

Date Collected: 05/23/25 08:15

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	06/01/25 01:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		15 - 150			05/28/25 12:34	06/01/25 01:43	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	06/01/25 01:43	1
Ethylbenzene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 01:43	1
Toluene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 01:43	1
Xylenes, Total	ND		0.099	mg/Kg		05/28/25 12:34	06/01/25 01:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		15 - 150			05/28/25 12:34	06/01/25 01:43	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		9.9	mg/Kg		05/29/25 16:16	05/29/25 23:45	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		05/29/25 16:16	05/29/25 23:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	118		62 - 134			05/29/25 16:16	05/29/25 23:45	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1400		60	mg/Kg		05/29/25 07:06	05/29/25 11:30	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-24 0'

Lab Sample ID: 885-25565-4

Date Collected: 05/23/25 08:20

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	06/01/25 02:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		15 - 150			05/28/25 12:34	06/01/25 02:05	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	06/01/25 02:05	1
Ethylbenzene	ND		0.049	mg/Kg		05/28/25 12:34	06/01/25 02:05	1
Toluene	ND		0.049	mg/Kg		05/28/25 12:34	06/01/25 02:05	1
Xylenes, Total	ND		0.098	mg/Kg		05/28/25 12:34	06/01/25 02:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		15 - 150			05/28/25 12:34	06/01/25 02:05	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		05/29/25 16:16	05/30/25 00:09	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/29/25 16:16	05/30/25 00:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	106		62 - 134			05/29/25 16:16	05/30/25 00:09	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1800		60	mg/Kg		05/29/25 07:06	05/29/25 11:44	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-25 0'

Lab Sample ID: 885-25565-5

Date Collected: 05/23/25 08:30

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	06/01/25 02:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		15 - 150			05/28/25 12:34	06/01/25 02:27	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	06/01/25 02:27	1
Ethylbenzene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 02:27	1
Toluene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 02:27	1
Xylenes, Total	ND		0.10	mg/Kg		05/28/25 12:34	06/01/25 02:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		15 - 150			05/28/25 12:34	06/01/25 02:27	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		05/29/25 16:16	05/30/25 00:33	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/29/25 16:16	05/30/25 00:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	108		62 - 134			05/29/25 16:16	05/30/25 00:33	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		60	mg/Kg		05/29/25 07:06	05/29/25 12:25	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-26 0'

Lab Sample ID: 885-25565-6

Date Collected: 05/23/25 08:35

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	06/01/25 02:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		15 - 150			05/28/25 12:34	06/01/25 02:49	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	06/01/25 02:49	1
Ethylbenzene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 02:49	1
Toluene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 02:49	1
Xylenes, Total	ND		0.099	mg/Kg		05/28/25 12:34	06/01/25 02:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		15 - 150			05/28/25 12:34	06/01/25 02:49	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		9.5	mg/Kg		05/29/25 16:16	05/30/25 00:57	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/29/25 16:16	05/30/25 00:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	112		62 - 134			05/29/25 16:16	05/30/25 00:57	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	910		60	mg/Kg		05/29/25 07:06	05/29/25 12:39	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-27 0'

Lab Sample ID: 885-25565-7

Date Collected: 05/23/25 08:45

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	06/01/25 03:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		15 - 150			05/28/25 12:34	06/01/25 03:10	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	06/01/25 03:10	1
Ethylbenzene	ND		0.049	mg/Kg		05/28/25 12:34	06/01/25 03:10	1
Toluene	ND		0.049	mg/Kg		05/28/25 12:34	06/01/25 03:10	1
Xylenes, Total	ND		0.099	mg/Kg		05/28/25 12:34	06/01/25 03:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		15 - 150			05/28/25 12:34	06/01/25 03:10	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		05/29/25 16:16	05/30/25 01:21	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/29/25 16:16	05/30/25 01:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	131		62 - 134			05/29/25 16:16	05/30/25 01:21	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1200		60	mg/Kg		05/29/25 07:06	05/29/25 12:52	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-28 0'

Lab Sample ID: 885-25565-8

Date Collected: 05/23/25 08:50

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	06/01/25 03:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		15 - 150			05/28/25 12:34	06/01/25 03:32	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		05/28/25 12:34	06/01/25 03:32	1
Ethylbenzene	ND		0.048	mg/Kg		05/28/25 12:34	06/01/25 03:32	1
Toluene	ND		0.048	mg/Kg		05/28/25 12:34	06/01/25 03:32	1
Xylenes, Total	ND		0.096	mg/Kg		05/28/25 12:34	06/01/25 03:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		15 - 150			05/28/25 12:34	06/01/25 03:32	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		05/29/25 16:16	05/30/25 01:45	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/29/25 16:16	05/30/25 01:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	110		62 - 134			05/29/25 16:16	05/30/25 01:45	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1500		60	mg/Kg		05/29/25 07:06	05/29/25 13:06	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-29 0'

Lab Sample ID: 885-25565-9

Date Collected: 05/23/25 09:00

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	06/01/25 03:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		15 - 150			05/28/25 12:34	06/01/25 03:54	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	06/01/25 03:54	1
Ethylbenzene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 03:54	1
Toluene	ND		0.050	mg/Kg		05/28/25 12:34	06/01/25 03:54	1
Xylenes, Total	ND		0.10	mg/Kg		05/28/25 12:34	06/01/25 03:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		15 - 150			05/28/25 12:34	06/01/25 03:54	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		05/29/25 16:16	05/30/25 02:08	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		05/29/25 16:16	05/30/25 02:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	111		62 - 134			05/29/25 16:16	05/30/25 02:08	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2000		60	mg/Kg		05/29/25 07:06	05/29/25 13:19	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-30 0'

Lab Sample ID: 885-25565-10

Date Collected: 05/23/25 09:05

Matrix: Solid

Date Received: 05/28/25 07:50

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		05/28/25 12:34	06/01/25 04:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		15 - 150			05/28/25 12:34	06/01/25 04:16	1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	06/01/25 04:16	1
Ethylbenzene	ND		0.049	mg/Kg		05/28/25 12:34	06/01/25 04:16	1
Toluene	ND		0.049	mg/Kg		05/28/25 12:34	06/01/25 04:16	1
Xylenes, Total	ND		0.098	mg/Kg		05/28/25 12:34	06/01/25 04:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		15 - 150			05/28/25 12:34	06/01/25 04:16	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		9.8	mg/Kg		05/29/25 16:16	05/30/25 02:32	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		05/29/25 16:16	05/30/25 02:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	111		62 - 134			05/29/25 16:16	05/30/25 02:32	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1700		60	mg/Kg		05/29/25 07:06	05/29/25 13:33	20

Eurofins Albuquerque

QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: LCS 885-27069/2-A

Matrix: Solid

Analysis Batch: 27392

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27069

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	25.0	27.8		mg/Kg		111	70 - 130
Surrogate	%Recovery	LCS Qualifier	LCS	Limits			
4-Bromofluorobenzene (Surr)	218			15 - 150			

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-27069/1-A

Matrix: Solid

Analysis Batch: 27352

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27069

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/28/25 12:34	05/31/25 23:10	1
Ethylbenzene	ND		0.050	mg/Kg		05/28/25 12:34	05/31/25 23:10	1
Toluene	ND		0.050	mg/Kg		05/28/25 12:34	05/31/25 23:10	1
Xylenes, Total	ND		0.10	mg/Kg		05/28/25 12:34	05/31/25 23:10	1
Surrogate	%Recovery	MB Qualifier	MB	Limits	Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	99			15 - 150	05/28/25 12:34	05/31/25 23:10	1	

Lab Sample ID: LCS 885-27069/3-A

Matrix: Solid

Analysis Batch: 27352

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27069

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.966		mg/Kg		97	70 - 130
Ethylbenzene	1.00	0.979		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	2.00	2.00		mg/Kg		100	70 - 130
o-Xylene	1.00	0.994		mg/Kg		99	70 - 130
Toluene	1.00	0.952		mg/Kg		95	70 - 130
Surrogate	%Recovery	LCS Qualifier	LCS	Limits			
4-Bromofluorobenzene (Surr)	99			15 - 150			

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-27203/1-A

Matrix: Solid

Analysis Batch: 27133

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27203

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		05/29/25 16:16	05/29/25 22:09	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		05/29/25 16:16	05/29/25 22:09	1
Surrogate	%Recovery	MB Qualifier	MB	Limits	Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	130			62 - 134	05/29/25 16:16	05/29/25 22:09	1	

Eurofins Albuquerque

QC Sample Results

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 885-27203/2-A

Matrix: Solid

Analysis Batch: 27133

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27203

Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec		
			Added	Result	Qualifier			Limits			
Diesel Range Organics [C10-C28]			50.0	57.4		mg/Kg		115	51 - 148		
Surrogate	LCS	LCS									
	%Recovery	Qualifier	Limits								
Di-n-octyl phthalate (Surr)	133		62 - 134								

Lab Sample ID: 885-25565-10 MS

Matrix: Solid

Analysis Batch: 27133

Client Sample ID: BS25-30 0'

Prep Type: Total/NA

Prep Batch: 27203

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		46.6	45.1		mg/Kg		97	44 - 136		
Surrogate	MS %Recovery	MS Qualifier	Limits								
Di-n-octyl phthalate (Surr)	108		62 - 134								

Lab Sample ID: 885-25565-10 MSD

Matrix: Solid

Analysis Batch: 27133

Client Sample ID: BS25-30 0'

Prep Type: Total/NA

Prep Batch: 27203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		49.0	48.6		mg/Kg		99	44 - 136	8	32
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Di-n-octyl phthalate (Surr)	112		62 - 134								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-27127/1-A

Matrix: Solid

Analysis Batch: 27136

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27127

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	mg/Kg		05/29/25 07:06	05/29/25 09:41	1

Lab Sample ID: LCS 885-27127/2-A

Matrix: Solid

Analysis Batch: 27136

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27127

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	15.0	14.8		mg/Kg		99	90 - 110

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

GC VOA

Prep Batch: 27069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25565-1	BS25-21 0'	Total/NA	Solid	5030C	
885-25565-2	BS25-22 0'	Total/NA	Solid	5030C	
885-25565-3	BS25-23 0'	Total/NA	Solid	5030C	
885-25565-4	BS25-24 0'	Total/NA	Solid	5030C	
885-25565-5	BS25-25 0'	Total/NA	Solid	5030C	
885-25565-6	BS25-26 0'	Total/NA	Solid	5030C	
885-25565-7	BS25-27 0'	Total/NA	Solid	5030C	
885-25565-8	BS25-28 0'	Total/NA	Solid	5030C	
885-25565-9	BS25-29 0'	Total/NA	Solid	5030C	
885-25565-10	BS25-30 0'	Total/NA	Solid	5030C	
MB 885-27069/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-27069/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-27069/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 27352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25565-1	BS25-21 0'	Total/NA	Solid	8021B	27069
885-25565-2	BS25-22 0'	Total/NA	Solid	8021B	27069
885-25565-3	BS25-23 0'	Total/NA	Solid	8021B	27069
885-25565-4	BS25-24 0'	Total/NA	Solid	8021B	27069
885-25565-5	BS25-25 0'	Total/NA	Solid	8021B	27069
885-25565-6	BS25-26 0'	Total/NA	Solid	8021B	27069
885-25565-7	BS25-27 0'	Total/NA	Solid	8021B	27069
885-25565-8	BS25-28 0'	Total/NA	Solid	8021B	27069
885-25565-9	BS25-29 0'	Total/NA	Solid	8021B	27069
885-25565-10	BS25-30 0'	Total/NA	Solid	8021B	27069
MB 885-27069/1-A	Method Blank	Total/NA	Solid	8021B	27069
LCS 885-27069/3-A	Lab Control Sample	Total/NA	Solid	8021B	27069

Analysis Batch: 27392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25565-1	BS25-21 0'	Total/NA	Solid	8015M/D	27069
885-25565-2	BS25-22 0'	Total/NA	Solid	8015M/D	27069
885-25565-3	BS25-23 0'	Total/NA	Solid	8015M/D	27069
885-25565-4	BS25-24 0'	Total/NA	Solid	8015M/D	27069
885-25565-5	BS25-25 0'	Total/NA	Solid	8015M/D	27069
885-25565-6	BS25-26 0'	Total/NA	Solid	8015M/D	27069
885-25565-7	BS25-27 0'	Total/NA	Solid	8015M/D	27069
885-25565-8	BS25-28 0'	Total/NA	Solid	8015M/D	27069
885-25565-9	BS25-29 0'	Total/NA	Solid	8015M/D	27069
885-25565-10	BS25-30 0'	Total/NA	Solid	8015M/D	27069
LCS 885-27069/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	27069

GC Semi VOA

Analysis Batch: 27133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25565-1	BS25-21 0'	Total/NA	Solid	8015M/D	27203
885-25565-2	BS25-22 0'	Total/NA	Solid	8015M/D	27203
885-25565-3	BS25-23 0'	Total/NA	Solid	8015M/D	27203
885-25565-4	BS25-24 0'	Total/NA	Solid	8015M/D	27203

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

GC Semi VOA (Continued)

Analysis Batch: 27133 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25565-5	BS25-25 0'	Total/NA	Solid	8015M/D	27203
885-25565-6	BS25-26 0'	Total/NA	Solid	8015M/D	27203
885-25565-7	BS25-27 0'	Total/NA	Solid	8015M/D	27203
885-25565-8	BS25-28 0'	Total/NA	Solid	8015M/D	27203
885-25565-9	BS25-29 0'	Total/NA	Solid	8015M/D	27203
885-25565-10	BS25-30 0'	Total/NA	Solid	8015M/D	27203
MB 885-27203/1-A	Method Blank	Total/NA	Solid	8015M/D	27203
LCS 885-27203/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	27203
885-25565-10 MS	BS25-30 0'	Total/NA	Solid	8015M/D	27203
885-25565-10 MSD	BS25-30 0'	Total/NA	Solid	8015M/D	27203

Prep Batch: 27203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25565-1	BS25-21 0'	Total/NA	Solid	SHAKE	
885-25565-2	BS25-22 0'	Total/NA	Solid	SHAKE	
885-25565-3	BS25-23 0'	Total/NA	Solid	SHAKE	
885-25565-4	BS25-24 0'	Total/NA	Solid	SHAKE	
885-25565-5	BS25-25 0'	Total/NA	Solid	SHAKE	
885-25565-6	BS25-26 0'	Total/NA	Solid	SHAKE	
885-25565-7	BS25-27 0'	Total/NA	Solid	SHAKE	
885-25565-8	BS25-28 0'	Total/NA	Solid	SHAKE	
885-25565-9	BS25-29 0'	Total/NA	Solid	SHAKE	
885-25565-10	BS25-30 0'	Total/NA	Solid	SHAKE	
MB 885-27203/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-27203/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-25565-10 MS	BS25-30 0'	Total/NA	Solid	SHAKE	
885-25565-10 MSD	BS25-30 0'	Total/NA	Solid	SHAKE	

HPLC/IC

Prep Batch: 27127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25565-1	BS25-21 0'	Total/NA	Solid	300_Prep	
885-25565-2	BS25-22 0'	Total/NA	Solid	300_Prep	
885-25565-3	BS25-23 0'	Total/NA	Solid	300_Prep	
885-25565-4	BS25-24 0'	Total/NA	Solid	300_Prep	
885-25565-5	BS25-25 0'	Total/NA	Solid	300_Prep	
885-25565-6	BS25-26 0'	Total/NA	Solid	300_Prep	
885-25565-7	BS25-27 0'	Total/NA	Solid	300_Prep	
885-25565-8	BS25-28 0'	Total/NA	Solid	300_Prep	
885-25565-9	BS25-29 0'	Total/NA	Solid	300_Prep	
885-25565-10	BS25-30 0'	Total/NA	Solid	300_Prep	
MB 885-27127/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-27127/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 27136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25565-1	BS25-21 0'	Total/NA	Solid	300.0	27127
885-25565-2	BS25-22 0'	Total/NA	Solid	300.0	27127
885-25565-3	BS25-23 0'	Total/NA	Solid	300.0	27127
885-25565-4	BS25-24 0'	Total/NA	Solid	300.0	27127

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

HPLC/IC (Continued)

Analysis Batch: 27136 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-25565-5	BS25-25 0'	Total/NA	Solid	300.0	27127
885-25565-6	BS25-26 0'	Total/NA	Solid	300.0	27127
885-25565-7	BS25-27 0'	Total/NA	Solid	300.0	27127
885-25565-8	BS25-28 0'	Total/NA	Solid	300.0	27127
885-25565-9	BS25-29 0'	Total/NA	Solid	300.0	27127
885-25565-10	BS25-30 0'	Total/NA	Solid	300.0	27127
MB 885-27127/1-A	Method Blank	Total/NA	Solid	300.0	27127
LCS 885-27127/2-A	Lab Control Sample	Total/NA	Solid	300.0	27127

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-21 0'

Lab Sample ID: 885-25565-1

Date Collected: 05/23/25 08:00

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	05/31/25 23:31
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	05/31/25 23:31
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/29/25 22:57
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 10:09

Client Sample ID: BS25-22 0'

Lab Sample ID: 885-25565-2

Date Collected: 05/23/25 08:05

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	06/01/25 00:37
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	06/01/25 00:37
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/29/25 23:21
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 10:50

Client Sample ID: BS25-23 0'

Lab Sample ID: 885-25565-3

Date Collected: 05/23/25 08:15

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	06/01/25 01:43
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	06/01/25 01:43
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/29/25 23:45
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 11:30

Client Sample ID: BS25-24 0'

Lab Sample ID: 885-25565-4

Date Collected: 05/23/25 08:20

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	06/01/25 02:05

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-24 0'

Lab Sample ID: 885-25565-4

Date Collected: 05/23/25 08:20

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	06/01/25 02:05
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/30/25 00:09
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 11:44

Client Sample ID: BS25-25 0'

Lab Sample ID: 885-25565-5

Date Collected: 05/23/25 08:30

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	06/01/25 02:27
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	06/01/25 02:27
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/30/25 00:33
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 12:25

Client Sample ID: BS25-26 0'

Lab Sample ID: 885-25565-6

Date Collected: 05/23/25 08:35

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	06/01/25 02:49
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	06/01/25 02:49
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/30/25 00:57
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 12:39

Client Sample ID: BS25-27 0'

Lab Sample ID: 885-25565-7

Date Collected: 05/23/25 08:45

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	06/01/25 03:10
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	06/01/25 03:10

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-27 0'

Lab Sample ID: 885-25565-7

Date Collected: 05/23/25 08:45

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/30/25 01:21
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 12:52

Client Sample ID: BS25-28 0'

Lab Sample ID: 885-25565-8

Date Collected: 05/23/25 08:50

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	06/01/25 03:32
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	06/01/25 03:32
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/30/25 01:45
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 13:06

Client Sample ID: BS25-29 0'

Lab Sample ID: 885-25565-9

Date Collected: 05/23/25 09:00

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	06/01/25 03:54
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	06/01/25 03:54
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/30/25 02:08
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 13:19

Client Sample ID: BS25-30 0'

Lab Sample ID: 885-25565-10

Date Collected: 05/23/25 09:05

Matrix: Solid

Date Received: 05/28/25 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8015M/D		1	27392	AT	EET ALB	06/01/25 04:16
Total/NA	Prep	5030C			27069	JE	EET ALB	05/28/25 12:34
Total/NA	Analysis	8021B		1	27352	AT	EET ALB	06/01/25 04:16
Total/NA	Prep	SHAKE			27203	MI	EET ALB	05/29/25 16:16
Total/NA	Analysis	8015M/D		1	27133	MI	EET ALB	05/30/25 02:32

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

Client Sample ID: BS25-30 0'
Date Collected: 05/23/25 09:05
Date Received: 05/28/25 07:50

Lab Sample ID: 885-25565-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			27127	DL	EET ALB	05/29/25 07:06
Total/NA	Analysis	300.0		20	27136	DL	EET ALB	05/29/25 13:33

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

- 1
- 2
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Accreditation/Certification Summary

Client: Vertex
Project/Site: Thistle Unit 10 CTB

Job ID: 885-25565-1

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			
(direct bill to Devon, work order 21206611)			
Mailing Address:			
Phone #:			
email or Fax#:			
QA/QC Package:			
<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)			
Accreditation: <input type="checkbox"/> Az Compliance <input type="checkbox"/> NELAC <input type="checkbox"/> Other			
<input type="checkbox"/> EDD (Type)			
Date	Time	Matrix	Sample Name
05.23.25	8:00	Soil	BS25-21 0'
05.23.25	8:05	Soil	BS25-22 0'
05.23.25	8:15	Soil	BS25-23 0'
05.23.25	8:20	Soil	BS25-24 0'
05.23.25	8:30	Soil	BS25-25 0'
05.23.25	8:35	Soil	BS25-26 0'
05.23.25	8:45	Soil	BS25-27 0'
05.23.25	8:50	Soil	BS25-28 0'
05.23.25	9:00	Soil	BS25-29 0'
05.23.25	9:05	Soil	BS25-30 0'
Date: 5-23-25		Time: 07:00	
Date: 5/23/25		Time: 1900	
Relinquished by: <i>[Signature]</i>		Relinquished by: <i>[Signature]</i>	

Turn-Around Time:		
X 72-hour		
Project Name:		
Thistle Unit 10 CTB		
Project #:		
23E-04784		
Project Manager:		
Kent Stallings, Sally Carttar		
kstallings@vertexresource.com		
Sampler: L. Pullman		
On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
# of Coolers: <i>1</i>		
Cooler Temp (including CF): <i>1.0 ± 0.2 = 1.2 °C</i>		
Container Type and #	Preservative Type	HEAL No.
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		
1, 4oz jar		

 HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 885-25565 COC	
	
Analysis Request	
BTEX / MTBE / TMBs (8021)	X
TPH:8015D(GRO / DRO / MRO)	X
8081 Pesticides/8082 PCBs	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	X
Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	X
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	

Remarks: ATTN Jim Raley
 Direct bill to Devon work order 21206611 Jim Raley
 cc. permain@vertexresource.com, SCarttar@vertexresource.com,
 kstallings@vertexresource.com, SMcCarty@vertexresource.com,
 and LPullman@vertexresource.com for Final Report

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-25565-1

Login Number: 25565

List Source: Eurofins Albuquerque

List Number: 1

Creator: Dominguez, Desiree

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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 471584

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 471584
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM1933052987
Incident Name	NRM1933052987 THISTLE UNIT 10 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Facility	[fAPP2130647365] THISTLE UNIT 10 BATTERY

Location of Release Source*Please answer all the questions in this group.*

Site Name	THISTLE UNIT 10 CTB
Date Release Discovered	08/30/2019
Surface Owner	State

Incident Details*Please answer all the questions in this group.*

Incident Type	Produced Water 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	Not answered.
Produced Water Released (bbls) Details	Cause: Lightning Water Tank Produced Water Released: 407 BBL Recovered: 407 BBL Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
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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Santa Fe, NM 87505

QUESTIONS, Page 2

Action 471584

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 471584
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
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: James Raley Title: EHS Professional Email: jim.raley@dvni.com Date: 06/06/2025
--	---

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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<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, Page 3

Action 471584

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 471584
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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 51 and 75 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
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	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 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
<i>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.</i>	
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)	4100
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3400
GRO+DRO (EPA SW-846 Method 8015M)	1800
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

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	04/07/2025
On what date will (or did) the final sampling or liner inspection occur	08/31/2024
On what date will (or was) the remediation complete(d)	07/06/2025
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	324
What is the estimated volume (in cubic yards) that will be remediated	12

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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Oil Conservation Division
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Santa Fe, NM 87505

QUESTIONS, Page 4

Action 471584

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 471584
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
<i>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.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(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	HALFWAY DISPOSAL AND LANDFILL [FEEM0112334510]
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
<i>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>	
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: James Raley Title: EHS Professional Email: jim.raley@dmv.com Date: 03/13/2025
<i>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.</i>	

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, Page 5

Action 471584

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 471584
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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	No

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QUESTIONS, Page 6

Action 471584

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 471584
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	464776
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/23/2025
What was the (estimated) number of samples that were to be gathered	20
What was the sampling surface area in square feet	10808

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	396
What was the total volume (cubic yards) remediated	15
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	0
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	Area remediated
<i>The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 06/06/2025

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QUESTIONS, Page 7

Action 471584

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 471584
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 471584

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 471584
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	The remediation closure is approved.	6/25/2025
michael.buchanan	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	6/25/2025
michael.buchanan	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	6/25/2025
michael.buchanan	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	6/25/2025
michael.buchanan	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	6/25/2025
michael.buchanan	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	6/25/2025