Incident Number: nAB1815052591

Remediation Closure

Todd 36 D State #002

Section 36, Township 23 South, Range 31 East

API: 30-015-27365

County: Eddy

Vertex File Number: 23E-05197

Prepared for:

Devon Energy Production Company, LP

Prepared by:

Vertex Resource Services Inc.

Date:

April 2025

Remediation Closure
Todd 36 D State #002
Section 36, Township 23 South, Range 31 East
API: 30-015-27365
County: Eddy

Prepared for:
Devon Energy Production Company, LP
5321 Buena Vista Drive
Carlsbad, New Mexico 88220

New Mexico Oil Conservation Division
508 West Texas Avenue
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Lakin Pullman

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April 23, 2025
Date

Kent Stallings

Kent Stallings, P.G.
SENIOR PROJECT MANAGER, REPORT REVIEW

April 23, 2025
Date

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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 and crude oil release that occurred on May 10, 2018, at Todd 36 D State #002 API 30-015-27365 (hereafter referred to as the "site"). Devon submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 2 on May 14, 2018. Incident ID number nAB1815052591 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 deferred until such time as all oil and gas activities are terminated and the site is reclaimed as per NMAC 19.15.29.13.

2.0 Incident Description

The release occurred on May 10, 2018, due to tank overflow out of the vent line. The incident was reported on May 14, 2018, and involved the release of approximately 8 barrels (bbl) of produced water and 1 bbl of produced oil into unlined earthen containment on the pad site. Approximately 8 bbl of free fluid was removed during initial clean-up. Additional details relevant to the release are presented in the C-141 Report.

3.0 Site Characteristics

The site is located approximately 19 miles east of Malaga, New Mexico. The legal location for the site is Section 36, Township 23 South and Range 31 East in Eddy 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 at the site on or in proximity to the unlined earthen containment (Figure 1).

The Geological Map of New Mexico indicates the site's surface geology primarily comprises Qep - Eolian and piedmont deposits (New Mexico Bureau of Geology and Mineral Resources, 2025). 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 and alluvial fans with elevations ranging between 3,100 and 4,200 feet. The climate is semiarid with average annual precipitation ranging between 10 and 14 inches. Predominant soil textures around the site are well-drained fine sands with negligible runoff potential (United States Department of Agriculture, Natural Resources Conservation Service, 2025). Using information from the United States Department of Agriculture, the dominant vegetation was determined to be grasses interspersed 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 facility pad.

4.0 Closure Criteria Determination

The nearest active well to the site is a livestock water well located approximately 0.74 miles west-northwest of the location (New Mexico Office of the State Engineer, 2025). 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 4.22 miles west 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.

The nearest depth to groundwater reference to the site is an exploratory borehole advanced 0.35 miles to the east-northeast on February 6, 2024. The borehole was terminated at 55 feet below ground surface (bgs) without encountering the water surface (New Mexico Office of the State Engineer, 2025). Information pertaining to the depth to ground water determination is included in Appendix B.

Table 1. Closure Criteria Determination			
Site Name: Todd 36 D State #002			
Spill Coordinates: 32.266891,-103.738791		**X: 618786**	**Y: 3570717**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater (nearest reference)	**>55**	feet
	Distance between release and nearest DTGW reference	**1,824**	feet
		0.35	miles
	Date of nearest DTGW reference measurement	**February 6, 2024**	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	22,257	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	25,472	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	30,858	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**	3,908	feet
	ii) Within 1000 feet of any fresh water well or spring	4,432	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	13,590	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	54,524	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	34,780	feet
10	Within a 100-year Floodplain	>500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	31,153	feet
11	Soil Type	Fine sand	
12	Ecological Classification	Deep 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 release on the active pad are associated with the following constituent concentration limits as presented in Table 2. The closure criteria for areas of impact outside the active pad will also adhere to Paragraph (1) of Subsection D of 19.15.29.13 NMAC for reclamation from surface to 4 feet bgs. The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 2 and Table 3 for pad and "pasture", respectively.

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

Table 3. Closure Criteria for Soils to Remediation & Reclamation Standards

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
0-4 feet bgs (19.15.29.13)	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
DTGW 51-100 feet (19.15.29.12)	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
bgs – below ground surface
DTGW – depth to groundwater
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 was completed by Vertex between November 12, 2023, and April 4, 2024. The characterization scope extended south into the pasture beyond the earthen containment to complete horizontal delineation. The impacted area was determined to cover approximately 3,846 square feet based on characterization results as shown on Figure 1. Characterization laboratory results are summarized in Table 4. Daily field reports documenting characterization are included in Appendix C.

Remediation efforts began on March 31, 2025, and were finalized on April 11, 2025. Vertex personnel supervised the excavation of impacted soils. Field screening was completed on a total of 18 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons), and silver nitrate titration (chloride). Field screening results were used to identify areas requiring further remediation. Soils were removed to depths of 1 to 4 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. Daily Field Reports (DFRs) documenting various phases of the remediation are presented in Appendix C.

Notifications that confirmatory samples were being collected was 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. The total areas of the excavation bases and walls were approximately 2176 and 522 square feet, respectively. A total of 11 excavation base samples and seven excavation wall samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Eurofins Environment Testing Laboratory 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 chloride (EPA Method 300.0). Confirmation sample locations and corresponding laboratory results are presented on Figure 2 and Table 5, respectively. Excavations on pasture were remediated to reclamation criteria.

Upon completion of remedial actions, approximately 1,578 square feet and 59 cubic yards of the pad surface was remediated to closure criteria. Reclamation of the entire 598 square feet and 45 cubic yards of impacted pasture area was completed. Approximately 3,544 square feet and 526 cubic yards of material on the active facility pad currently meet closure criteria but will require reclamation upon cessation of oilfield activities.

6.0 Closure Request

The release area was fully delineated and remediated on April 11, 2025. Confirmatory samples were analyzed by the laboratory and found to be below allowable concentrations as per the NMAC Closure Criteria for Soils Impacted by a release location where depth to ground water is 51 to 100 feet bgs. Vertex recommends no additional remediation action to address the release at Todd 36 D State #002. Vertex requests that this incident (nAB1815052591) be closed where all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. Final reclamation shall take place under 19.15.29.13 NMAC once the site is no longer being used for oil and gas operations.

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

7.0 References

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New Mexico Bureau of Geology and Mineral Resources. (2025). *Interactive Geologic Map*. Retrieved from https://maps.nmt.edu/

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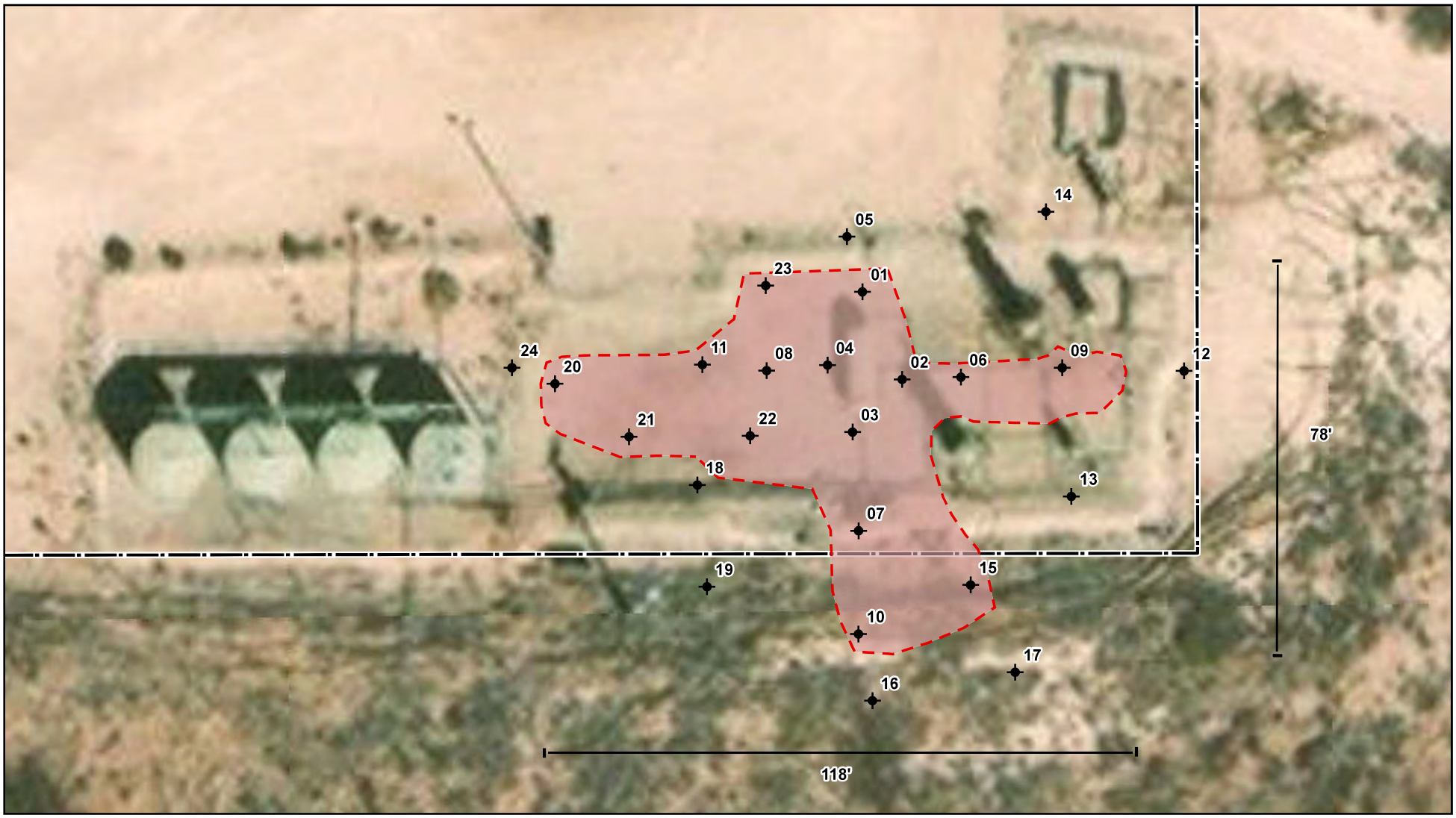
United States Geological Survey. (2025). *National Water Information System: Web Interface*. Retrieved from https://waterdata.usgs.gov/nwis

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 or 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



Approximate Lease Boundary

Approximate Release Area (~ 3,846 sq. ft.)

Borehole (Prefixed by "BH23-")

VERTEX

0 5 10 20 ft

Map Center:
Lat/Long: 32.266922°,-103.738789°

NAD 1983 UTM Zone 13N
Date: Apr 19/24

N

Characterization Sampling Site Schematic
Todd 36 D State #002

FIGURE:
1

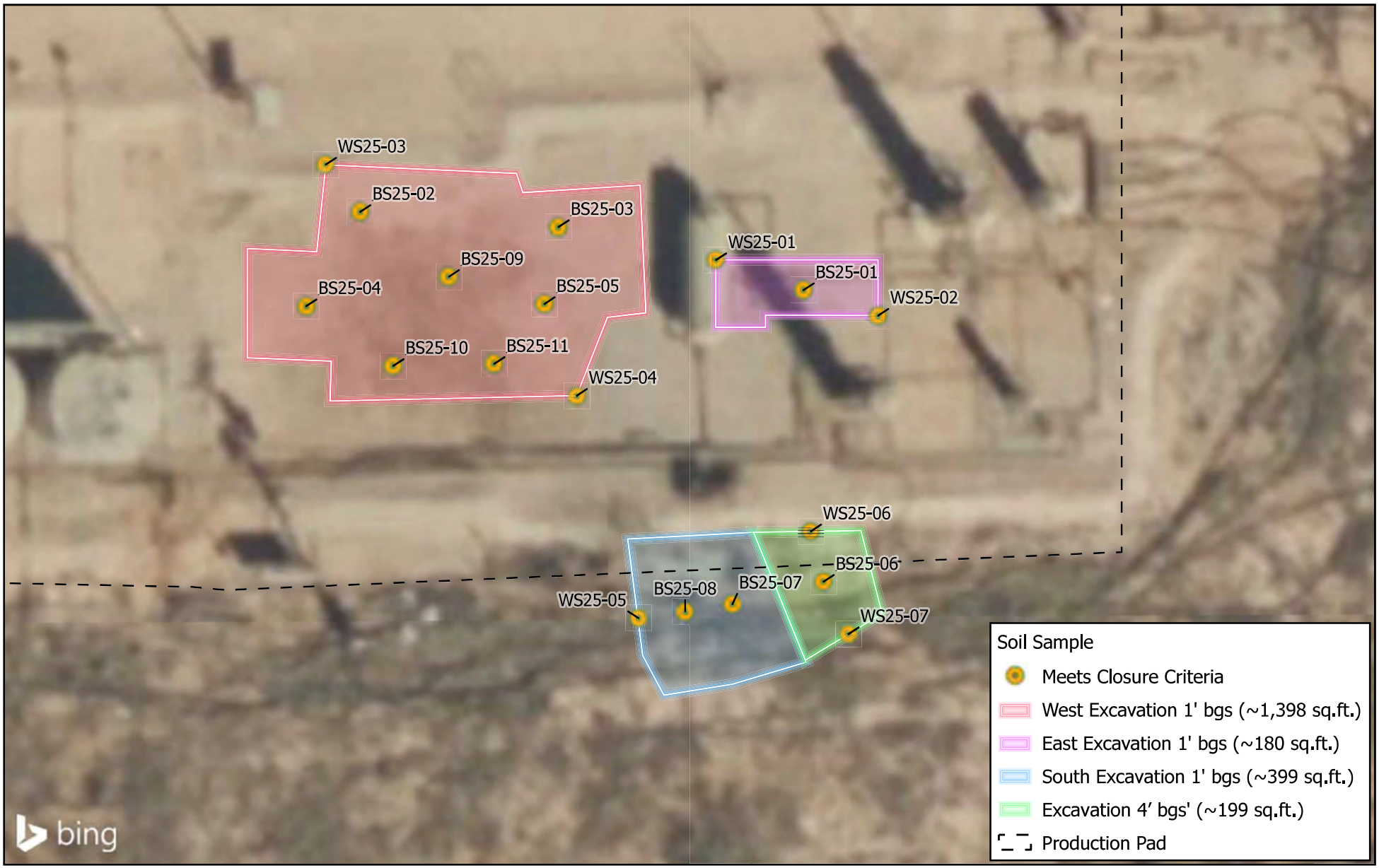
devon

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

Note: Georeferenced image from Esri, 2022. Approximate site boundary from sketch by Vertex Professional Services Ltd. (Vertex), 2024. Site features from GPS, Vertex, 2023.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects\ US PROJECTS\Devon Energy Corporation\2023\23E-05197 - Todd 36 D State #002\Project\23E-05197.aprx



VERTEX

0 10 20 ft

NAD 1983 StatePlane New Mexico East FIPS 3001 Feet

Map Center:
Lat/Long: 32.266878°N, 103.738701°W

Date: Apr 17/25

N

Confirmat on Sampling Site Schematic
Todd 36 D State #002

FIGURE:
2

devon

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

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

VERSATILITY. EXPERTISE.

TABLES

Client Name: Devon Energy Production Company, LP
Site Name: Todd 36 D State #002
NMOCD Tracking #: nAB1815052591
Project #: 23E-05197
Lab Reports: 2311675, 2311C31, 2311C33 and 885-2488-1

Table 4. Characterization Sample Laboratory Results - Depth to Groundwater 51 - 100 feet bgs

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	(GRO + DRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	Chloride Concentration (mg/kg)
BH23-01	0	November 12, 2023	ND	ND	ND	25	ND	ND	25	2,400
	2	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	430
	4	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	830
	5	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	390
BH23-02	0	November 12, 2023	ND	ND	ND	1,100	2,100	**1,100**	**3,200**	80
	2	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	300
BH23-03	0	November 12, 2023	ND	ND	ND	390	930	390	1,320	ND
	2	November 12, 2023	ND	ND	ND	16	ND	16	16	ND
	4	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	830
BH23-04	0	November 12, 2023	ND	ND	ND	1,800	2,600	**1,800**	**4,400**	430
	2	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	130
BH23-05	0	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	67
	2	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-06	0	November 12, 2023	ND	ND	ND	1,200	2,200	**1,200**	**3,400**	180
	2	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	200
BH23-07	0	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	1,400
	2	November 12, 2023	ND	ND	ND	21	ND	21	21	430
BH23-08	0	November 12, 2023	ND	ND	ND	15,000	8,500	**15,000**	**23,500**	810
	2	November 12, 2023	ND	ND	ND	17	ND	17	17	1,200
	4	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	73
BH23-09	0	November 12, 2023	ND	ND	ND	1,000	1,400	1,000	2,400	290
	2	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	110
BH23-10	0	November 12, 2023	ND	ND	ND	230	500	**230**	**730**	ND
	2	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-11	0	November 12, 2023	ND	ND	ND	25,000	15,000	**25,000**	**40,000**	ND
	2	November 12, 2023	ND	ND	ND	ND	ND	ND	ND	470
BH23-12	0	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	89
	2	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	270
BH23-13	0	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-14	0	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-15	0	November 17, 2023	ND	ND	ND	2,900	2,100	**2,900**	**5,000**	400
	2	November 17, 2023	ND	ND	ND	140	310	**140**	**450**	ND
	4	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-16	0	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-17	0	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-18	0	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-19	0	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 17, 2023	ND	ND	ND	ND	ND	ND	ND	ND

Client Name: Devon Energy Production Company, LP
Site Name: Todd 36 D State #002
NMOCD Tracking #: nAB1815052591
Project #: 23E-05197
Lab Reports: 2311675, 2311C31, 2311C33 and 885-2488-1

Table 4. Characterization Sample Laboratory Results - Depth to Groundwater 51 - 100 feet bgs

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	(GRO + DRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	Chloride Concentration (mg/kg)
BH23-20	0	November 18, 2023	ND	ND	ND	17	ND	17	17	800
	2	November 18, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-21	0	November 18, 2023	ND	ND	ND	26,000	17,000	**26,000**	**43,000**	ND
	2	November 18, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-22	0	November 18, 2023	ND	ND	ND	7,200	4,700	**7,200**	**11,900**	ND
	2	November 18, 2023	ND	ND	ND	260	490	260	750	180
BH23-23	0	November 18, 2023	ND	ND	ND	370	930	370	1,300	ND
	2	November 18, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-24	0	April 4, 2024	ND	ND	ND	ND	ND	ND	ND	15
	2	April 4, 2024	ND	ND	ND	11	ND	11	11	15

"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: Todd 36 D State #002
NMOCD Tracking #: nAB1815052591
Project #: 23E-05197
Lab Reports: 885-22760-1, 885-23045-1, 885-23300-1, and 885-23304-1

Table 3. Confirmatory Sample Laboratory Results

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater 51-100ft							
BS25-01	1	April 4, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-02	1	April 4, 2025	ND	ND	ND	380	380	380	760	ND
BS25-03	1	April 4, 2025	ND	ND	ND	66	73	66	139	290
BS25-04	1	April 4, 2025	ND	ND	ND	160	140	160	300	ND
BS25-05	1	April 4, 2025	ND	ND	ND	170	130	170	300	310
BS25-06	4	April 8, 2025	ND	ND	ND	54	130	54	184	72
BS25-07	1	April 8, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-08	1	April 8, 2025	ND	ND	ND	ND	ND	ND	ND	ND
BS25-09	1	April 8, 2025	ND	ND	ND	190	180	190	370	ND
BS25-10	1	April 11, 2025	ND	ND	ND	60	63	60	123	ND
BS25-11	1	April 11, 2025	ND	ND	ND	240	190	240	430	ND
WS25-01	0-1	April 11, 2025	ND	ND	ND	ND	ND	ND	ND	ND
WS25-02	0-1	April 8, 2025	ND	ND	ND	ND	ND	ND	ND	97
WS25-03	0-1	April 4, 2025	ND	ND	ND	55	59	55	**114**	120
	0-1	April 4, 2025	ND	ND	ND	ND	ND	ND	**ND**	190
WS25-04	0-1	April 11, 2025	ND	ND	ND	ND	ND	ND	ND	110
WS25-05	0-1	April 8, 2025	ND	ND	ND	ND	ND	ND	ND	ND
WS25-06	0-4	April 11, 2025	ND	ND	ND	ND	ND	ND	ND	ND
WS25-07	0-4	April 11, 2025	ND	ND	ND	ND	ND	ND	ND	ND
Backfill-01	-	April 4, 2025	ND	ND	ND	22	ND	22	22	360
Backfill-02	-	April 4, 2025	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
Bold and blue shaded indicates re-collected sample results inside NMOCD Remediation Closure Criteria

APPENDIX A - NMOCD C-141 Reports

RECEIVED

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

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

Form C-141
Revised April 3, 2017

MAY 23 2018
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

DISTRICT II-ARTESIA O.C.D.

Release Notification and Corrective Action

nAB1815052591

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company (0137)	Contact Merle Lewis, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-748-3371
Facility Name Todd 36D State 2 Battery	Facility Type Battery

Surface Owner Federal	Mineral Owner State	API No. 30-015-27365

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	36	23S	31E	330'	FNL	330'	FWL	Eddy

Latitude_32.2672234_ **Longitude**_103.7389755_ NAD83

NATURE OF RELEASE

Type of Release Oil & produced water	Volume of Release 1bbl oil & 8bbls produced water	Volume Recovered .5bbls oil & 7.5bbls produced water
Source of Release Vent line off of 2 phase separator	Date and Hour of Occurrence May 10, 2018 @ 11:00 Am	Date and Hour of Discovery May 10, 2018 @ 11:00 AM
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Two-phase separator dump stuck closed forcing fluid over the top causing it to go down the vent line to the water tank to the poly line which developed a leak.

Describe Area Affected and Cleanup Action Taken.*
Approximately 1bbl oil & 8bbls produced water was released inside dirt containment. The vessel was isolated and production was turned into other vessels to stop the release.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Sheila Fisher	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Signed By Kelly Sanderson	
Printed Name: Sheila Fisher		
Title: Field Admin Support	Approval Date: 5/29/18	Expiration Date: N/A
E-mail Address: Sheila.Fisher@dvn.com	Conditions of Approval: See attached	Attached: #AP-4773
Date: 5/14/18 Phone: 575.748.1829		

* Attach Additional Sheets If Necessary

APPENDIX B – Closure Criteria Research Documentation


C-02258
C-02348
C-02602
C-04790-POD1
C-04746-POD1
Red Rd
Red Rd
Red Rd
Jal Hwy
Jal Hwy
Jal Hwy
Twin Wells Rd
Twin Wells Rd

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 04790 POD1		CUB	ED	SE	SE	SW	25	23S	31E	619309.4	3570904.8		556	55		
C 02348		C	ED	NW	SE	SW	26	23S	31E	617647.5	3571068.0		1191	700	430	270
C 02258		C	ED		SW	NE	26	23S	31E	618055.0	3571853.0 *		1350	662		
C 04746 POD1		CUB	ED	SW	SE	SW	36	23S	31E	619225.7	3569417.8		1371	105		

Average Depth to Water: **430 feet**

Minimum Depth: **430 feet**

Maximum Depth: **430 feet**

Record Count: 4

UTM Filters (in meters):
Easting: 618786
Northing: 3570717
Radius: 002000

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

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 04790 POD1	SE	SE	SW	25	23S	31E	619309.4	3570904.8	

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

Driller License:	1833	**Driller Company:**	VISION RESOURCES, INC		
Driller Name:	JASON MALEY				
Drill Start Date:	2024-02-06	**Drill Finish Date:**	2024-02-06	**Plug Date:**	2024-02-10
Log File Date:	2024-02-26	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	2.00	**Depth Well:**	55	**Depth Water:**	

4/13/25 12:44 PM MST **Point of Diversion Summary**

Water Right Summary

get image list

WR File Number:	C 04790	**Subbasin:**	CUB	**Cross Reference:**	
Primary Purpose:	MON MONITORING WELL				
Primary Status:	PMT Permit				
Total Acres:		**Subfile:**		**Header:**	
Total Diversion:	0.000	**Cause/Case:**			
Owner:	DEVON ENERGY RESOURCES	**Owner Class:**	Owner		
Contact:	DALE WOODALL				

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	753931	EXPL	2023-12-11	PMT	APR	C 04790 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 04790 POD1	NA		SE	SE	SW	25	23S	31E	619309.4	3570904.8		

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

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.) C4790-POD1	WELL TAG ID NO. C4790	OSE FILE NO(S). C04790
WELL OWNER NAME(S) Devon Energy Resources		PHONE (OPTIONAL)
WELL OWNER MAILING ADDRESS 205 E Bender Road #150	CITY Hobbs	STATE NM ZIP 88240

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	16	6.708	N
	LONGITUDE	-103	43	59.556	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* 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.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1833	Jason Maley	Vision Resources

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
2-6-24	2-6-24	55'	55'	Dry

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

STATIC WATER LEVEL IN COMPLETED WELL (FT) 0'

DATE STATIC MEASURED 2-10-24

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

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

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	45'	6"	2" PVC SCH40	Thread	2"	SCH40	N/A
45'	55'	6"	2" PVC SCH40	Thread	2"	SCH40	.02

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE

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

FILE NO. C-04790	POD NO. 1	TRN NO. 753931	
LOCATION 23S.31E.25.443		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	40'	40'	Red dirt with small rocks	Y ✓ N	
40'	55'	15'	Tan fine sand with small rocks	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	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0

5. TEST; RIG SUPERVISION

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

MISCELLANEOUS INFORMATION:

OSE DII FEB 26 2024 PM2:04

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

6. SIGNATURE

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

Jason Maley — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

2/21/24 — DATE

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

FILE NO. C-04790	POD NO. 1	TRN NO. 753931	
LOCATION 23S.31E.25.443		WELL TAG ID NO.	PAGE 2 OF 2

U.S. Fish and Wildlife Service
National Wetlands Inventory

Todd 36 D State 2 - Watercourse 22,257' away (4.22 mi)

January 9, 2024 **Wetlands**

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

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

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

U.S. Fish and Wildlife Service
National Wetlands Inventory

Todd 36 D State #2 Playa 25,472 ft

December 14, 2023

Wetlands

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

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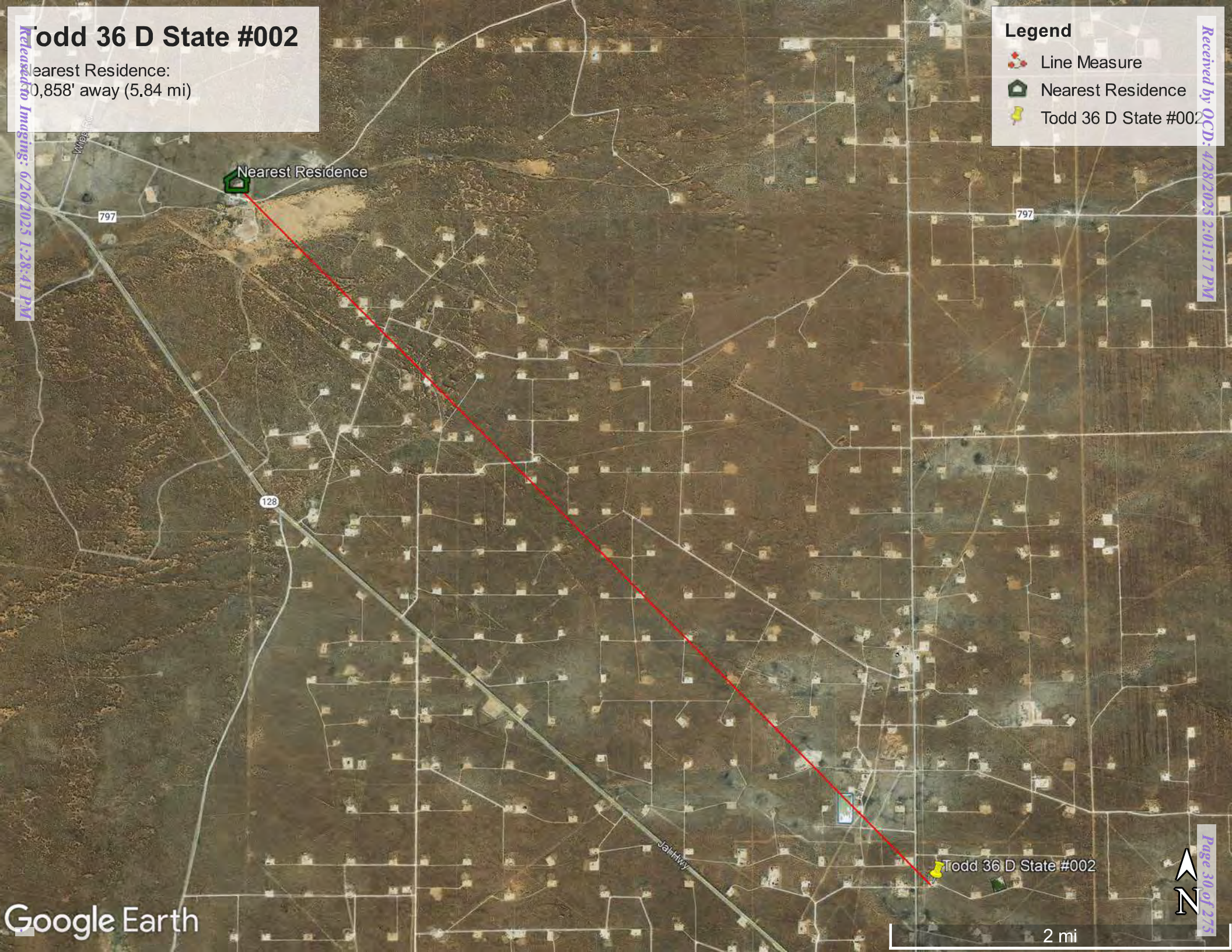
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper



Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum) | (R=POD has been replaced and no longer serves this file, C=the file is closed) | (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) | (NAD83 UTM in meters) | (meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q64	q16	q4	Sec	Tws	Range	X	Y	Map	Distance
C 02602	C	SAN	0.000	POGO PRODUCING COMPANY	ED	C 02602						NE	NE	35	23S	31E	618471.0	3570650.0 *		322.0
C 04790	CUB	MON	0.000	DEVON ENERGY RESOURCES	ED	C 04790 POD1	NA				SE	SE	SW	25	23S	31E	619309.4	3570904.8		556.1
C 02348	C	STK	3.000	NGL NORTH RANCH LLC A TX LLC	ED	C 02348				Shallow	NW	SE	SW	26	23S	31E	617647.5	3571068.0		1,191.4
C 02258	C	PRO	0.000	DEVON ENERGY CORP. (NEVADA)	ED	C 02258						SW	NE	26	23S	31E	618055.0	3571853.0 *		1,350.9
C 04746	CUB	MON	0.000	DEVON ENERGY RESOURCES	ED	C 04746 POD1	NA				SW	SE	SW	36	23S	31E	619225.7	3569417.8		1,371.6

Record Count: 5

Filters Applied:

UTM Filters (in meters):
Easting: 618786
Northing: 3570717
Radius: 002000

Sorted By: Distance

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

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 02348	NW	SE	SW	26	23S	31E	617647.5	3571068.0	

* UTM location was derived from PLSS - see Help

Driller License:	1654	**Driller Company:**	NOT WORKING FOR HIRE--SIRMAN DRILLING AND CONSTRUC		
Driller Name:	JOHN SIRMAN				
Drill Start Date:	2013-10-31	**Drill Finish Date:**	2013-11-01	**Plug Date:**	
Log File Date:	2013-11-07	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	10
Casing Size:	6.00	**Depth Well:**	700	**Depth Water:**	430

Water Bearing Stratifications:

Top	Bottom	Description
15	125	Sandstone/Gravel/Conglomerate
315	700	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
560	620
680	700

Water Right Summary

get image list

WR File Number:	C 02348	**Subbasin:**	C	**Cross Reference:**	
Primary Purpose:	STK 72-12-1 LIVESTOCK WATERING				
Primary Status:	PMT Permit				
Total Acres:		**Subfile:**		**Header:**	
Total Diversion:	3.000	**Cause/Case:**			
Owner:	NGL NORTH RANCH LLC A TX LLC	**Owner Class:**	Owner		
Contact:	JIM WINTER				

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
	755955	COWNF	2024-01-31	CHG	PRC	C 02348	T	0.000	0.000	
get images	633178	COWNF	2018-09-17	CHG	PRC	C 02348	T		0.000	
get images	491413	72121	2011-12-14	PMT	LOG	C 02348: SUBSEQUENT STK PERMIT	T		3.000	
	422940	COWNF	2009-02-02	CHG	PRC	C 02348	T		0.000	
	154822	COWNF	1998-09-09	CHG	PRC	C 02348	T	0.000	0.000	
	154817	DCL	1998-09-09	DCL	PRC	C 02348	T	0.000	3.000	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 02348		Shallow	NW	SE	SW	26	23S	31E	617647.5	3571068.0		

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

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 02258		SW	NE	26	23S	31E	618055.0	3571853.0 *	

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

Driller License:	421	**Driller Company:**	GLENN'S WATER WELL SERVICE		
Driller Name:	CORKY GLENN				
Drill Start Date:	1992-09-18	**Drill Finish Date:**	1992-09-18	**Plug Date:**	
Log File Date:	1992-09-25	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	662	**Depth Water:**	

4/13/25 1:04 PM MST **Point of Diversion Summary**

Water Right Summary

get image list

WR File Number:	C 02258	**Subbasin:**	C	**Cross Reference:**
Primary Purpose:	PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE			
Primary Status:	PMT Permit			
Total Acres:		**Subfile:**		**Header:**
Total Diversion:	0.000	**Cause/Case:**		
Owner:	DEVON ENERGY CORP.(NEVADA)	**Owner Class:**	Owner	
Contact:	CHARLES W. HORSMAN			

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	469242	72121	1992-05-27	EXP	EXP	C 02258	T		3.000	

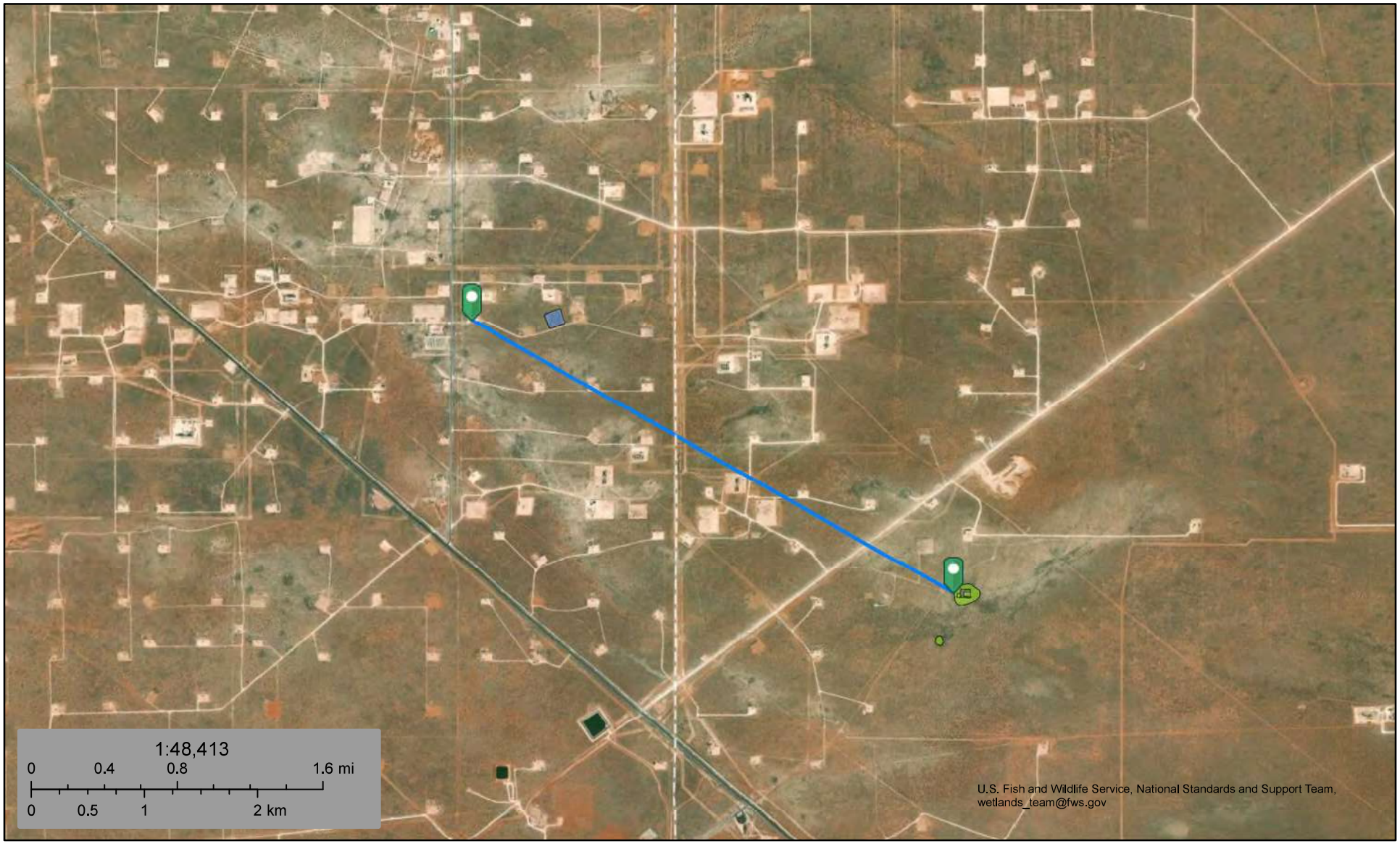
Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 02258				SW	NE	26	23S	31E	618055.0	3571853.0 *		

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

U.S. Fish and Wildlife Service
National Wetlands Inventory

Todd 36 D State #2 Wetland 13,590 ft



December 14, 2023

Wetlands

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

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

Todd 36 D State #002 Mine 54,254ft

3/12/2024, 7:34:16 AM

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Registered Mines

- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Potash

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

EMNRD MMD GIS Coordinator

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

Karst Potential

- Critical
- High
- Medium
- Low

- Site Location
- Site Buffer (1,000 ft)

Overview Map

0 0.5 1 2 mi

Detail Map

0 150 300 600 ft

VERTEX

Map Center:
Lat/Long: 32.276849, -103.743627

NAD 1983 UTM Zone 13N
Date: Mar 13/24

N

Karst Potential Map
Todd 36 D State #002

FIGURE:
X

devon

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

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

VERSATILITY. EXPERTISE.

Document Path: S:\04 - Geomatics\1-Projects_US PROJECTS\Devon Energy Corporation\2023\23E-05197 - Todd 36 D State #002\Figure X Karst Potential Map (23E-05197

National Flood Hazard Layer FIRMette

FEMA

103°44'39"W 32°16'17"N

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

1:6,000

103°44'2"W 32°15'47"N

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 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

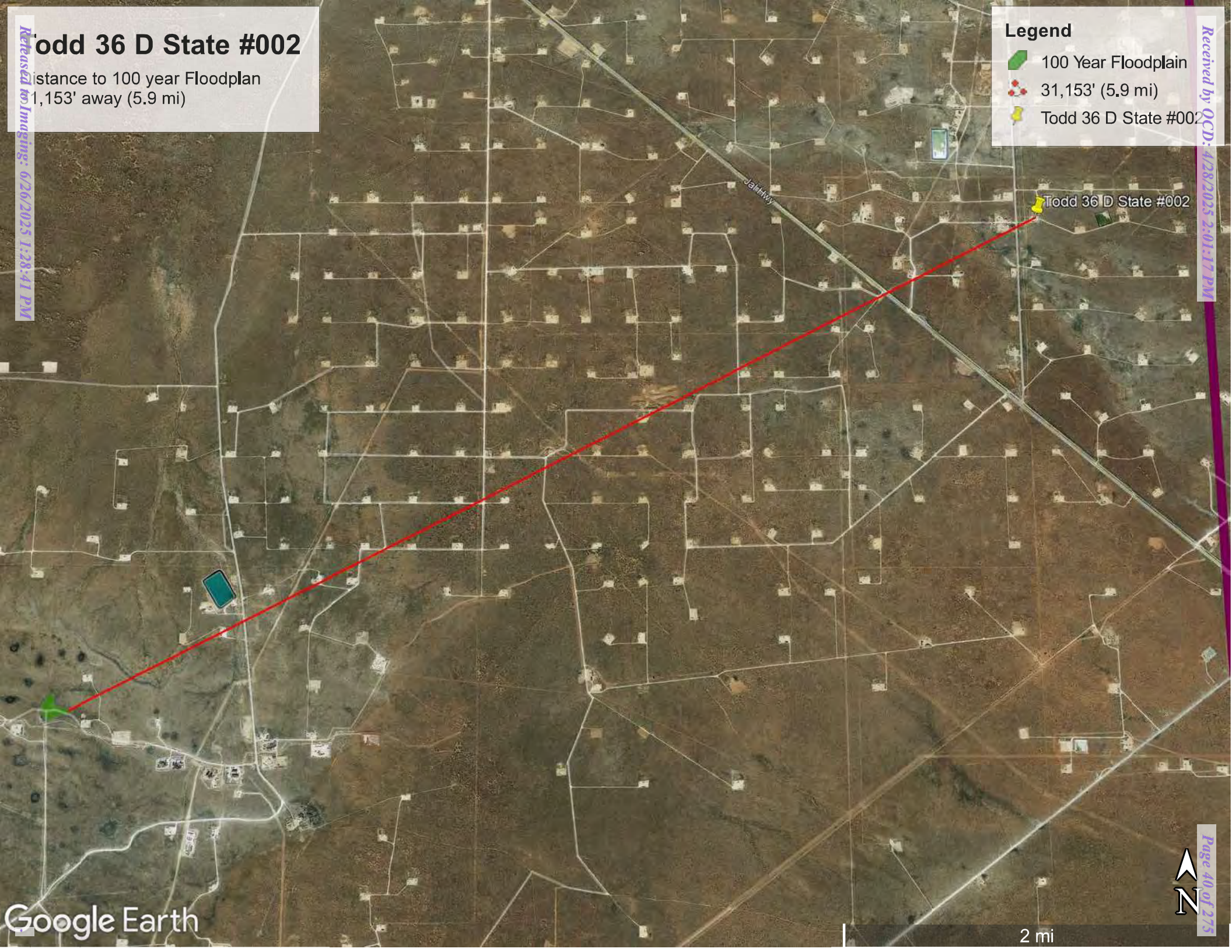
N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/17/2023 at 3:34 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.



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 Eddy Area, New Mexico

September 17, 2023

Custom Soil Resource Report
Soil Map

Map Scale: 1:512 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 20 40 80 120

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

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: Eddy Area, New Mexico
Survey Area Data: Version 18, Sep 8, 2022

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.

Eddy Area, New Mexico

KM—Kermit-Berino fine sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w4q
Elevation: 3,100 to 4,200 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 60 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 50 percent
Berino and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit

Setting

Landform: Plains, alluvial fans
Landform position (three-dimensional): Talf, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 7 inches: fine sand
H2 - 7 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R070BD005NM - Deep Sand
Hydric soil rating: No

Description of Berino

Setting

Landform: Plains, fan piedmonts
Landform position (three-dimensional): Riser

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 17 inches: fine sand
H2 - 17 to 50 inches: fine sandy loam
H3 - 50 to 58 inches: loamy sand

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
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Active dune land

Percent of map unit: 15 percent
Hydric soil rating: No

Ecological site R070BD005NM
Deep Sand

Accessed: 12/14/2023

General information

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

Figure 1. Mapped extent

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

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on terraces, Piedmonts, dunes fields, or upland plains. Parent material consists of eolian deposits and alluvium derived from sandstone. Slopes range from 0 to 15 percent, usually less than 5 percent. Low, stabilized hummocks or dunes frequently occur. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Dune (2) Parna dune (3) Terrace
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–4,500 ft
Slope	0–15%
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 is in late March or early April, and the first killing frost is in late October or early November.

Both temperature and moisture favor warm season perennial plant growth. During years of abundant winter and early spring moisture, cool season growth and annual forbs, make up an important component of this site. Strong winds blow from the west 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 deep or very deep. Surface textures are sand loam, fine sand or loamy fine sand, Underlying material textures are loamy fine sand, fine sand, sand or fine sandy loam. Because of the coarse textures and rapid drying of the surface, the soil, if unprotected by plant cover and organic residue, becomes windblown and low hummocks or dunes are formed around shrubs.

Characteristic soils are:
Anthony
Aguena
Kermit
Likes
Pintura
Bluepoint

Table 4. Representative soil features

Surface texture	(1) Sand (2) Fine sand (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to excessively drained
Permeability class	Moderate to very rapid
Soil depth	60–72 in
Surface fragment cover <=3"	0–5%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	3–5 in
Calcium carbonate equivalent (0-40in)	5–15%
Electrical conductivity (0-40in)	0–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0–2
Soil reaction (1:1 water) (0-40in)	6.6–7.8

Subsurface fragment volume <=3" (Depth not specified)	5–10%
Subsurface fragment volume >3" (Depth not specified)	0%

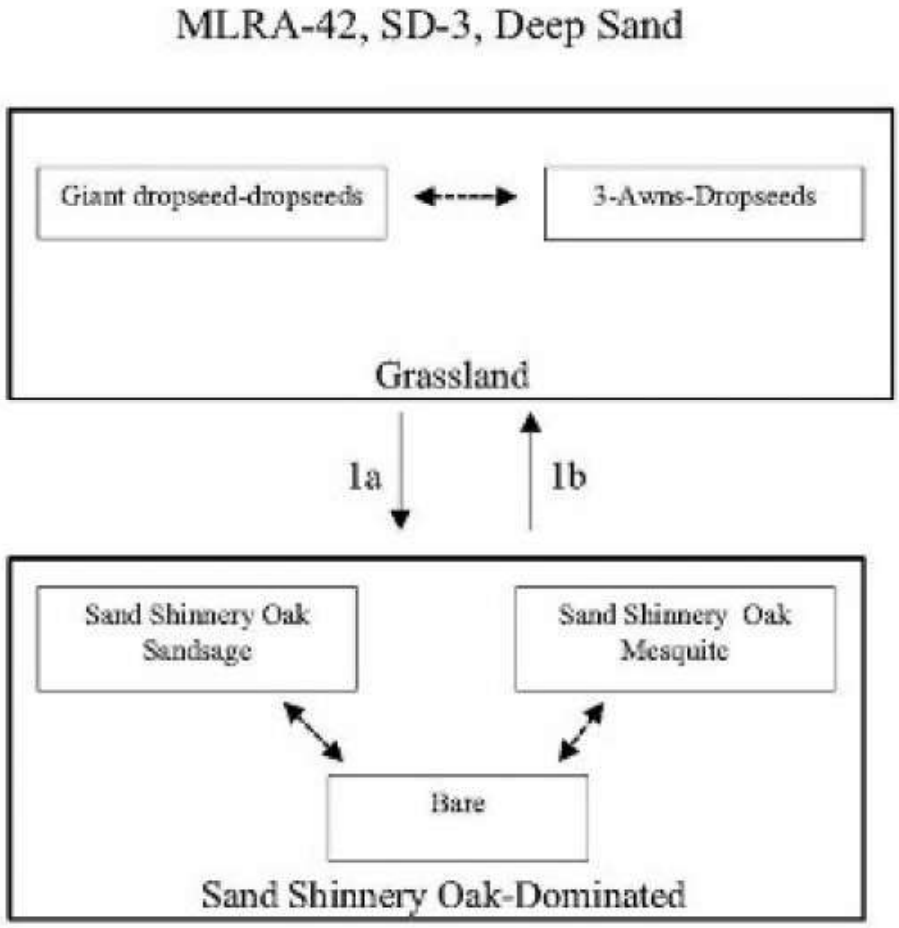
Ecological dynamics

Overview

The Deep Sand site occurs adjacent to and/or intergraded with the Sandhills and Sandy sites (SD-3). The Deep Sand site can be distinguished by slopes less than eight percent (approximately five percent) and textural changes at depths greater than 40 inches. The Deep Sand site has well drained soils with a surface texture of sand or loamy fine sand. The Sandhills site has slopes greater than eight percent and textural depths greater than 60 inches. Conversely, the Sandy site has slopes less than five percent and depths to textural change commonly around 20 inches. The historic plant community of the Deep Sand site is dominated primarily by giant dropseed (*Sporobolus giganteus*) and other dropseeds (*S. flexuosus*, *S. contractus*, *S. cryptandrus*), with scattered shinnery oak (*Quercus havardii*) and soapweed yucca (*Yucca glauca*). Other herbaceous species include threeawns (Aristida spp.), bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), and annual and perennial forbs distributed relative to precipitation occurrences. Bare ground and litter compose a significant proportion of ground cover while grasses are the remainder. Shinnery oak will increase with an associated decrease in dropseed and bluestem abundance possibly due to climatic change, fire suppression, interspecific competition, and excessive grazing. Continued grass cover loss may result in a transition to a shinnery oak dominated state with increases in sand sage (*Artemisia filifolia*) and honey mesquite (*Prosopis glandulosa*). However, brush management may restore the grassland component and reverse the shinnery oak state back toward the historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram)



1.a Climate, fire suppression, competition, over grazing

1.b Brush control, Prescribed grazing

State 1
Historic Climax Plant Community

Community 1.1

Historic Climax Plant Community

State Containing Historic Plant Community Grassland: The historic plant community is dominated by giant dropseed, other dropseeds, threeawns, and bluestems. Dominant woody plants include shinnery oak and soapweed yucca. Forb abundance and distribution varies and is dependent on annual rainfall. The Deep Sand site typically exists in sandy plains and dunes (Sosebee 1983). Grass dominance stabilizes the potentially erosive sandy soils. Historical fire suppression, however, may have contributed to increased woody plant abundance, which has reduced grass species. Further, drought conditions compounded with excessive grazing likely has driven most grass species out of competition with shrubs which has resulted in a shinnery oak dominated state with sand sage and mesquite (Young et al. 1948). Diagnosis: Grassland dominated by dropseeds, threeawns, and bluestems. Small shrubs, such as shinnery oak and soapweed yucca, and subshrubs are dispersed throughout the grassland. Other grasses that could appear on this site would include: flatsedge, almejita signalgrass, big bluestem, Indiangrass, fall witchgrass, hairy grama and red lovegrass Other shrubs include: fourwing saltbush, mesquite, ephedra and broom snakeweed. Other forbs include: wooly and scarlet gaura, wooly dalea, phlox heliotrope, scorpionweed, deerstongue, fleabane, nama, hoffmanseggia, lemon beebalm and stickleaf.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	396	858	1320
Shrub/Vine	108	234	360
Forb	96	208	320
Total	**600**	**1300**	**2000**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	15-20%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	35-40%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	35-40%

Figure 5. Plant community growth curve (percent production by month). NM2805, HCPC. SD-3 Deep 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
Shinnery Oak Dominated

Community 2.1
Shinnery Oak Dominated

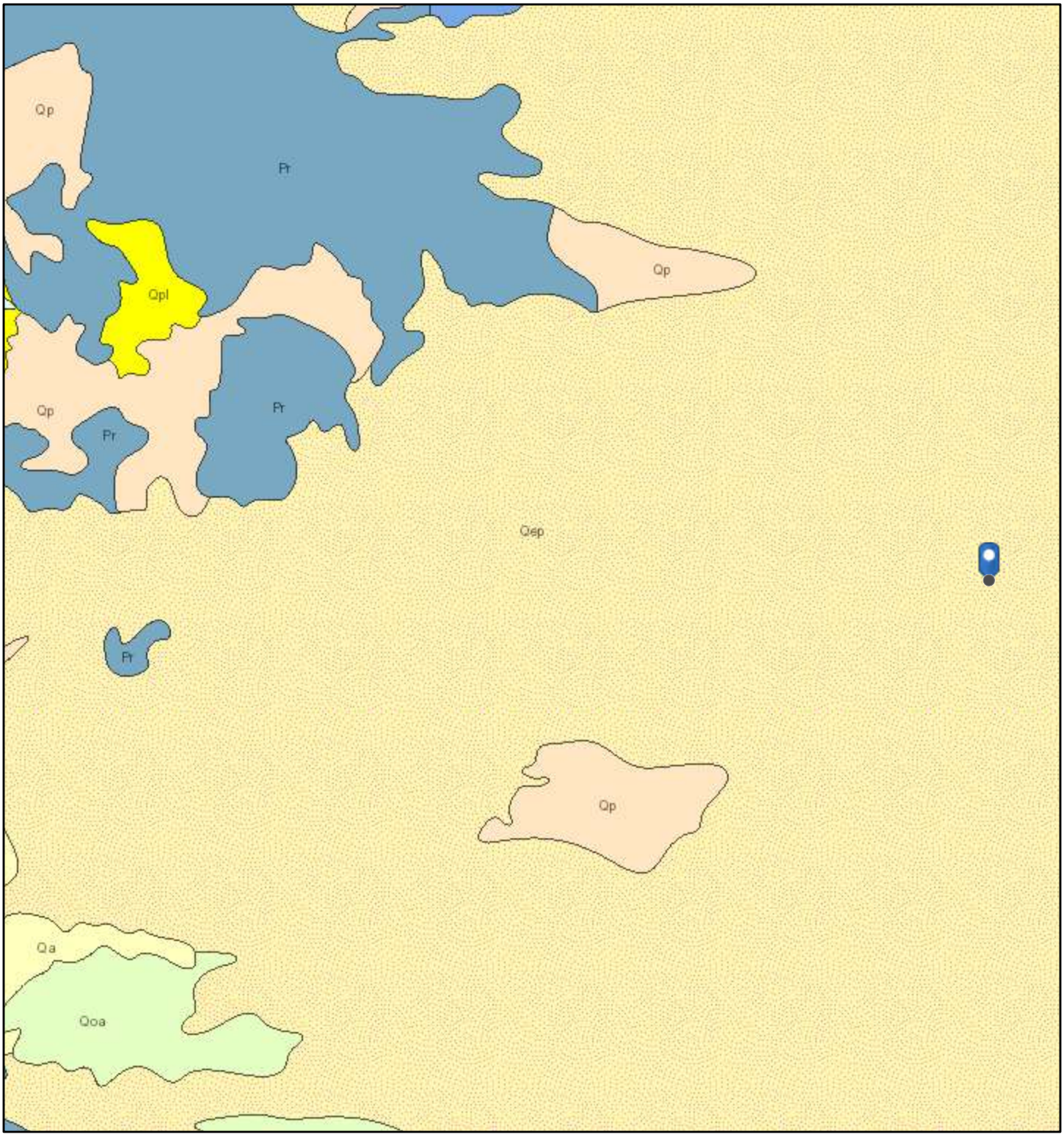
Shinnery Oak Dominated: This state is dominated by shinnery oak with subdominants of sand sage or mesquite. Bare ground is a significant component in this state as well. shinnery oak is characterized by dense stands in sandy soils; however, as clay percentage increases, shinnery oak decreases. Shinnery oak abundance and distribution increase with disturbances, such as excessive grazing and fire, due to an aggressive rhizome system. As shinnery oak abundance increases, an associated increase of mesquite, sand sage, and soapweed yucca also occurs. Shinnery oak's extensive root system allows the oak to competitively exclude grasses and forbs. Sand sage, however, stabilizes light sandy soils from wind erosion and can co-exist with herbaceous species by protecting them in heavily grazed conditions (Davis and Bonham 1979). Shinnery oak has been found primarily in very deep, excessively drained, and rapidly permeable soils. Shinnery oak is associated with landforms which are gently undulating to rolling uplands, very gently sloping to moderately steep slopes, and upland plains, alluvial fans and valley sideslopes. Shinnery oak and sand sage can be controlled with herbicide if applied in the spring with a subsequent rest from grazing (Herbel et al. 1979, Pettit 1986). In addition, repetitive seasons of goat browsing can also reduce shinnery oak abundance. Patches should be maintained during brush control, however, to prevent erosion and to provide wildlife cover and forage. Further, as shinnery oak and other shrubs increase, bare patches and erosion will increase due to a lack of herbaceous ground cover. Diagnosis: Shinnery oak dominated with subdominant sand sage, honey mesquite, and soapweed yucca with increasing frequency and size of bare patches. Transition to Shinnery oak dominated state (1a): The historic plant community begins to shift toward the shinnery oak dominated state as drivers such as climate change, 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 an increase of shrub species abundance and bare patch expansion. Key indicators of approach to transition: • Loss of grass and forb cover • Surface soil erosion • Bare patch expansion • Increased shrub species abundance and composition Transition to Historic Plant Community (1b): The shinnery oak dominated state may transition back toward the historic plant community as new drivers are introduced such as prescribed grazing, brush control, and discontinued drought conditions.

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)

Todd 36 D State #002 Geology



3/12/2024, 7:24:55 AM

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Lithologic Units

Playa—Alluvium and evaporite deposits (Holocene)

Water—Perenial standing water

Qa—Alluvium (Holocene to upper Pleistocene)

Esri, NASA, NGA, USGS, 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

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

APPENDIX C – Daily Field and Sampling Reports

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	11/17/2023
Site Location Name:	Todd 36 D State #002	Report Run Date:	3/11/2024 6:22 PM
Client Contact Name:	Jim Raley	API #:	30-015-27365
Client Contact Phone #:	575-748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	11/17/2023 8:12 AM
Departed Site	11/17/2023 2:02 PM

Field Notes

8:24 Completed safety meeting and filled out safety paperwork

9:29 Collected borehole samples 12-14

9:30 Tested samples 12-14 for chloride (all appearing clean)

10:24 Screened samples 12-14 for chloride

10:33 Noticeable washout from corroded line leading to possible release. Noticeable contamination at surface. Field screening for due diligence purposes. (Borehole samples 15-18)

11:24 Borehole samples 15-19 tested for chloride

12:18 Screened borehole samples 15-19 for TPH

13:34 Took photos of all holes and contaminated area of earthberm

13:35 Jarred all soil samples

Next Steps & Recommendations

1

Daily Site Visit Report

Daily Site Visit Report

Site Photos

Viewing Direction: South

BH23-12

Viewing Direction: West

BH23-13

Viewing Direction: East

BH23-14

Viewing Direction: East

BH23-15

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: Southeast
	
BH23-16	BH23-17
Viewing Direction: West	**Viewing Direction**: Southwest
	
BH23-19	BH23-18

Daily Site Visit Report

Viewing Direction: East

Contaminated area of earthberm

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Bryce Mortimer

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/8/2025
Site Location Name:	Todd 36 D State #002	Report Run Date:	4/9/2025 3:05 PM
Client Contact Name:	Jim Raley	API #:	30-015-27365
Client Contact Phone #:	575-748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/8/2025 8:40 AM
Departed Site	4/8/2025 5:45 PM

Field Notes

17:36 Completed saftey paperwork upon arrival

17:38 Continued to expand wall sample 4 south 1ft at a time until it got to the the lines then began expanding out to the to the east and the western section to the south

17:38 Samples base sample 6 through 11

17:38 Sampled wall samples 4 and 2

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: South

Wall sample 4 expansion further south

Viewing Direction: South

Wall sample 4 expansions to the east and western section south

Viewing Direction: South

Base samples 9-11

Viewing Direction: South

Base samples 7 and 8 in the 1ft pasture land

Daily Site Visit Report

Viewing Direction: South

Base sample 6 in the 4ft pastureland

Viewing Direction: Southwest

Wall sample 5 along the 1ft pastureland excavation

Viewing Direction: Southeast

Excavations closed off at end of day

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Katrina Taylor

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/11/2025
Site Location Name:	Todd 36 D State #002	Report Run Date:	4/12/2025 12:32 AM
Client Contact Name:	Jim Raley	API #:	30-015-27365
Client Contact Phone #:	575-748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/11/2025 7:05 AM
Departed Site	4/11/2025 4:20 PM

Daily Site Visit Report

Site Sketch

Daily Site Visit Report

Field Notes

7:34 Completed JSA on arrival. On site to update excavation map in ArcGIS and collect remaining confirmation samples from excavation base and walls.

11:00 Updated excavation and sampling location map in ArcGIS. Swept excavation surfaces with magnetic locator prior to sample collection.

15:51 Collected confirmation samples from surfaces of excavations to 1 and 4 feet bgs on pad and into pasture. Confirmation samples collected from the excavation base and walls were 5-point composites representing areas no greater than 200 square feet.

15:58 Collected confirmation samples BS25-10 and BS25-11 from base of west excavation to 1 feet bgs on pad. Field screening results were below NMOCD thresholds for depth to groundwater between 51 and 100 feet bgs.

16:00 Collected confirmation sample WS25-04 from wall of west excavation to 1 feet bgs on pad. Collected confirmation sample WS25-01 from wall of east excavation to 1 feet bgs on pad. Field screening results were below NMOCD strictest criteria for chloride and TPH.

16:02 Collected confirmation samples WS25-06 and WS25-07 from wall excavation to 4 feet bgs in pasture. Field screening results were below NMOCD strictest criteria for chloride and TPH.

16:02 Confirmation sampling completed pending laboratory results.

Next Steps & Recommendations

1 Submit confirmation samples to laboratory for analyses.

Daily Site Visit Report

Site Photos

Viewing Direction: East

Northwest of tanks facing east.

Viewing Direction: East

Northwest corner of west excavation to 1 feet bgs facing east.

Viewing Direction: Southeast

Northwest corner of west excavation to 1 feet bgs facing southeast.

Viewing Direction: South

Northwest corner of west excavation to 1 feet bgs facing south.

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: North
	
West edge of west excavation to 1 feet bgs facing east.	Southwest corner of west excavation to 1 feet bgs facing north.
Viewing Direction: Northeast	**Viewing Direction**: East
	
Southwest corner of west excavation to 1 feet bgs facing northeast.	Southwest corner of west excavation to 1 feet bgs facing east.

Daily Site Visit Report

Viewing Direction: West

Southeast corner of west excavation to 1 feet bgs facing west. Collected confirmation samples BS25-10, BS25-11, and WS25-04.

Viewing Direction: Northwest

Southeast corner of west excavation to 1 feet bgs facing northwest. Collected confirmation samples BS25-10, BS25-11, and WS25-04.

Viewing Direction: North

Southeast corner of west excavation to 1 feet bgs facing north. Collected confirmation samples BS25-10, BS25-11, and WS25-04.

Viewing Direction: West

East edge of west excavation to 1 feet bgs facing west.

Daily Site Visit Report

Viewing Direction: South

Northeast corner of west excavation to 1 feet bgs facing south.

Viewing Direction: Southwest

Northeast corner of west excavation to 1 feet bgs facing southwest.

Viewing Direction: West

Northeast corner of west excavation to 1 feet bgs facing west.

Viewing Direction: Southeast

Northwest corner of east excavation to 1 feet bgs facing east-southeast. Collected confirmation sample WS25-01.

Daily Site Visit Report

Viewing Direction: Northeast	**Viewing Direction**: Northwest
	
Southwest corner of east excavation to 1 feet bgs facing east-northeast. Collected confirmation sample WS25-01.	Southeast corner of east excavation to 1 feet bgs facing west-northwest.
Viewing Direction: Southwest	**Viewing Direction**: East
	
Northeast corner of east excavation to 1 feet bgs facing west-southwest.	Northwest corner of south excavation to 1 feet bgs facing east.

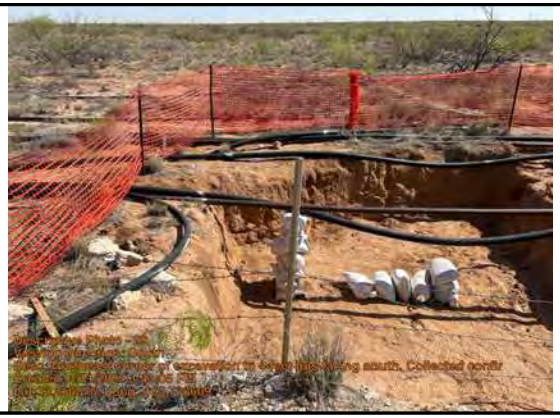
Daily Site Visit Report

Viewing Direction: Southeast	**Viewing Direction**: South
	
Northwest corner of south excavation to 1 feet bgs facing southeast.	Northwest corner of south excavation to 1 feet bgs facing south.
Viewing Direction: North	**Viewing Direction**: Northeast
	
Southwest corner of south excavation to 1 feet bgs facing north.	Southwest corner of south excavation to 1 feet bgs facing northeast.

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: West
	
Southwest corner of south excavation to 1 feet bgs facing east.	Southeast corner of excavation to 4 feet bgs facing west. Collected confirmation samples WS25-06 and WS25-07.
Viewing Direction: Northwest	**Viewing Direction**: North
	
Southeast corner of excavation to 4 feet bgs facing northwest. Collected confirmation samples WS25-06 and WS25-07.	Southeast corner of excavation to 4 feet bgs facing north. Collected confirmation samples WS25-06 and WS25-07.

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: Southwest
	
Northeast corner of excavation to 4 feet bgs facing south. Collected confirmation samples WS25-06 and WS25-07.	Northeast corner of excavation to 4 feet bgs facing southwest. Collected confirmation samples WS25-06 and WS25-07.

Viewing Direction: West

Northeast corner of excavation to 4 feet bgs facing west. Collected confirmation samples WS25-06 and WS25-07.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 

APPENDIX D – Notifications

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 447685

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 447685
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1815052591**
Incident Name	**NAB1815052591 TODD 36 D STATE #002 @ 30-015-27365**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Plan Approved**
Incident Well	**[30-015-27365] TODD 36 D STATE #002**

Location of Release Source	
Site Name	**TODD 36 D STATE #002**
Date Release Discovered	**05/10/2018**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	1,500
What is the estimated number of samples that will be gathered	16
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/04/2025
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Katrina Taylor 575-263-3295 , Kent Stallings 346-814-1413
Please provide any information necessary for navigation to sampling site	Site Coordinates: 32.2672234,-103.7389755 From the intersection of US-Hwy285 S and NM-31 (Potash Mines Rd) Head east on NM-31 (Potash Mines Rd) toward NM-128 E (Jal Hwy) 7.7 mi Turn right on NM-128 E (Jal Hwy) 18mi Turn left on Red Rd 1mi Turn right 0.1 mi

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

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 447685
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jraley	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.	4/1/2025

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 448669

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 448669
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1815052591**
Incident Name	**NAB1815052591 TODD 36 D STATE #002 @ 30-015-27365**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Plan Approved**
Incident Well	**[30-015-27365] TODD 36 D STATE #002**

Location of Release Source	
Site Name	**TODD 36 D STATE #002**
Date Release Discovered	**05/10/2018**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	1,500
What is the estimated number of samples that will be gathered	16
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/08/2025
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Katrina Taylor 575-263-3295 , Kent Stallings 346-814-1413
Please provide any information necessary for navigation to sampling site	Site Coordinates: 32.2672234,-103.7389755 From the intersection of US-Hwy285 S and NM-31 (Potash Mines Rd) Head east on NM-31 (Potash Mines Rd) toward NM-128 E (Jal Hwy) 7.7 mi Turn right on NM-128 E (Jal Hwy) 18mi Turn left on Red Rd 1mi Turn right 0.1 mi

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

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137
	Action Number: 448669
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jraley	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.	4/3/2025

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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

QUESTIONS

Action 450285

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 450285
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1815052591**
Incident Name	**NAB1815052591 TODD 36 D STATE #002 @ 30-015-27365**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Plan Approved**
Incident Well	**[30-015-27365] TODD 36 D STATE #002**

Location of Release Source	
Site Name	**TODD 36 D STATE #002**
Date Release Discovered	**05/10/2018**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	1,500
What is the estimated number of samples that will be gathered	16
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/11/2025
Time sampling will commence	11:00 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	Site Coordinates: 32.2672234,-103.7389755 From the intersection of US-Hwy285 S and NM-31 (Potash Mines Rd) Head east on NM-31 (Potash Mines Rd) toward NM-128 E (Jal Hwy) 7.7 mi Turn right on NM-128 E (Jal Hwy) 18mi Turn left on Red Rd 1mi Turn right 0.1 mi

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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

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 450285
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jraley	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.	4/9/2025

APPENDIX E – Laboratory Data Reports and Chain of Custody Forms

eurofins | 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 29, 2023

Kent Stallings

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

RE: Todd 36 D State 2 OrderNo.: 2311675

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 26 sample(s) on 11/14/2023 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-01 0'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 9:00:00 AM
Lab ID: 2311675-001 **Matrix:** SOIL
Received Date: 11/14/2023 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)	25	9.6		mg/Kg	1	11/16/2023 12:25:53 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/16/2023 12:25:53 PM
Surr: DNOP	87.0	69-147		%Rec	1	11/16/2023 12:25:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/18/2023 5:00:21 PM
Surr: BFB	96.8	15-244		%Rec	1	11/18/2023 5:00:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/18/2023 5:00:21 PM
Toluene	ND	0.047		mg/Kg	1	11/18/2023 5:00:21 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/18/2023 5:00:21 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/18/2023 5:00:21 PM
Surr: 4-Bromofluorobenzene	94.5	39.1-146		%Rec	1	11/18/2023 5:00:21 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	2400	150		mg/Kg	50	11/20/2023 8:40:44 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-01 2'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 9:10:00 AM
Lab ID: 2311675-002 **Matrix:** SOIL
Received Date: 11/14/2023 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	11/16/2023 4:20:10 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/16/2023 4:20:10 PM
Surr: DNOP	112	69-147		%Rec	1	11/16/2023 4:20:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/18/2023 5:24:06 PM
Surr: BFB	99.1	15-244		%Rec	1	11/18/2023 5:24:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/18/2023 5:24:06 PM
Toluene	ND	0.047		mg/Kg	1	11/18/2023 5:24:06 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/18/2023 5:24:06 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/18/2023 5:24:06 PM
Surr: 4-Bromofluorobenzene	96.4	39.1-146		%Rec	1	11/18/2023 5:24:06 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	430	60		mg/Kg	20	11/17/2023 9:22:48 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-02 0'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 9:20:00 AM
Lab ID: 2311675-003 **Matrix:** SOIL
Received Date: 11/14/2023 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)	1100	200		mg/Kg	20	11/16/2023 12:47:13 PM
Motor Oil Range Organics (MRO)	2100	980		mg/Kg	20	11/16/2023 12:47:13 PM
Surr: DNOP	0	69-147	S	%Rec	20	11/16/2023 12:47:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/18/2023 5:47:47 PM
Surr: BFB	95.1	15-244		%Rec	1	11/18/2023 5:47:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/18/2023 5:47:47 PM
Toluene	ND	0.048		mg/Kg	1	11/18/2023 5:47:47 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/18/2023 5:47:47 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/18/2023 5:47:47 PM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	11/18/2023 5:47:47 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	80	60		mg/Kg	20	11/17/2023 10:00:02 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-02 2'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 9:30:00 AM
Lab ID: 2311675-004 **Matrix:** SOIL
Received Date: 11/14/2023 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	11/16/2023 4:31:04 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 4:31:04 PM
Surr: DNOP	109	69-147		%Rec	1	11/16/2023 4:31:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/18/2023 6:11:29 PM
Surr: BFB	95.2	15-244		%Rec	1	11/18/2023 6:11:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/18/2023 6:11:29 PM
Toluene	ND	0.049		mg/Kg	1	11/18/2023 6:11:29 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/18/2023 6:11:29 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/18/2023 6:11:29 PM
Surr: 4-Bromofluorobenzene	94.0	39.1-146		%Rec	1	11/18/2023 6:11:29 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	300	59		mg/Kg	20	11/17/2023 10:37:15 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-03 0'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 9:40:00 AM
Lab ID: 2311675-005 **Matrix:** SOIL **Received Date:** 11/14/2023 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)	390	180		mg/Kg	20	11/16/2023 1:08:36 PM
Motor Oil Range Organics (MRO)	930	920		mg/Kg	20	11/16/2023 1:08:36 PM
Surr: DNOP	0	69-147	S	%Rec	20	11/16/2023 1:08:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/18/2023 6:35:11 PM
Surr: BFB	91.9	15-244		%Rec	1	11/18/2023 6:35:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/18/2023 6:35:11 PM
Toluene	ND	0.049		mg/Kg	1	11/18/2023 6:35:11 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/18/2023 6:35:11 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/18/2023 6:35:11 PM
Surr: 4-Bromofluorobenzene	90.1	39.1-146		%Rec	1	11/18/2023 6:35:11 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	11/17/2023 10:49:40 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-03 2'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 9:50:00 AM
Lab ID: 2311675-006 **Matrix:** SOIL **Received Date:** 11/14/2023 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)	16	9.8		mg/Kg	1	11/17/2023 3:15:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/17/2023 3:15:51 PM
Surr: DNOP	108	69-147		%Rec	1	11/17/2023 3:15:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/20/2023 10:40:34 AM
Surr: BFB	100	15-244		%Rec	1	11/20/2023 10:40:34 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/20/2023 8:03:32 PM
Toluene	ND	0.047		mg/Kg	1	11/20/2023 8:03:32 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/20/2023 8:03:32 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/20/2023 8:03:32 PM
Surr: 4-Bromofluorobenzene	92.5	39.1-146		%Rec	1	11/20/2023 8:03:32 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	11/17/2023 11:02:04 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-04 0'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 10:00:00 AM
Lab ID: 2311675-007 **Matrix:** SOIL
Received Date: 11/14/2023 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)	1800	200		mg/Kg	20	11/17/2023 4:54:38 PM
Motor Oil Range Organics (MRO)	2600	980		mg/Kg	20	11/17/2023 4:54:38 PM
Surr: DNOP	0	69-147	S	%Rec	20	11/17/2023 4:54:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 11:04:06 AM
Surr: BFB	91.6	15-244		%Rec	1	11/20/2023 11:04:06 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/20/2023 8:50:23 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 8:50:23 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 8:50:23 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/20/2023 8:50:23 PM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	11/20/2023 8:50:23 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	430	60		mg/Kg	20	11/17/2023 11:14:28 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-04 2'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 10:10:00 AM
Lab ID: 2311675-008 **Matrix:** SOIL
Received Date: 11/14/2023 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	9.6		mg/Kg	1	11/17/2023 3:40:25 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/17/2023 3:40:25 PM
Surr: DNOP	110	69-147		%Rec	1	11/17/2023 3:40:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/20/2023 11:27:30 AM
Surr: BFB	99.3	15-244		%Rec	1	11/20/2023 11:27:30 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/20/2023 9:13:47 PM
Toluene	ND	0.047		mg/Kg	1	11/20/2023 9:13:47 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/20/2023 9:13:47 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/20/2023 9:13:47 PM
Surr: 4-Bromofluorobenzene	94.3	39.1-146		%Rec	1	11/20/2023 9:13:47 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	130	60		mg/Kg	20	11/17/2023 11:26:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-01 4'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 10:20:00 AM
Lab ID: 2311675-009 **Matrix:** SOIL **Received Date:** 11/14/2023 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	9.6		mg/Kg	1	11/17/2023 4:05:03 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/17/2023 4:05:03 PM
Surr: DNOP	111	69-147		%Rec	1	11/17/2023 4:05:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/20/2023 11:51:04 AM
Surr: BFB	95.1	15-244		%Rec	1	11/20/2023 11:51:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/20/2023 9:37:10 PM
Toluene	ND	0.046		mg/Kg	1	11/20/2023 9:37:10 PM
Ethylbenzene	ND	0.046		mg/Kg	1	11/20/2023 9:37:10 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/20/2023 9:37:10 PM
Surr: 4-Bromofluorobenzene	93.8	39.1-146		%Rec	1	11/20/2023 9:37:10 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	830	61		mg/Kg	20	11/17/2023 11:39:17 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-03 4'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 10:30:00 AM
Lab ID: 2311675-010 **Matrix:** SOIL **Received Date:** 11/14/2023 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	9.3		mg/Kg	1	11/17/2023 4:29:28 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/17/2023 4:29:28 PM
Surr: DNOP	98.1	69-147		%Rec	1	11/17/2023 4:29:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 12:14:40 PM
Surr: BFB	92.2	15-244		%Rec	1	11/20/2023 12:14:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/20/2023 10:00:31 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 10:00:31 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 10:00:31 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/20/2023 10:00:31 PM
Surr: 4-Bromofluorobenzene	95.4	39.1-146		%Rec	1	11/20/2023 10:00:31 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	830	61		mg/Kg	20	11/17/2023 11:51:42 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-05 0'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 10:40:00 AM
Lab ID: 2311675-011 **Matrix:** SOIL **Received Date:** 11/14/2023 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	11/17/2023 5:18:19 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/17/2023 5:18:19 PM
Surr: DNOP	123	69-147		%Rec	1	11/17/2023 5:18:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/20/2023 1:48:53 PM
Surr: BFB	91.7	15-244		%Rec	1	11/20/2023 1:48:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/20/2023 1:48:53 PM
Toluene	ND	0.047		mg/Kg	1	11/20/2023 1:48:53 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/20/2023 1:48:53 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/20/2023 1:48:53 PM
Surr: 4-Bromofluorobenzene	95.2	39.1-146		%Rec	1	11/20/2023 1:48:53 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	67	60		mg/Kg	20	11/18/2023 12:04:07 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-05 2'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 10:50:00 AM
Lab ID: 2311675-012 **Matrix:** SOIL **Received Date:** 11/14/2023 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	9.2		mg/Kg	1	11/17/2023 5:42:44 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/17/2023 5:42:44 PM
Surr: DNOP	116	69-147		%Rec	1	11/17/2023 5:42:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 2:12:19 PM
Surr: BFB	92.6	15-244		%Rec	1	11/20/2023 2:12:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/20/2023 2:12:19 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 2:12:19 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 2:12:19 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/20/2023 2:12:19 PM
Surr: 4-Bromofluorobenzene	95.4	39.1-146		%Rec	1	11/20/2023 2:12:19 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	11/18/2023 12:16:31 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-06 0'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 11:00:00 AM
Lab ID: 2311675-013 **Matrix:** SOIL
Received Date: 11/14/2023 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)	1200	200		mg/Kg	20	11/17/2023 5:41:55 PM
Motor Oil Range Organics (MRO)	2200	980		mg/Kg	20	11/17/2023 5:41:55 PM
Surr: DNOP	0	69-147	S	%Rec	20	11/17/2023 5:41:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/20/2023 2:35:46 PM
Surr: BFB	92.8	15-244		%Rec	1	11/20/2023 2:35:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/20/2023 2:35:46 PM
Toluene	ND	0.048		mg/Kg	1	11/20/2023 2:35:46 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/20/2023 2:35:46 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/20/2023 2:35:46 PM
Surr: 4-Bromofluorobenzene	96.0	39.1-146		%Rec	1	11/20/2023 2:35:46 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	180	60		mg/Kg	20	11/18/2023 12:28:56 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-06 2'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 11:10:00 AM
Lab ID: 2311675-014 **Matrix:** SOIL **Received Date:** 11/14/2023 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	11/17/2023 6:07:10 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/17/2023 6:07:10 PM
Surr: DNOP	122	69-147		%Rec	1	11/17/2023 6:07:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/20/2023 2:59:20 PM
Surr: BFB	94.4	15-244		%Rec	1	11/20/2023 2:59:20 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/20/2023 2:59:20 PM
Toluene	ND	0.047		mg/Kg	1	11/20/2023 2:59:20 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/20/2023 2:59:20 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/20/2023 2:59:20 PM
Surr: 4-Bromofluorobenzene	97.5	39.1-146		%Rec	1	11/20/2023 2:59:20 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	200	60		mg/Kg	20	11/18/2023 1:06:10 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-07 0'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 11:20:00 AM
Lab ID: 2311675-015 **Matrix:** SOIL **Received Date:** 11/14/2023 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	9.7		mg/Kg	1	11/17/2023 6:31:34 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/17/2023 6:31:34 PM
Surr: DNOP	107	69-147		%Rec	1	11/17/2023 6:31:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/20/2023 3:22:52 PM
Surr: BFB	95.2	15-244		%Rec	1	11/20/2023 3:22:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/20/2023 3:22:52 PM
Toluene	ND	0.050		mg/Kg	1	11/20/2023 3:22:52 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/20/2023 3:22:52 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/20/2023 3:22:52 PM
Surr: 4-Bromofluorobenzene	98.0	39.1-146		%Rec	1	11/20/2023 3:22:52 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	1400	59		mg/Kg	20	11/18/2023 1:18:34 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-07 2'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 11:30:00 AM
Lab ID: 2311675-016 **Matrix:** SOIL **Received Date:** 11/14/2023 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)	21	9.5		mg/Kg	1	11/17/2023 6:55:59 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/17/2023 6:55:59 PM
Surr: DNOP	135	69-147		%Rec	1	11/17/2023 6:55:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/20/2023 3:46:21 PM
Surr: BFB	91.9	15-244		%Rec	1	11/20/2023 3:46:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/20/2023 3:46:21 PM
Toluene	ND	0.048		mg/Kg	1	11/20/2023 3:46:21 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/20/2023 3:46:21 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/20/2023 3:46:21 PM
Surr: 4-Bromofluorobenzene	95.0	39.1-146		%Rec	1	11/20/2023 3:46:21 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	430	61		mg/Kg	20	11/19/2023 3:52:10 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-08 0'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 11:40:00 AM
Lab ID: 2311675-017 **Matrix:** SOIL
Received Date: 11/14/2023 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)	15000	190		mg/Kg	20	11/17/2023 2:26:42 PM
Motor Oil Range Organics (MRO)	8500	960		mg/Kg	20	11/17/2023 2:26:42 PM
Surr: DNOP	0	69-147	S	%Rec	20	11/17/2023 2:26:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/20/2023 4:09:43 PM
Surr: BFB	90.4	15-244		%Rec	1	11/20/2023 4:09:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/20/2023 4:09:43 PM
Toluene	ND	0.050		mg/Kg	1	11/20/2023 4:09:43 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/20/2023 4:09:43 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/20/2023 4:09:43 PM
Surr: 4-Bromofluorobenzene	93.8	39.1-146		%Rec	1	11/20/2023 4:09:43 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	810	60		mg/Kg	20	11/19/2023 4:29:24 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-08 2'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 11:50:00 AM
Lab ID: 2311675-018 **Matrix:** SOIL
Received Date: 11/14/2023 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)	17	10		mg/Kg	1	11/17/2023 7:20:23 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/17/2023 7:20:23 PM
Surr: DNOP	88.9	69-147		%Rec	1	11/17/2023 7:20:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 4:32:57 PM
Surr: BFB	89.0	15-244		%Rec	1	11/20/2023 4:32:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/20/2023 4:32:57 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 4:32:57 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 4:32:57 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/20/2023 4:32:57 PM
Surr: 4-Bromofluorobenzene	96.4	39.1-146		%Rec	1	11/20/2023 4:32:57 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	1200	60		mg/Kg	20	11/19/2023 4:41:49 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-09 0'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 12:00:00 PM
Lab ID: 2311675-019 **Matrix:** SOIL
Received Date: 11/14/2023 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)	1000	190		mg/Kg	20	11/17/2023 12:51:07 PM
Motor Oil Range Organics (MRO)	1400	960		mg/Kg	20	11/17/2023 12:51:07 PM
Surr: DNOP	0	69-147	S	%Rec	20	11/17/2023 12:51:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/20/2023 4:56:16 PM
Surr: BFB	89.6	15-244		%Rec	1	11/20/2023 4:56:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/20/2023 4:56:16 PM
Toluene	ND	0.047		mg/Kg	1	11/20/2023 4:56:16 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/20/2023 4:56:16 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/20/2023 4:56:16 PM
Surr: 4-Bromofluorobenzene	92.3	39.1-146		%Rec	1	11/20/2023 4:56:16 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	290	60		mg/Kg	20	11/19/2023 4:54:14 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-09 2'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 12:10:00 PM
Lab ID: 2311675-020 **Matrix:** SOIL **Received Date:** 11/14/2023 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	9.7		mg/Kg	1	11/17/2023 7:44:42 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/17/2023 7:44:42 PM
Surr: DNOP	123	69-147		%Rec	1	11/17/2023 7:44:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 5:19:47 PM
Surr: BFB	93.3	15-244		%Rec	1	11/20/2023 5:19:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/20/2023 5:19:47 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 5:19:47 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 5:19:47 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/20/2023 5:19:47 PM
Surr: 4-Bromofluorobenzene	96.9	39.1-146		%Rec	1	11/20/2023 5:19:47 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	110	60		mg/Kg	20	11/19/2023 5:06:39 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-10 0'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 12:20:00 PM
Lab ID: 2311675-021 **Matrix:** SOIL **Received Date:** 11/14/2023 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)	230	47		mg/Kg	5	11/17/2023 6:29:26 PM
Motor Oil Range Organics (MRO)	500	230		mg/Kg	5	11/17/2023 6:29:26 PM
Surr: DNOP	137	69-147		%Rec	5	11/17/2023 6:29:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 6:06:28 PM
Surr: BFB	91.3	15-244		%Rec	1	11/20/2023 6:06:28 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/20/2023 6:06:28 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 6:06:28 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 6:06:28 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/20/2023 6:06:28 PM
Surr: 4-Bromofluorobenzene	93.9	39.1-146		%Rec	1	11/20/2023 6:06:28 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	11/19/2023 5:19:03 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-10 2'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 12:30:00 PM
Lab ID: 2311675-022 **Matrix:** SOIL
Received Date: 11/14/2023 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	11/17/2023 8:09:07 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/17/2023 8:09:07 PM
Surr: DNOP	116	69-147		%Rec	1	11/17/2023 8:09:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 6:29:56 PM
Surr: BFB	93.5	15-244		%Rec	1	11/20/2023 6:29:56 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/20/2023 6:29:56 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 6:29:56 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 6:29:56 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/20/2023 6:29:56 PM
Surr: 4-Bromofluorobenzene	95.9	39.1-146		%Rec	1	11/20/2023 6:29:56 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	61		mg/Kg	20	11/19/2023 5:56:16 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-11 0'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 12:40:00 PM
Lab ID: 2311675-023 **Matrix:** SOIL
Received Date: 11/14/2023 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)	25000	980		mg/Kg	100	11/17/2023 7:16:53 PM
Motor Oil Range Organics (MRO)	15000	4900		mg/Kg	100	11/17/2023 7:16:53 PM
Surr: DNOP	0	69-147	S	%Rec	100	11/17/2023 7:16:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 6:53:15 PM
Surr: BFB	87.7	15-244		%Rec	1	11/20/2023 6:53:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/20/2023 6:53:15 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 6:53:15 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 6:53:15 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/20/2023 6:53:15 PM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	11/20/2023 6:53:15 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	61		mg/Kg	20	11/19/2023 6:08:40 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-11 2'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 12:50:00 PM
Lab ID: 2311675-024 **Matrix:** SOIL
Received Date: 11/14/2023 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	11/17/2023 8:33:26 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/17/2023 8:33:26 PM
Surr: DNOP	105	69-147		%Rec	1	11/17/2023 8:33:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 7:16:39 PM
Surr: BFB	90.1	15-244		%Rec	1	11/20/2023 7:16:39 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/20/2023 7:16:39 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 7:16:39 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 7:16:39 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/20/2023 7:16:39 PM
Surr: 4-Bromofluorobenzene	96.9	39.1-146		%Rec	1	11/20/2023 7:16:39 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	470	60		mg/Kg	20	11/19/2023 6:21:04 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-08 4'
Project: Todd 36 D State 2 **Collection Date:** 11/12/2023 1:00:00 PM
Lab ID: 2311675-025 **Matrix:** SOIL **Received Date:** 11/14/2023 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	9.3		mg/Kg	1	11/17/2023 8:57:51 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/17/2023 8:57:51 PM
Surr: DNOP	124	69-147		%Rec	1	11/17/2023 8:57:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/20/2023 7:40:05 PM
Surr: BFB	91.5	15-244		%Rec	1	11/20/2023 7:40:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/20/2023 7:40:05 PM
Toluene	ND	0.049		mg/Kg	1	11/20/2023 7:40:05 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/20/2023 7:40:05 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/20/2023 7:40:05 PM
Surr: 4-Bromofluorobenzene	93.6	39.1-146		%Rec	1	11/20/2023 7:40:05 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	73	60		mg/Kg	20	11/19/2023 6:33:29 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2311675**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-01 5'
Project: Todd 36 D State 2
Collection Date: 11/12/2023 1:10:00 PM
Lab ID: 2311675-026 **Matrix:** SOIL
Received Date: 11/14/2023 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	11/17/2023 12:01:42 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/17/2023 12:01:42 PM
Surr: DNOP	118	69-147		%Rec	1	11/17/2023 12:01:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2023 12:20:32 AM
Surr: BFB	91.5	15-244		%Rec	1	11/21/2023 12:20:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/21/2023 12:20:32 AM
Toluene	ND	0.050		mg/Kg	1	11/21/2023 12:20:32 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/21/2023 12:20:32 AM
Xylenes, Total	ND	0.10		mg/Kg	1	11/21/2023 12:20:32 AM
Surr: 4-Bromofluorobenzene	95.2	39.1-146		%Rec	1	11/21/2023 12:20:32 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	390	60		mg/Kg	20	11/19/2023 6:45:54 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311675**

29-Nov-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 2

Sample ID: **MB-78869**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **78869**	RunNo: **101286**							
Prep Date: **11/17/2023**	Analysis Date: **11/17/2023**	SeqNo: **3724875**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78869**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **78869**	RunNo: **101286**							
Prep Date: **11/17/2023**	Analysis Date: **11/17/2023**	SeqNo: **3724876**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.6	90	110			

Sample ID: **MB-78892**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **78892**	RunNo: **101309**							
Prep Date: **11/19/2023**	Analysis Date: **11/19/2023**	SeqNo: **3726155**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78893**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **78893**	RunNo: **101309**							
Prep Date: **11/19/2023**	Analysis Date: **11/19/2023**	SeqNo: **3726157**	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-78893**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **78893**	RunNo: **101309**							
Prep Date: **11/19/2023**	Analysis Date: **11/19/2023**	SeqNo: **3726158**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78892**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **78892**	RunNo: **101309**							
Prep Date: **11/19/2023**	Analysis Date: **11/19/2023**	SeqNo: **3726159**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311675**

29-Nov-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 2

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: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		93.8	69	147			

Sample ID: **LCS-78828**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **78828**	RunNo: **101250**							
Prep Date: **11/15/2023**	Analysis Date: **11/16/2023**	SeqNo: **3722306**	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	7.4		5.000		148	69	147			S

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: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		103	69	147			

Sample ID: **MB-78828**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **78828**	RunNo: **101250**							
Prep Date: **11/15/2023**	Analysis Date: **11/16/2023**	SeqNo: **3722308**	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	12		10.00		116	69	147			

Sample ID: **LCS-78851**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **78851**	RunNo: **101270**							
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3724368**	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	107	61.9	130			
Surr: DNOP	5.4		5.000		109	69	147			

Sample ID: **MB-78851**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **78851**	RunNo: **101270**							
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3724369**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311675**

29-Nov-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 2

Sample ID: **MB-78851**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **78851**	RunNo: **101270**							
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3724369**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		110	69	147			

Sample ID: **MB-78848**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **78848**	RunNo: **101314**							
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3726336**	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	8.8		10.00		87.7	69	147			

Sample ID: **LCS-78848**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **78848**	RunNo: **101314**							
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3726337**	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	104	61.9	130			
Surr: DNOP	4.1		5.000		81.3	69	147			

Sample ID: **2311675-025AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH23-08 4'**	Batch ID: **78848**	RunNo: **101314**							
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3726359**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	9.6	47.80	0	119	54.2	135			
Surr: DNOP	4.9		4.780		102	69	147			

Sample ID: **2311675-025AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH23-08 4'**	Batch ID: **78848**	RunNo: **101314**							
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3726360**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.2	46.00	0	109	54.2	135	13.3	29.2	
Surr: DNOP	4.2		4.600		90.5	69	147	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311675**

29-Nov-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 2

Sample ID: **lcs-78842**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **78842**	RunNo: **101265**							
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3723385**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.2	70	130			
Surr: BFB	2000		1000		197	15	244			

Sample ID: **mb-78842**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **78842**	RunNo: **101265**							
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3723386**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		93.2	15	244			

Sample ID: **lcs-78825**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **78825**	RunNo: **101265**							
Prep Date: **11/15/2023**	Analysis Date: **11/18/2023**	SeqNo: **3725395**	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	89.6	70	130			
Surr: BFB	2000		1000		205	15	244			

Sample ID: **mb-78825**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **78825**	RunNo: **101265**							
Prep Date: **11/15/2023**	Analysis Date: **11/18/2023**	SeqNo: **3725396**	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	960		1000		96.4	15	244			

Sample ID: **lcs-78830**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **78830**	RunNo: **101322**							
Prep Date: **11/15/2023**	Analysis Date: **11/20/2023**	SeqNo: **3726923**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.7	70	130			
Surr: BFB	1900		1000		188	15	244			

Sample ID: **mb-78830**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **78830**	RunNo: **101322**							
Prep Date: **11/15/2023**	Analysis Date: **11/20/2023**	SeqNo: **3726924**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311675**

29-Nov-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 2

Sample ID: **mb-78830**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **78830**	RunNo: **101322**
Prep Date: **11/15/2023**	Analysis Date: **11/20/2023**	SeqNo: **3726924** 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	910		1000		91.4	15	244			

Sample ID: **2311675-006ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-03 2'**	Batch ID: **78830**	RunNo: **101322**
Prep Date: **11/15/2023**	Analysis Date: **11/20/2023**	SeqNo: **3726929** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.7	23.65	0	84.9	70	130			
Surr: BFB	1900		946.1		196	15	244			

Sample ID: **2311675-006amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-03 2'**	Batch ID: **78830**	RunNo: **101322**
Prep Date: **11/15/2023**	Analysis Date: **11/20/2023**	SeqNo: **3726930** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.61	0	87.1	70	130	2.37	20	
Surr: BFB	1800		944.3		193	15	244	0	0	

Sample ID: **2311675-026ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-01 5'**	Batch ID: **78842**	RunNo: **101322**
Prep Date: **11/16/2023**	Analysis Date: **11/21/2023**	SeqNo: **3726951** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.8	70	130			
Surr: BFB	1900		1000		194	15	244			

Sample ID: **2311675-026amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-01 5'**	Batch ID: **78842**	RunNo: **101322**
Prep Date: **11/16/2023**	Analysis Date: **11/21/2023**	SeqNo: **3726952** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	24.80	0	88.6	70	130	2.42	20	
Surr: BFB	1900		992.1		195	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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311675**

29-Nov-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 2

Sample ID: **LCS-78842**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **78842**	RunNo: **101265**
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3723388** 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	104	70	130			
Toluene	1.0	0.050	1.000	0	103	70	130			
Ethylbenzene	1.0	0.050	1.000	0	102	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: **mb-78842**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **78842**	RunNo: **101265**
Prep Date: **11/16/2023**	Analysis Date: **11/17/2023**	SeqNo: **3723389** 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		96.9	39.1	146			

Sample ID: **LCS-78825**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **78825**	RunNo: **101265**
Prep Date: **11/15/2023**	Analysis Date: **11/18/2023**	SeqNo: **3725514** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.1	70	130			
Toluene	0.94	0.050	1.000	0	94.0	70	130			
Ethylbenzene	0.94	0.050	1.000	0	94.3	70	130			
Xylenes, Total	2.8	0.10	3.000	0	94.0	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	39.1	146			

Sample ID: **mb-78825**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **78825**	RunNo: **101265**
Prep Date: **11/15/2023**	Analysis Date: **11/18/2023**	SeqNo: **3725516** 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	0.95		1.000		94.7	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311675**

29-Nov-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 2

Sample ID: **LCS-78830** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **78830** RunNo: **101322**

Prep Date: **11/15/2023** Analysis Date: **11/20/2023** SeqNo: **3726965** 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	94.2	70	130			
Toluene	0.95	0.050	1.000	0	95.2	70	130			
Ethylbenzene	0.94	0.050	1.000	0	94.1	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.5	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	39.1	146			

Sample ID: **MB-78830** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **78830** RunNo: **101322**

Prep Date: **11/15/2023** Analysis Date: **11/20/2023** SeqNo: **3726967** 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	0.95		1.000		95.2	39.1	146			

Sample ID: **2311675-007ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-04 0'** Batch ID: **78830** RunNo: **101322**

Prep Date: **11/15/2023** Analysis Date: **11/20/2023** SeqNo: **3727001** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.024	0.9766	0	87.3	70	130			
Toluene	0.86	0.049	0.9766	0	87.7	70	130			
Ethylbenzene	0.84	0.049	0.9766	0	86.3	70	130			
Xylenes, Total	2.5	0.098	2.930	0	84.5	70	130			
Surr: 4-Bromofluorobenzene	0.96		0.9766		98.8	39.1	146			

Sample ID: **2311675-007amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-04 0'** Batch ID: **78830** RunNo: **101322**

Prep Date: **11/15/2023** Analysis Date: **11/20/2023** SeqNo: **3727003** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.025	0.9823	0	83.5	70	130	3.86	20	
Toluene	0.83	0.049	0.9823	0	84.2	70	130	3.45	20	
Ethylbenzene	0.82	0.049	0.9823	0	83.1	70	130	3.14	20	
Xylenes, Total	2.4	0.098	2.947	0	81.9	70	130	2.61	20	
Surr: 4-Bromofluorobenzene	0.97		0.9823		98.8	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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

eurofins | 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

Sample Log-In Check List

Client Name: Vertex Resources Work Order Number: 2311675 RcptNo: 1

Received By: Juan Rojas 11/14/2023 7:40:00 AM

Completed By: Tracy Casarrubias 11/14/2023 8:23:06 AM

Reviewed By: SCM 11/14/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐	
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐	
5. Sample(s) in proper container(s)?	Yes ☑	No ☐		
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐		
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐		
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐	
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑	
10. Were any sample containers received broken?	Yes ☐	No ☑		
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?	
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 ☐	Checked by: TMC 11/14/23	

TMC 11/14/23

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 11/14/23

16. Additional remarks:

Client did not relinquish chain of custody

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0	Good	Yes	Morty		

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: Todd 36 D State 2

Project #: 23E-05197

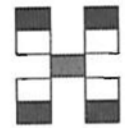
Project Manager: Kent Stallings

Sampler: Zach Englebert

On Ice: ☐ Yes ☐ No

# of Coolers: 1 Marty

Cooler Temp(including CF): 0.1-0.1=0 (°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. 2311675
11-17-23	9 00	Soil	BH23-01 0'	1 jar	ice	001
	9 10		BH23-01 2'			002
	9 20		BH23-02 0'			003
	9 30		BH23-02 2'			004
	9 40		BH23-03 0'			005
	9 50		BH23-03 2'			006
	10 00		BH23-04 0'			007
	10 10		BH23-04 2'			008
	10 20		BH23-01 4'			009
	10 30		BH23-03 4'			010
	10 40		BH23-05 0'			011
	10 50		BH23-05 2'			012

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)

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					11/16/23	1130
Date: 11/16/23	Time: 1900	Relinquished by:	Received by:	Via: courier	Date 11/14/23	Time 7:40

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

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.

1 of 3

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: Todd 36 D State 2

Project #: 23E-05197

Project Manager: Kent Stallings

Sampler: Zach Eaglebeut

On Ice: ☑ Yes ☐ No

# of Coolers: 1 marty

Cooler Temp(Including CF): 0.1-0.1=0 (°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. 2311675	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)
11-12-23	11:00	soil	BH23-06 0'	1 jar	ice	013										
	11:10		BH23-06 2'			014										
	11:20		BH23-07 0'			015										
	11:30		BH23-07 2'			016										
	11:40		BH23-08 0'			017										
	11:50		BH23-08 2'			018										
	12:00		BH23-09 0'			019										
	12:10		BH23-09 2'			020										
	12:20		BH23-10 0'			021										
	12:30		BH23-10 2'			022										
	12:40		BH23-11 0'			023										
	12:50		BH23-11 2'			024										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					11/13/23	1030
Date: 11/13/23	Time: 1300	Relinquished by:	Received by:	Via: Courier	Date 11/14/23	Time 7:40

Remarks: Direct Bill to Deron
cc Kstallings@vertexica

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.

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: Todd 36 D State 2

Project #: 23E-05197

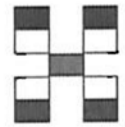
Project Manager: Kent Stallings

Sampler: Zach Englebert

On Ice: ☑ Yes ☐ No

# of Coolers: 1 Marty

Cooler Temp (including CF): 0.1-0.1=0 (°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. 2311675
11-12-23	1300	soil	BH23-08 4'	1 jar	ice	025
↓	1310	↓	BH23-01 5'	↓	↓	026

Analysis Request columns: 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)

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
					11/13/23	1080
11/13/23	1900			Courier	11/14/23	7:40

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

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

eurofins | Environment Testing

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

December 06, 2023

Kent Stallings

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

RE: Todd 36 D State 002 OrderNo.: 2311C31

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 8 sample(s) on 11/28/2023 for the analyses presented in the following report.

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

Please 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2311C31**
Date Reported: **12/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Todd 36 D State 002
Lab ID: 2311C31-001 **Matrix:** SOIL

Client Sample ID: BH23-20 0.0'
Collection Date: 11/18/2023 9:00:00 AM
Received Date: 11/28/2023 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)	17	9.6		mg/Kg	1	12/1/2023 1:50:02 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/1/2023 1:50:02 PM
Surr: DNOP	94.5	69-147		%Rec	1	12/1/2023 1:50:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/29/2023 7:10:00 PM
Surr: BFB	101	15-244		%Rec	1	11/29/2023 7:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	11/29/2023 7:10:00 PM
Toluene	ND	0.046		mg/Kg	1	11/29/2023 7:10:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	11/29/2023 7:10:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/29/2023 7:10:00 PM
Surr: 4-Bromofluorobenzene	93.4	39.1-146		%Rec	1	11/29/2023 7:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	800	60		mg/Kg	20	11/30/2023 6:01:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C31**
Date Reported: **12/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Todd 36 D State 002
Lab ID: 2311C31-002 **Matrix:** SOIL

Client Sample ID: BH23-20 2.0'
Collection Date: 11/18/2023 9:10:00 AM
Received Date: 11/28/2023 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	9.9		mg/Kg	1	12/1/2023 2:11:02 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/1/2023 2:11:02 PM
Surr: DNOP	96.4	69-147		%Rec	1	12/1/2023 2:11:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/29/2023 7:32:00 PM
Surr: BFB	101	15-244		%Rec	1	11/29/2023 7:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	11/29/2023 7:32:00 PM
Toluene	ND	0.047		mg/Kg	1	11/29/2023 7:32:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/29/2023 7:32:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/29/2023 7:32:00 PM
Surr: 4-Bromofluorobenzene	94.9	39.1-146		%Rec	1	11/29/2023 7:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/30/2023 6:14:16 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C31**
Date Reported: **12/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Todd 36 D State 002
Lab ID: 2311C31-003 **Matrix:** SOIL

Client Sample ID: BH23-21 0.0'
Collection Date: 11/18/2023 9:20:00 AM
Received Date: 11/28/2023 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)	26000	490		mg/Kg	50	12/3/2023 12:28:31 AM
Motor Oil Range Organics (MRO)	17000	2500		mg/Kg	50	12/3/2023 12:28:31 AM
Surr: DNOP	0	69-147	S	%Rec	50	12/3/2023 12:28:31 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/29/2023 7:54:00 PM
Surr: BFB	96.0	15-244		%Rec	1	11/29/2023 7:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	11/29/2023 7:54:00 PM
Toluene	ND	0.047		mg/Kg	1	11/29/2023 7:54:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/29/2023 7:54:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/29/2023 7:54:00 PM
Surr: 4-Bromofluorobenzene	91.0	39.1-146		%Rec	1	11/29/2023 7:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/30/2023 6:26:41 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C31**
Date Reported: **12/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Todd 36 D State 002
Lab ID: 2311C31-004 **Matrix:** SOIL

Client Sample ID: BH23-21 2.0'
Collection Date: 11/18/2023 9:30:00 AM
Received Date: 11/28/2023 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	9.1		mg/Kg	1	12/1/2023 3:01:45 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/1/2023 3:01:45 PM
Surr: DNOP	75.8	69-147		%Rec	1	12/1/2023 3:01:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/29/2023 8:16:00 PM
Surr: BFB	102	15-244		%Rec	1	11/29/2023 8:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/29/2023 8:16:00 PM
Toluene	ND	0.049		mg/Kg	1	11/29/2023 8:16:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/29/2023 8:16:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/29/2023 8:16:00 PM
Surr: 4-Bromofluorobenzene	94.7	39.1-146		%Rec	1	11/29/2023 8:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/30/2023 6:39:06 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C31**
Date Reported: **12/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Todd 36 D State 002
Lab ID: 2311C31-005 **Matrix:** SOIL

Client Sample ID: BH23-22 0.0'
Collection Date: 11/18/2023 9:40:00 AM
Received Date: 11/28/2023 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)	7200	200		mg/Kg	20	12/1/2023 3:12:22 PM
Motor Oil Range Organics (MRO)	4700	980		mg/Kg	20	12/1/2023 3:12:22 PM
Surr: DNOP	0	69-147	S	%Rec	20	12/1/2023 3:12:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	12		mg/Kg	5	11/29/2023 10:26:00 PM
Surr: BFB	101	15-244		%Rec	5	11/29/2023 10:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.096		mg/Kg	5	11/29/2023 10:26:00 PM
Toluene	ND	0.096		mg/Kg	5	11/29/2023 10:26:00 PM
Ethylbenzene	ND	0.096		mg/Kg	5	11/29/2023 10:26:00 PM
Xylenes, Total	ND	0.29		mg/Kg	5	11/29/2023 10:26:00 PM
Surr: 4-Bromofluorobenzene	94.2	39.1-146		%Rec	5	11/29/2023 10:26:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/30/2023 6:51:30 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C31**
Date Reported: **12/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Todd 36 D State 002
Lab ID: 2311C31-006 **Matrix:** SOIL

Client Sample ID: BH23-22 2.0'
Collection Date: 11/18/2023 9:50:00 AM
Received Date: 11/28/2023 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)	260	9.9		mg/Kg	1	12/2/2023 8:32:36 PM
Motor Oil Range Organics (MRO)	490	49		mg/Kg	1	12/2/2023 8:32:36 PM
Surr: DNOP	99.0	69-147		%Rec	1	12/2/2023 8:32:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2023 12:15:00 AM
Surr: BFB	94.0	15-244		%Rec	1	11/30/2023 12:15:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/30/2023 12:15:00 AM
Toluene	ND	0.048		mg/Kg	1	11/30/2023 12:15:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2023 12:15:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	11/30/2023 12:15:00 AM
Surr: 4-Bromofluorobenzene	90.6	39.1-146		%Rec	1	11/30/2023 12:15:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	180	60		mg/Kg	20	11/30/2023 7:03:55 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311C31**
Date Reported: **12/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Todd 36 D State 002
Lab ID: 2311C31-007 **Matrix:** SOIL

Client Sample ID: BH23-23 0.0'
Collection Date: 11/18/2023 10:00:00 AM
Received Date: 11/28/2023 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)	370	96		mg/Kg	10	12/2/2023 11:41:21 PM
Motor Oil Range Organics (MRO)	930	480		mg/Kg	10	12/2/2023 11:41:21 PM
Surr: DNOP	0	69-147	S	%Rec	10	12/2/2023 11:41:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2023 12:37:00 AM
Surr: BFB	96.5	15-244		%Rec	1	11/30/2023 12:37:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/30/2023 12:37:00 AM
Toluene	ND	0.048		mg/Kg	1	11/30/2023 12:37:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2023 12:37:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	11/30/2023 12:37:00 AM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	11/30/2023 12:37:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/30/2023 7:41:07 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C31**
Date Reported: **12/6/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Todd 36 D State 002
Lab ID: 2311C31-008 **Matrix:** SOIL

Client Sample ID: BH23-23 2.0'
Collection Date: 11/18/2023 10:10:00 AM
Received Date: 11/28/2023 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	9.1		mg/Kg	1	12/1/2023 11:56:01 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/1/2023 11:56:01 PM
Surr: DNOP	94.0	69-147		%Rec	1	12/1/2023 11:56:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/30/2023 12:58:00 AM
Surr: BFB	97.9	15-244		%Rec	1	11/30/2023 12:58:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	11/30/2023 12:58:00 AM
Toluene	ND	0.047		mg/Kg	1	11/30/2023 12:58:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	11/30/2023 12:58:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	11/30/2023 12:58:00 AM
Surr: 4-Bromofluorobenzene	91.8	39.1-146		%Rec	1	11/30/2023 12:58:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/30/2023 7:53:31 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C31**

06-Dec-23

Client: Devon Energy

Project: Todd 36 D State 002

Sample ID: **MB-79069**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **79069**	RunNo: **101524**							
Prep Date: **11/30/2023**	Analysis Date: **11/30/2023**	SeqNo: **3737310**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-79069**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **79069**	RunNo: **101524**							
Prep Date: **11/30/2023**	Analysis Date: **11/30/2023**	SeqNo: **3737311**	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			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C31**

06-Dec-23

Client: Devon Energy

Project: Todd 36 D State 002

Sample ID: **LCS-79082**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **79082**	RunNo: **101534**
Prep Date: **11/30/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738243** 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	4.7		5.000		94.3	69	147			

Sample ID: **LCS-79098**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **79098**	RunNo: **101534**
Prep Date: **12/1/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738244** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		78.6	69	147			

Sample ID: **MB-79082**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **79082**	RunNo: **101534**
Prep Date: **11/30/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738245** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		101	69	147			

Sample ID: **MB-79098**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **79098**	RunNo: **101534**
Prep Date: **12/1/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738246** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.2		10.00		81.9	69	147			

Sample ID: **LCS-79080**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **79080**	RunNo: **101534**
Prep Date: **11/30/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738774** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.4	61.9	130			
Surr: DNOP	4.5		5.000		89.2	69	147			

Sample ID: **MB-79080**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **79080**	RunNo: **101534**
Prep Date: **11/30/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738775** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C31**

06-Dec-23

Client: Devon Energy

Project: Todd 36 D State 002

Sample ID: **MB-79080**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **79080**	RunNo: **101534**
Prep Date: **11/30/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738775** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.1		10.00		80.8	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C31**

06-Dec-23

Client: Devon Energy

Project: Todd 36 D State 002

Sample ID: **lcs-79020**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **79020**	RunNo: **101489**							
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735681**	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	2100		1000		206	15	244			

Sample ID: **MB-79020**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **79020**	RunNo: **101489**							
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735682**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		100	15	244			

Sample ID: **lcs-79027**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **79027**	RunNo: **101489**							
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735705**	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	86.2	70	130			
Surr: BFB	2100		1000		210	15	244			

Sample ID: **mb-79027**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **79027**	RunNo: **101489**							
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735706**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		98.2	15	244			

Sample ID: **2311c31-005ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH23-22 0.0'**	Batch ID: **79027**	RunNo: **101489**							
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735708**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	24	23.95	0	105	70	130			
Surr: BFB	6000		4789		124	15	244			

Sample ID: **2311c31-005amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH23-22 0.0'**	Batch ID: **79027**	RunNo: **101489**							
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735709**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C31**

06-Dec-23

Client: Devon Energy

Project: Todd 36 D State 002

Sample ID: **2311c31-005amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-22 0.0'**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735709** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	24	24.08	0	104	70	130	0.571	20	
Surr: BFB	6100		4817		126	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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C31**

06-Dec-23

Client: Devon Energy

Project: Todd 36 D State 002

Sample ID: **lcs-79020**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **79020**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735824** 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	95.8	70	130			
Toluene	0.96	0.050	1.000	0	96.0	70	130			
Ethylbenzene	0.97	0.050	1.000	0	97.5	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.9	70	130			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	39.1	146			

Sample ID: **mb-79020**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **79020**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735825** 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	0.95		1.000		95.4	39.1	146			

Sample ID: **lcs-79027**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735851** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.8	70	130			
Toluene	0.95	0.050	1.000	0	95.4	70	130			
Ethylbenzene	0.97	0.050	1.000	0	96.9	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.7	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.6	39.1	146			

Sample ID: **mb-79027**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735852** 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			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C31**

06-Dec-23

Client: Devon Energy

Project: Todd 36 D State 002

Sample ID: **2311c31-006ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-22 2.0'**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735854** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.024	0.9699	0	101	70	130			
Toluene	1.0	0.048	0.9699	0	103	70	130			
Ethylbenzene	1.0	0.048	0.9699	0	106	70	130			
Xylenes, Total	3.1	0.097	2.910	0	105	70	130			
Surr: 4-Bromofluorobenzene	0.90		0.9699		92.9	39.1	146			

Sample ID: **2311c31-006amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-22 2.0'**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735855** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.024	0.9615	0	98.1	70	130	3.86	20	
Toluene	0.97	0.048	0.9615	0	101	70	130	3.25	20	
Ethylbenzene	1.0	0.048	0.9615	0	104	70	130	2.88	20	
Xylenes, Total	3.0	0.096	2.885	0	104	70	130	2.31	20	
Surr: 4-Bromofluorobenzene	0.90		0.9615		93.1	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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

eurofins
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: Devon Energy Work Order Number: 2311C31 RcptNo: 1

Received By: Juan Rojas 11/28/2023 7:40:00 AM

Completed By: Tracy Casarrubias 11/28/2023 8:28:12 AM

Reviewed By: YM 11/28/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 1 (<2 or >12 unless noted)

Adjusted?

Checked by: SCM 11/28/23

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions: Mailing address,phone number and Email/Fax are missing on COC- TMC 11/28/23

16. Additional remarks:

Client did not relinquish chain of custody

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes	Morty		

Chain-of-Custody Record

Client: Devon
Direct Bill
Mailing Address:
Phone #:
email or Fax#:
QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush 5 Day
Project Name: Todd 36 D State #002
Project #: 23E-05197
Project Manager: Kent Stallings
Sampler: AH/BM
On Ice: ☐ Yes ☐ No
# of Coolers: 1 (Monty)
Cooler Temp (Including CF): 1.1-0.1=1.0 (°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. 2311C31	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)
11-18-23	0900	Soil	BH23-20	0.0'	402	ICE	001										
	0910		BH23-20	2.0'			002										
	0920		BH23-21	6.0'			003										
	0930		BH23-21	2.0'			004										
	0940		BH23-22	0.0'			005										
	0950		BH23-22	2.0'			006										
	1000		BH23-23	0.0'			007										
	1010		BH23-23	2.0'			008										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			[signature]		11/27/23	930
Date: 11/27/23	Time: 1900	Relinquished by: [signature]	Received by: [signature]	Via: courier	Date 11/28/23	Time 7:40

Remarks: CC: kstallings@vertex.ca
aharris@vertex.ca

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

eurofins | Environment Testing

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

December 08, 2023

Kent Stallings

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

RE: Todd 36 D State 002 OrderNo.: 2311C33

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 17 sample(s) on 11/28/2023 for the analyses presented in the following report.

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

Please 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-12 0'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 9:00:00 AM
Lab ID: 2311C33-001 **Matrix:** SOIL **Received Date:** 11/28/2023 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	9.4		mg/Kg	1	12/2/2023 7:05:36 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/2/2023 7:05:36 AM
Surr: DNOP	62.9	69-147	S	%Rec	1	12/2/2023 7:05:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2023 3:52:00 AM
Surr: BFB	96.2	15-244		%Rec	1	11/30/2023 3:52:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/30/2023 3:52:00 AM
Toluene	ND	0.048		mg/Kg	1	11/30/2023 3:52:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2023 3:52:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	11/30/2023 3:52:00 AM
Surr: 4-Bromofluorobenzene	91.9	39.1-146		%Rec	1	11/30/2023 3:52:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	89	60		mg/Kg	20	12/2/2023 11:54:13 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-12 2'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 9:05:00 AM
Lab ID: 2311C33-002 **Matrix:** SOIL **Received Date:** 11/28/2023 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	12/2/2023 7:29:04 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/2/2023 7:29:04 AM
Surr: DNOP	121	69-147		%Rec	1	12/2/2023 7:29:04 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/30/2023 4:13:00 AM
Surr: BFB	98.3	15-244		%Rec	1	11/30/2023 4:13:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	11/30/2023 4:13:00 AM
Toluene	ND	0.050		mg/Kg	1	11/30/2023 4:13:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/30/2023 4:13:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	11/30/2023 4:13:00 AM
Surr: 4-Bromofluorobenzene	92.0	39.1-146		%Rec	1	11/30/2023 4:13:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	270	60		mg/Kg	20	12/2/2023 1:09:59 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-13 0'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 9:10:00 AM
Lab ID: 2311C33-003 **Matrix:** SOIL **Received Date:** 11/28/2023 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	12/2/2023 7:52:36 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/2/2023 7:52:36 AM
Surr: DNOP	84.8	69-147		%Rec	1	12/2/2023 7:52:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/30/2023 4:35:00 AM
Surr: BFB	96.2	15-244		%Rec	1	11/30/2023 4:35:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	11/30/2023 4:35:00 AM
Toluene	ND	0.046		mg/Kg	1	11/30/2023 4:35:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	11/30/2023 4:35:00 AM
Xylenes, Total	ND	0.092		mg/Kg	1	11/30/2023 4:35:00 AM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	11/30/2023 4:35:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	61		mg/Kg	20	12/2/2023 1:25:09 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-13 2'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 9:15:00 AM
Lab ID: 2311C33-004 **Matrix:** SOIL **Received Date:** 11/28/2023 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	9.3		mg/Kg	1	12/2/2023 8:16:01 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/2/2023 8:16:01 AM
Surr: DNOP	118	69-147		%Rec	1	12/2/2023 8:16:01 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2023 4:57:00 AM
Surr: BFB	95.1	15-244		%Rec	1	11/30/2023 4:57:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/30/2023 4:57:00 AM
Toluene	ND	0.048		mg/Kg	1	11/30/2023 4:57:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2023 4:57:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	11/30/2023 4:57:00 AM
Surr: 4-Bromofluorobenzene	90.6	39.1-146		%Rec	1	11/30/2023 4:57:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	12/2/2023 1:42:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-14 0'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 9:20:00 AM
Lab ID: 2311C33-005 **Matrix:** SOIL **Received Date:** 11/28/2023 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	12/1/2023 5:23:51 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/1/2023 5:23:51 PM
Surr: DNOP	100	69-147		%Rec	1	12/1/2023 5:23:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2023 5:18:00 AM
Surr: BFB	96.9	15-244		%Rec	1	11/30/2023 5:18:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/30/2023 5:18:00 AM
Toluene	ND	0.048		mg/Kg	1	11/30/2023 5:18:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2023 5:18:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	11/30/2023 5:18:00 AM
Surr: 4-Bromofluorobenzene	90.9	39.1-146		%Rec	1	11/30/2023 5:18:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	12/2/2023 1:58:02 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-14 2'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 9:25:00 AM
Lab ID: 2311C33-006 **Matrix:** SOIL **Received Date:** 11/28/2023 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	12/1/2023 5:34:32 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/1/2023 5:34:32 PM
Surr: DNOP	107	69-147		%Rec	1	12/1/2023 5:34:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/30/2023 5:40:00 AM
Surr: BFB	98.6	15-244		%Rec	1	11/30/2023 5:40:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	11/30/2023 5:40:00 AM
Toluene	ND	0.047		mg/Kg	1	11/30/2023 5:40:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	11/30/2023 5:40:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	11/30/2023 5:40:00 AM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	11/30/2023 5:40:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 1:34:31 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-15 0'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 9:50:00 AM
Lab ID: 2311C33-007 **Matrix:** SOIL **Received Date:** 11/28/2023 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)	2900	190		mg/Kg	20	12/1/2023 5:45:19 PM
Motor Oil Range Organics (MRO)	2100	970		mg/Kg	20	12/1/2023 5:45:19 PM
Surr: DNOP	0	69-147	S	%Rec	20	12/1/2023 5:45:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2023 6:02:00 AM
Surr: BFB	96.3	15-244		%Rec	1	11/30/2023 6:02:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/30/2023 6:02:00 AM
Toluene	ND	0.048		mg/Kg	1	11/30/2023 6:02:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2023 6:02:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	11/30/2023 6:02:00 AM
Surr: 4-Bromofluorobenzene	89.0	39.1-146		%Rec	1	11/30/2023 6:02:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	400	60		mg/Kg	20	12/1/2023 1:46:56 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-15 2'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 9:55:00 AM
Lab ID: 2311C33-008 **Matrix:** SOIL **Received Date:** 11/28/2023 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)	140	9.8		mg/Kg	1	12/2/2023 9:43:08 PM
Motor Oil Range Organics (MRO)	310	49		mg/Kg	1	12/2/2023 9:43:08 PM
Surr: DNOP	124	69-147		%Rec	1	12/2/2023 9:43:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2023 6:24:00 AM
Surr: BFB	96.9	15-244		%Rec	1	11/30/2023 6:24:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/30/2023 6:24:00 AM
Toluene	ND	0.048		mg/Kg	1	11/30/2023 6:24:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2023 6:24:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	11/30/2023 6:24:00 AM
Surr: 4-Bromofluorobenzene	91.2	39.1-146		%Rec	1	11/30/2023 6:24:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 2:24:08 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-15 4'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 1:45:00 PM
Lab ID: 2311C33-009 **Matrix:** SOIL **Received Date:** 11/28/2023 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	12/1/2023 7:05:35 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/1/2023 7:05:35 PM
Surr: DNOP	95.5	69-147		%Rec	1	12/1/2023 7:05:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/30/2023 6:45:00 AM
Surr: BFB	99.4	15-244		%Rec	1	11/30/2023 6:45:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	11/30/2023 6:45:00 AM
Toluene	ND	0.050		mg/Kg	1	11/30/2023 6:45:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/30/2023 6:45:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	11/30/2023 6:45:00 AM
Surr: 4-Bromofluorobenzene	92.8	39.1-146		%Rec	1	11/30/2023 6:45:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 3:01:22 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-16 0'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 10:00:00 AM
Lab ID: 2311C33-010 **Matrix:** SOIL
Received Date: 11/28/2023 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	12/1/2023 7:16:14 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/1/2023 7:16:14 PM
Surr: DNOP	87.2	69-147		%Rec	1	12/1/2023 7:16:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/30/2023 7:07:00 AM
Surr: BFB	98.6	15-244		%Rec	1	11/30/2023 7:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/30/2023 7:07:00 AM
Toluene	ND	0.047		mg/Kg	1	11/30/2023 7:07:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	11/30/2023 7:07:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	11/30/2023 7:07:00 AM
Surr: 4-Bromofluorobenzene	92.2	39.1-146		%Rec	1	11/30/2023 7:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 3:38:35 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-16 2'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 10:05:00 AM
Lab ID: 2311C33-011 **Matrix:** SOIL
Received Date: 11/28/2023 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	8.9		mg/Kg	1	12/1/2023 10:22:07 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/1/2023 10:22:07 AM
Surr: DNOP	87.5	69-147		%Rec	1	12/1/2023 10:22:07 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/29/2023 8:20:38 PM
Surr: BFB	92.8	15-244		%Rec	1	11/29/2023 8:20:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/29/2023 8:20:38 PM
Toluene	ND	0.048		mg/Kg	1	11/29/2023 8:20:38 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/29/2023 8:20:38 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/29/2023 8:20:38 PM
Surr: 4-Bromofluorobenzene	92.9	39.1-146		%Rec	1	11/29/2023 8:20:38 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 3:50:59 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-17 0'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 10:10:00 AM
Lab ID: 2311C33-012 **Matrix:** SOIL
Received Date: 11/28/2023 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	12/1/2023 10:46:40 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/1/2023 10:46:40 AM
Surr: DNOP	79.3	69-147		%Rec	1	12/1/2023 10:46:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/29/2023 8:44:05 PM
Surr: BFB	94.3	15-244		%Rec	1	11/29/2023 8:44:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/29/2023 8:44:05 PM
Toluene	ND	0.047		mg/Kg	1	11/29/2023 8:44:05 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/29/2023 8:44:05 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/29/2023 8:44:05 PM
Surr: 4-Bromofluorobenzene	95.5	39.1-146		%Rec	1	11/29/2023 8:44:05 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 4:03:24 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-17 2'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 10:15:00 AM
Lab ID: 2311C33-013 **Matrix:** SOIL
Received Date: 11/28/2023 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	12/1/2023 12:48:38 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/1/2023 12:48:38 PM
Surr: DNOP	89.4	69-147		%Rec	1	12/1/2023 12:48:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/29/2023 9:07:30 PM
Surr: BFB	96.3	15-244		%Rec	1	11/29/2023 9:07:30 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/29/2023 9:07:30 PM
Toluene	ND	0.049		mg/Kg	1	11/29/2023 9:07:30 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/29/2023 9:07:30 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/29/2023 9:07:30 PM
Surr: 4-Bromofluorobenzene	98.0	39.1-146		%Rec	1	11/29/2023 9:07:30 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 4:15:48 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-18 0'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 10:20:00 AM
Lab ID: 2311C33-014 **Matrix:** SOIL
Received Date: 11/28/2023 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	8.2		mg/Kg	1	12/1/2023 1:12:55 PM
Motor Oil Range Organics (MRO)	ND	41		mg/Kg	1	12/1/2023 1:12:55 PM
Surr: DNOP	92.4	69-147		%Rec	1	12/1/2023 1:12:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/29/2023 9:30:58 PM
Surr: BFB	94.3	15-244		%Rec	1	11/29/2023 9:30:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/29/2023 9:30:58 PM
Toluene	ND	0.047		mg/Kg	1	11/29/2023 9:30:58 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/29/2023 9:30:58 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/29/2023 9:30:58 PM
Surr: 4-Bromofluorobenzene	95.5	39.1-146		%Rec	1	11/29/2023 9:30:58 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 4:28:13 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-18 2'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 10:25:00 AM
Lab ID: 2311C33-015 **Matrix:** SOIL
Received Date: 11/28/2023 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	9.4		mg/Kg	1	12/1/2023 1:37:23 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/1/2023 1:37:23 PM
Surr: DNOP	95.1	69-147		%Rec	1	12/1/2023 1:37:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/29/2023 9:54:21 PM
Surr: BFB	93.1	15-244		%Rec	1	11/29/2023 9:54:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/29/2023 9:54:21 PM
Toluene	ND	0.046		mg/Kg	1	11/29/2023 9:54:21 PM
Ethylbenzene	ND	0.046		mg/Kg	1	11/29/2023 9:54:21 PM
Xylenes, Total	ND	0.092		mg/Kg	1	11/29/2023 9:54:21 PM
Surr: 4-Bromofluorobenzene	93.4	39.1-146		%Rec	1	11/29/2023 9:54:21 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 4:40:38 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-19 0'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 10:30:00 AM
Lab ID: 2311C33-016 **Matrix:** SOIL
Received Date: 11/28/2023 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	8.8		mg/Kg	1	12/1/2023 2:01:43 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/1/2023 2:01:43 PM
Surr: DNOP	93.2	69-147		%Rec	1	12/1/2023 2:01:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/29/2023 10:17:47 PM
Surr: BFB	97.1	15-244		%Rec	1	11/29/2023 10:17:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/29/2023 10:17:47 PM
Toluene	ND	0.049		mg/Kg	1	11/29/2023 10:17:47 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/29/2023 10:17:47 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/29/2023 10:17:47 PM
Surr: 4-Bromofluorobenzene	97.3	39.1-146		%Rec	1	11/29/2023 10:17:47 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 4:53:02 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2311C33**
Date Reported: **12/8/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-19 2'
Project: Todd 36 D State 002
Collection Date: 11/17/2023 10:35:00 AM
Lab ID: 2311C33-017 **Matrix:** SOIL
Received Date: 11/28/2023 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	8.7		mg/Kg	1	12/1/2023 2:26:16 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/1/2023 2:26:16 PM
Surr: DNOP	93.3	69-147		%Rec	1	12/1/2023 2:26:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/29/2023 10:41:08 PM
Surr: BFB	95.1	15-244		%Rec	1	11/29/2023 10:41:08 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/29/2023 10:41:08 PM
Toluene	ND	0.047		mg/Kg	1	11/29/2023 10:41:08 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/29/2023 10:41:08 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/29/2023 10:41:08 PM
Surr: 4-Bromofluorobenzene	95.6	39.1-146		%Rec	1	11/29/2023 10:41:08 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/1/2023 5:05:28 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C33**

08-Dec-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 002

Sample ID: **MB-79100**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **79100**	RunNo: **101545**							
Prep Date: **12/1/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738624**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-79100**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **79100**	RunNo: **101545**							
Prep Date: **12/1/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738625**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.1	90	110			

Sample ID: **MB-79099**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **79099**	RunNo: **101539**							
Prep Date: **12/1/2023**	Analysis Date: **12/1/2023**	SeqNo: **3739558**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-79099**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **79099**	RunNo: **101539**							
Prep Date: **12/1/2023**	Analysis Date: **12/1/2023**	SeqNo: **3739559**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C33**

08-Dec-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 002

Sample ID: **LCS-79082**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **79082**	RunNo: **101534**
Prep Date: **11/30/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738243** 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	4.7		5.000		94.3	69	147			

Sample ID: **MB-79082**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **79082**	RunNo: **101534**
Prep Date: **11/30/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738245** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		101	69	147			

Sample ID: **MB-79089**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **79089**	RunNo: **101553**
Prep Date: **11/30/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738961** 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		111	69	147			

Sample ID: **LCS-79089**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **79089**	RunNo: **101553**
Prep Date: **11/30/2023**	Analysis Date: **12/1/2023**	SeqNo: **3738962** 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	5.2		5.000		104	69	147			

Sample ID: **MB-79081**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **79081**	RunNo: **101555**
Prep Date: **11/30/2023**	Analysis Date: **12/2/2023**	SeqNo: **3739049** 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		113	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C33**

08-Dec-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 002

Sample ID: **LCS-79081**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **79081**	RunNo: **101555**
Prep Date: **11/30/2023**	Analysis Date: **12/2/2023**	SeqNo: **3739050** 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	106	61.9	130			
Surr: DNOP	5.3		5.000		106	69	147			

Sample ID: **MB-79120**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **79120**	RunNo: **101583**
Prep Date: **12/4/2023**	Analysis Date: **12/4/2023**	SeqNo: **3740818** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		102	69	147			

Sample ID: **LCS-79120**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **79120**	RunNo: **101583**
Prep Date: **12/4/2023**	Analysis Date: **12/4/2023**	SeqNo: **3740819** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		104	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C33**

08-Dec-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 002

Sample ID: **lcs-79033**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **79033**	RunNo: **101468**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735523** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.7	70	130			
Surr: BFB	2000		1000		202	15	244			

Sample ID: **mb-79033**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **79033**	RunNo: **101468**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735524** 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		94.4	15	244			

Sample ID: **2311c33-011ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-16 2'**	Batch ID: **79033**	RunNo: **101468**
Prep Date: **11/28/2023**	Analysis Date: **11/30/2023**	SeqNo: **3735541** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	23.99	0	95.9	70	130			
Surr: BFB	2000		959.7		210	15	244			

Sample ID: **2311c33-011amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-16 2'**	Batch ID: **79033**	RunNo: **101468**
Prep Date: **11/28/2023**	Analysis Date: **11/30/2023**	SeqNo: **3735543** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	24.04	0	92.2	70	130	3.72	20	
Surr: BFB	1900		961.5		203	15	244	0	0	

Sample ID: **lcs-79027**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735705** 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	86.2	70	130			
Surr: BFB	2100		1000		210	15	244			

Sample ID: **mb-79027**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735706** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C33**

08-Dec-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 002

Sample ID: **mb-79027**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735706** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		98.2	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 Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C33**

08-Dec-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 002

Sample ID: **LCS-79033**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **79033**	RunNo: **101468**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735623** 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	94.2	70	130			
Toluene	0.95	0.050	1.000	0	94.8	70	130			
Ethylbenzene	0.95	0.050	1.000	0	95.1	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.0	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	39.1	146			

Sample ID: **mb-79033**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **79033**	RunNo: **101468**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735624** 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	0.95		1.000		94.6	39.1	146			

Sample ID: **2311c33-012ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-17 0'**	Batch ID: **79033**	RunNo: **101468**
Prep Date: **11/28/2023**	Analysis Date: **11/30/2023**	SeqNo: **3735627** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.023	0.9372	0	105	70	130			
Toluene	1.0	0.047	0.9372	0	107	70	130			
Ethylbenzene	1.0	0.047	0.9372	0	107	70	130			
Xylenes, Total	3.0	0.094	2.812	0	107	70	130			
Surr: 4-Bromofluorobenzene	0.91		0.9372		97.3	39.1	146			

Sample ID: **2311c33-012amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-17 0'**	Batch ID: **79033**	RunNo: **101468**
Prep Date: **11/28/2023**	Analysis Date: **11/30/2023**	SeqNo: **3735628** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.023	0.9320	0	97.6	70	130	8.05	20	
Toluene	0.92	0.047	0.9320	0	98.6	70	130	8.61	20	
Ethylbenzene	0.93	0.047	0.9320	0	99.6	70	130	8.10	20	
Xylenes, Total	2.8	0.093	2.796	0	100	70	130	7.27	20	
Surr: 4-Bromofluorobenzene	0.87		0.9320		93.1	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311C33**

08-Dec-23

Client: Vertex Resources Services, Inc.

Project: Todd 36 D State 002

Sample ID: **lcs-79027**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735851** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.8	70	130			
Toluene	0.95	0.050	1.000	0	95.4	70	130			
Ethylbenzene	0.97	0.050	1.000	0	96.9	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.7	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.6	39.1	146			

Sample ID: **mb-79027**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **79027**	RunNo: **101489**
Prep Date: **11/28/2023**	Analysis Date: **11/29/2023**	SeqNo: **3735852** 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			

Qualifiers:

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

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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: 2311C33 RcptNo: 1

Received By: Juan Rojas 11/28/2023 7:40:00 AM

Completed By: Tracy Casarrubias 11/28/2023 8:32:51 AM

Reviewed By: TMC 11/28/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: SCM 11/28/23

Special Handling (if applicable)

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

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions: Mailing address,phone number and Email/Fax are missing on COC- TMC 11/28/23

16. Additional remarks:

Tme of client's relinquish signature does not match drivers

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0	Good	Yes	Morty		

Chain-of-Custody Record

Client: Vertex

Mailing Address: On file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
■ Standard ☒ Rush 5 Day

Project Name: Todd 36 D State #002

Project #: 23E-05197

Project Manager: Kent Stallings

Sampler: Austin Harris / Bryce Mortimer

On Ice: ☐ Yes ☐ No

# of Coolers: 1 Monty

Cooler Temp (including CF): 0.1+0.1=0.2 (°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. 2311C33	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)
11.17.23	9:00	Soil	BH23-12	0'	4oz jar	Ice	001										
	9:05		BH23-12	2'			002										
	9:10		BH23-13	0'			003										
	9:15		BH23-13	2'			004										
	9:20		BH23-14	0'			005										
	9:25		BH23-14	2'			006										
	9:50		BH23-15	0'			007										
	9:55		BH23-15	2'			008										
	13:45		BH23-15	4'			009										
	10:00		BH23-16	0'			010										
	10:05		BH23-16	2'			011										
	10:10		BH23-17	0'			012										

Date	Time	Relinquished by	Received by	Via	Date	Time
11.27.23		Bryce Mortimer				
11/27/23	1900			Courier	11/28/23	7:40

Remarks: Devon Energy Corporation

cc KStallings@vertex.ca, AHarris@vertex.ca

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.

Chain-of-Custody Record

Client: Vertex

Mailing Address: On file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
■ Standard ☑ Rush 5 Day

Project Name: Todd 36 D State #002

Project #: 23E-05197

Project Manager: Kent Stallings

Sampler: Austin Harris / Bryce Mortimer

On Ice: ☐ Yes ☐ No

# of Coolers: 1 Marty

Cooler Temp (including CF): 0.1-0.1=0 (°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. 2311C33	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	F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11.17.23	10:15	Soil	BH23-17 2'	4oz jar	Ice	013	✓	✓					✓			
↓	10:20	↓	BH23-18 0'	↓	↓	014										
	10:25		BH23-18 2'			015										
	10:30		BH23-19 0'			016										
↓	10:35	↓	BH23-19 2'	↓	↓	017	↓	↓					↓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11.17.23		Bryce Mortimer	[signature]		11/27/23	930
11/27/23	1900	[signature]	[signature]	courier	11/28/23	7:40

Remarks: Devon Energy Corporation

cc KStallings@vertex.ca, AHarris@vertex.ca

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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ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/12/2024 7:39:25 AM

JOB DESCRIPTION

Todd 36 D State #002

JOB NUMBER

885-2488-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
4/12/2024 7:39:25 AM

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

Client: Vertex
Project/Site: Todd 36 D State #002

Laboratory Job ID: 885-2488-1

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Definitions/Glossary

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-2488-1

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: Todd 36 D State #002

Job ID: 885-2488-1

Job ID: 885-2488-1 Eurofins Albuquerque

Job Narrative
885-2488-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 4/6/2024 11:37 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 1.4°C.

Gasoline Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-2488-1

Client Sample ID: BH24-24 0'

Date Collected: 04/04/24 09:50
Date Received: 04/06/24 11:37

Lab Sample ID: 885-2488-1

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		04/08/24 15:32	04/10/24 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 244*	*04/08/24 15:32*	*04/10/24 14:51*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/08/24 15:32	04/10/24 14:51	1
Ethylbenzene	ND		0.048		mg/Kg		04/08/24 15:32	04/10/24 14:51	1
Toluene	ND		0.048		mg/Kg		04/08/24 15:32	04/10/24 14:51	1
Xylenes, Total	ND		0.095		mg/Kg		04/08/24 15:32	04/10/24 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*39 - 146*	*04/08/24 15:32*	*04/10/24 14:51*	*1*

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.9		mg/Kg		04/09/24 13:09	04/10/24 16:09	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		04/09/24 13:09	04/10/24 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*108*		*62 - 134*	*04/09/24 13:09*	*04/10/24 16:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		5.0		mg/Kg			04/11/24 06:12	1

Client Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-2488-1

Client Sample ID: BH24-24 2'

Date Collected: 04/04/24 09:55
Date Received: 04/06/24 11:37

Lab Sample ID: 885-2488-2

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/08/24 15:32	04/10/24 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*04/08/24 15:32*	*04/10/24 15:14*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/08/24 15:32	04/10/24 15:14	1
Ethylbenzene	ND		0.050		mg/Kg		04/08/24 15:32	04/10/24 15:14	1
Toluene	ND		0.050		mg/Kg		04/08/24 15:32	04/10/24 15:14	1
Xylenes, Total	ND		0.10		mg/Kg		04/08/24 15:32	04/10/24 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*39 - 146*	*04/08/24 15:32*	*04/10/24 15:14*	*1*

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**11**		9.7		mg/Kg		04/09/24 13:09	04/10/24 16:21	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/09/24 13:09	04/10/24 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*04/09/24 13:09*	*04/10/24 16:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15**		5.0		mg/Kg			04/11/24 06:19	1

QC Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-2488-1

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

Lab Sample ID: MB 885-2924/1-A
Matrix: Solid
Analysis Batch: 3090

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2924

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/08/24 15:32	04/10/24 11:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*15 - 244*	*04/08/24 15:32*	*04/10/24 11:19*	*1*

Lab Sample ID: LCS 885-2924/2-A
Matrix: Solid
Analysis Batch: 3090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2924

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	25.5		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*204*		*15 - 244*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-2924/1-A
Matrix: Solid
Analysis Batch: 3091

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2924

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/08/24 15:32	04/10/24 11:19	1
Ethylbenzene	ND		0.050		mg/Kg		04/08/24 15:32	04/10/24 11:19	1
Toluene	ND		0.050		mg/Kg		04/08/24 15:32	04/10/24 11:19	1
Xylenes, Total	ND		0.10		mg/Kg		04/08/24 15:32	04/10/24 11:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*39 - 146*	*04/08/24 15:32*	*04/10/24 11:19*	*1*

Lab Sample ID: LCS 885-2924/3-A
Matrix: Solid
Analysis Batch: 3091

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2924

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.786		mg/Kg		79	70 - 130		
Ethylbenzene			1.00	0.804		mg/Kg		80	70 - 130		
Toluene			1.00	0.795		mg/Kg		80	70 - 130		
Xylenes, Total			3.00	2.44		mg/Kg		81	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*39 - 146*

QC Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-2488-1

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

Lab Sample ID: MB 885-2975/1-A
Matrix: Solid
Analysis Batch: 3129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2975

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/09/24 13:09	04/10/24 11:23	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/09/24 13:09	04/10/24 11:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*117*		*62 - 134*	*04/09/24 13:09*	*04/10/24 11:23*	*1*

Lab Sample ID: LCS 885-2975/2-A
Matrix: Solid
Analysis Batch: 3129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2975

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	53.5		mg/Kg		107	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*124*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-77847/1-A
Matrix: Solid
Analysis Batch: 77873

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg			04/11/24 03:09	1

Lab Sample ID: LCS 880-77847/2-A
Matrix: Solid
Analysis Batch: 77873

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-77847/3-A
Matrix: Solid
Analysis Batch: 77873

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-2488-1

GC VOA

Prep Batch: 2924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2488-1	BH24-24 0'	Total/NA	Solid	5030C	
885-2488-2	BH24-24 2'	Total/NA	Solid	5030C	
MB 885-2924/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-2924/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-2924/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 3090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2488-1	BH24-24 0'	Total/NA	Solid	8015D	2924
885-2488-2	BH24-24 2'	Total/NA	Solid	8015D	2924
MB 885-2924/1-A	Method Blank	Total/NA	Solid	8015D	2924
LCS 885-2924/2-A	Lab Control Sample	Total/NA	Solid	8015D	2924

Analysis Batch: 3091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2488-1	BH24-24 0'	Total/NA	Solid	8021B	2924
885-2488-2	BH24-24 2'	Total/NA	Solid	8021B	2924
MB 885-2924/1-A	Method Blank	Total/NA	Solid	8021B	2924
LCS 885-2924/3-A	Lab Control Sample	Total/NA	Solid	8021B	2924

GC Semi VOA

Prep Batch: 2975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2488-1	BH24-24 0'	Total/NA	Solid	SHAKE	
885-2488-2	BH24-24 2'	Total/NA	Solid	SHAKE	
MB 885-2975/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-2975/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 3129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2488-1	BH24-24 0'	Total/NA	Solid	8015D	2975
885-2488-2	BH24-24 2'	Total/NA	Solid	8015D	2975
MB 885-2975/1-A	Method Blank	Total/NA	Solid	8015D	2975
LCS 885-2975/2-A	Lab Control Sample	Total/NA	Solid	8015D	2975

HPLC/IC

Leach Batch: 77847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2488-1	BH24-24 0'	Soluble	Solid	DI Leach	
885-2488-2	BH24-24 2'	Soluble	Solid	DI Leach	
MB 880-77847/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-77847/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-77847/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 77873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2488-1	BH24-24 0'	Soluble	Solid	300.0	77847
885-2488-2	BH24-24 2'	Soluble	Solid	300.0	77847
MB 880-77847/1-A	Method Blank	Soluble	Solid	300.0	77847
LCS 880-77847/2-A	Lab Control Sample	Soluble	Solid	300.0	77847

QC Association Summary

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-2488-1

HPLC/IC (Continued)

Analysis Batch: 77873 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-77847/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	77847

Lab Chronicle

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-2488-1

Client Sample ID: BH24-24 0'
Date Collected: 04/04/24 09:50
Date Received: 04/06/24 11:37

Lab Sample ID: 885-2488-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2924	JP	EET ALB	04/08/24 15:32
Total/NA	Analysis	8015D		1	3090	JP	EET ALB	04/10/24 14:51
Total/NA	Prep	5030C			2924	JP	EET ALB	04/08/24 15:32
Total/NA	Analysis	8021B		1	3091	JP	EET ALB	04/10/24 14:51
Total/NA	Prep	SHAKE			2975	PD	EET ALB	04/09/24 13:09
Total/NA	Analysis	8015D		1	3129	JU	EET ALB	04/10/24 16:09
Soluble	Leach	DI Leach			77847	SA	EET MID	04/10/24 14:45
Soluble	Analysis	300.0		1	77873	SMC	EET MID	04/11/24 06:12

Client Sample ID: BH24-24 2'
Date Collected: 04/04/24 09:55
Date Received: 04/06/24 11:37

Lab Sample ID: 885-2488-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2924	JP	EET ALB	04/08/24 15:32
Total/NA	Analysis	8015D		1	3090	JP	EET ALB	04/10/24 15:14
Total/NA	Prep	5030C			2924	JP	EET ALB	04/08/24 15:32
Total/NA	Analysis	8021B		1	3091	JP	EET ALB	04/10/24 15:14
Total/NA	Prep	SHAKE			2975	PD	EET ALB	04/09/24 13:09
Total/NA	Analysis	8015D		1	3129	JU	EET ALB	04/10/24 16:21
Soluble	Leach	DI Leach			77847	SA	EET MID	04/10/24 14:45
Soluble	Analysis	300.0		1	77873	SMC	EET MID	04/11/24 06:19

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-2488-1

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	02-26-25

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
8015D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	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	02-26-25

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
8015D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	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

Laboratory: Eurofins Midland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 871
Tel. 505-345-3975 Fax 505-345-4107
885-2488 COC

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 Days
Project Name: Todd 36 D State #002
Project #: 23E-05197
Project Manager: KentStallings
Sampler: SM
On Ice: ☒ Yes ☐ No morty
# of Coolers: 1
Cooler Temp(Including CF): 1.4 ± 0 = 1.4 (°C)

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)
4/4/24	9:50	Soil	BH24-24 0'	4oz jar	Ice	1	✓	✓					✓			
↓	9:55	↓	BH24-24 2'	↓	↓	2	✓	✓					✓			

Date	Time	Relinquished by	Received by	Via	Date	Time
4/5/24	7:45				4/5/24	745
4/5/24	1900			courier	4/6/24	11:37

Remarks: Direct Bill to Devon (wbs#: 100609260)
C-C. KStallings@vertex.ca
BMcCarty@vertex.ca

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.

Chain-of-Custody Record

Client: Vertex (XTO)

Mailing Address: On File

Phone #: On File

email or Fax#: Scartter@vertex.ca

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

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

Turn-Around Time:
☑ Standard ☑ Rush 5 Day

Project Name: Mis Amigos

Project #: 23E-05219

Project Manager: Sally Carttar

Sampler: Wyatt Wadleigh

On Ice: ☑ Yes ☐ No mostly

# of Coolers: 1

Cooler Temp (including CF): 1.4 +0 = 1.4 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 8710
Tel. 505-345-3975 Fax 505-345-4107

885-2487 COC

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)
04/03/24	10:00	Soil	BES24-26 1ft	1, 4oz jar		1	X	X					X			
04/03/24	10:15	Soil	BES24-27 1ft	1, 4oz jar		2	X	X					X			
~~04/03/24~~	~~10:30~~	~~Soil~~	~~BES24-28 1ft~~	~~1, 4oz jar~~			X	X					X			
04/03/24	10:45	Soil	BES24-29 1 ft	1, 4oz jar			X	X					X			
~~04/03/24~~	~~11:00~~	~~Soil~~	~~BES24-30 1 ft~~	~~1, 4oz jar~~			X	X					X			
~~04/03/24~~	~~11:15~~	~~Soil~~	~~BES24-31 1ft~~	~~1, 4oz jar~~			X	X					X			
~~04/03/24~~	~~11:30~~	~~Soil~~	~~BES24-32 1 ft~~	~~1, 4oz jar~~			X	X					X			
~~04/03/24~~	11:45	Soil	~~BES24-33 1ft~~	~~1, 4oz jar~~			X	X					X			
04/03/24	12:00	Soil	BES24-34 1 ft	1, 4oz jar		3	X	X					X			
~~04/03/24~~	~~12:15~~	~~Soil~~	~~BES24-35 1 ft~~	~~1, 4oz jar~~			X	X					X			
04/03/24	12:30	Soil	BES24-36 1 ft	1, 4oz jar		4	X	X					X			
04/03/24	12:45	Soil	WES24-05 1 ft	1, 4oz jar		5	X	X					X			

Date	Time	Relinquished by	Received by	Via	Date	Time
		Wyatt Wadleigh			4/5/24	745
4/5/24	1700			courier	4/6/24	11:37

Remarks: Please CC wwadleigh@vertex.ca
Cost center Number: ~~[illegible]~~ 1055621001

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.

Chain-of-Custody Record

Client Vertex (XTO)

Mailing Address On File

Phone # On File

email or Fax# Scartter@vertex.ca

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

Accreditation ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time
☑ Standard ☑ Rush 5 Day

Project Name Mis Amigos

Project # 23E-05219

Project Manager Sally Carttar

Sampler Wyatt Wadleigh
On Ice: ☑ Yes ☐ No marty
# of Coolers: 1
Cooler Temp(Including CF): 1.4+0=1.4 °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)						
04/03/24	13 00	Soil	WES24-06 1ft	1, 4oz jar		1	X	X					X									
04/03/24	13 15	Soil	WES24-07 1 ft	1, 4oz jar		2	X	X					X									
04/03/24	13 30	Soil	WES24-11 1 ft	1, 4oz jar		3	X	X					X									

Date	Time	Relinquished by	Received by	Via	Date	Time
		Wyatt Wadleigh				
4/5/24	1900			Courier	4/6/24	11:37

Remarks Please CC wwadleigh@vertex ca
Cost center Number 10556 21001

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: 885-2488-1

Login Number: 2488 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-2488-1

Login Number: 2488
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 04/10/24 01:43 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/14/2025 3:00:12 PM

JOB DESCRIPTION

Todd 36D State 002

JOB NUMBER

885-22760-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
4/14/2025 3:00:12 PM

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

Client: Vertex
Project/Site: Todd 36D State 002

Laboratory Job ID: 885-22760-1

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Definitions/Glossary

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

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: Todd 36D State 002

Job ID: 885-22760-1

Job ID: 885-22760-1 Eurofins Albuquerque

Job Narrative
885-22760-1

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 4/8/2025 8:05 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 2.8°C.

Gasoline Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: BS25-01 1

Date Collected: 04/04/25 09:00
Date Received: 04/08/25 08:05

Lab Sample ID: 885-22760-1

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.9		mg/Kg		04/09/25 10:08	04/11/25 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*35 - 166*	*04/09/25 10:08*	*04/11/25 16:36*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:08	04/11/25 16:36	1
Ethylbenzene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 16:36	1
Toluene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 16:36	1
Xylenes, Total	ND		0.099		mg/Kg		04/09/25 10:08	04/11/25 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*48 - 145*	*04/09/25 10:08*	*04/11/25 16:36*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		04/10/25 10:50	04/10/25 15:25	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/10/25 10:50	04/10/25 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*111*		*62 - 134*	*04/10/25 10:50*	*04/10/25 15:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		61		mg/Kg		04/09/25 14:12	04/09/25 22:42	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: BS25-02 1

Date Collected: 04/04/25 09:10
Date Received: 04/08/25 08:05

Lab Sample ID: 885-22760-2

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.9		mg/Kg		04/09/25 10:08	04/11/25 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*35 - 166*	*04/09/25 10:08*	*04/11/25 17:00*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:08	04/11/25 17:00	1
Ethylbenzene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 17:00	1
Toluene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 17:00	1
Xylenes, Total	ND		0.098		mg/Kg		04/09/25 10:08	04/11/25 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*48 - 145*	*04/09/25 10:08*	*04/11/25 17:00*	*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]	**380**		19		mg/Kg		04/10/25 10:50	04/10/25 15:37	2
Motor Oil Range Organics [C28-C40]	**380**		96		mg/Kg		04/10/25 10:50	04/10/25 15:37	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*110*		*62 - 134*	*04/10/25 10:50*	*04/10/25 15:37*	*2*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/09/25 14:12	04/09/25 22:56	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: BS25-03 1

Date Collected: 04/04/25 09:20
Date Received: 04/08/25 08:05

Lab Sample ID: 885-22760-3

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		04/09/25 10:08	04/11/25 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*35 - 166*	*04/09/25 10:08*	*04/11/25 17:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:08	04/11/25 17:24	1
Ethylbenzene	ND		0.050		mg/Kg		04/09/25 10:08	04/11/25 17:24	1
Toluene	ND		0.050		mg/Kg		04/09/25 10:08	04/11/25 17:24	1
Xylenes, Total	ND		0.099		mg/Kg		04/09/25 10:08	04/11/25 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*48 - 145*	*04/09/25 10:08*	*04/11/25 17:24*	*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]	**66**		9.2		mg/Kg		04/10/25 10:50	04/10/25 15:49	1
Motor Oil Range Organics [C28-C40]	**73**		46		mg/Kg		04/10/25 10:50	04/10/25 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*119*		*62 - 134*	*04/10/25 10:50*	*04/10/25 15:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**290**		60		mg/Kg		04/09/25 14:12	04/09/25 23:10	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: BS25-04 1

Date Collected: 04/04/25 09:30
Date Received: 04/08/25 08:05

Lab Sample ID: 885-22760-4

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.9		mg/Kg		04/09/25 10:08	04/11/25 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*35 - 166*	*04/09/25 10:08*	*04/11/25 17:47*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:08	04/11/25 17:47	1
Ethylbenzene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 17:47	1
Toluene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 17:47	1
Xylenes, Total	ND		0.098		mg/Kg		04/09/25 10:08	04/11/25 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*48 - 145*	*04/09/25 10:08*	*04/11/25 17:47*	*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]	**160**		18		mg/Kg		04/10/25 10:50	04/10/25 16:13	2
Motor Oil Range Organics [C28-C40]	**140**		92		mg/Kg		04/10/25 10:50	04/10/25 16:13	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*124*		*62 - 134*	*04/10/25 10:50*	*04/10/25 16:13*	*2*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/09/25 14:12	04/09/25 23:24	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: BS25-05 1

Date Collected: 04/04/25 09:40
Date Received: 04/08/25 08:05

Lab Sample ID: 885-22760-5

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.9		mg/Kg		04/09/25 10:08	04/11/25 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*35 - 166*	*04/09/25 10:08*	*04/11/25 18:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:08	04/11/25 18:11	1
Ethylbenzene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 18:11	1
Toluene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 18:11	1
Xylenes, Total	ND		0.099		mg/Kg		04/09/25 10:08	04/11/25 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*48 - 145*	*04/09/25 10:08*	*04/11/25 18:11*	*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]	**170**		19		mg/Kg		04/10/25 10:50	04/10/25 16:25	2
Motor Oil Range Organics [C28-C40]	**130**		97		mg/Kg		04/10/25 10:50	04/10/25 16:25	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*109*		*62 - 134*	*04/10/25 10:50*	*04/10/25 16:25*	*2*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**310**		60		mg/Kg		04/09/25 14:12	04/09/25 23:38	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: WS25-03 0-1

Date Collected: 04/04/25 09:50
Date Received: 04/08/25 08:05

Lab Sample ID: 885-22760-6

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.9		mg/Kg		04/09/25 10:08	04/11/25 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*35 - 166*	*04/09/25 10:08*	*04/11/25 18:35*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:08	04/11/25 18:35	1
Ethylbenzene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 18:35	1
Toluene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 18:35	1
Xylenes, Total	ND		0.099		mg/Kg		04/09/25 10:08	04/11/25 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*48 - 145*	*04/09/25 10:08*	*04/11/25 18:35*	*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]	**55**		9.3		mg/Kg		04/10/25 10:50	04/10/25 16:37	1
Motor Oil Range Organics [C28-C40]	**59**		46		mg/Kg		04/10/25 10:50	04/10/25 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*114*		*62 - 134*	*04/10/25 10:50*	*04/10/25 16:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**120**		60		mg/Kg		04/09/25 14:12	04/10/25 00:21	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: WS25-06 0-3

Date Collected: 04/04/25 10:00
Date Received: 04/08/25 08:05

Lab Sample ID: 885-22760-7

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		04/09/25 10:08	04/11/25 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*35 - 166*	*04/09/25 10:08*	*04/11/25 19:46*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:08	04/11/25 19:46	1
Ethylbenzene	ND		0.050		mg/Kg		04/09/25 10:08	04/11/25 19:46	1
Toluene	ND		0.050		mg/Kg		04/09/25 10:08	04/11/25 19:46	1
Xylenes, Total	ND		0.099		mg/Kg		04/09/25 10:08	04/11/25 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*48 - 145*	*04/09/25 10:08*	*04/11/25 19:46*	*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		04/10/25 10:50	04/10/25 16:49	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		04/10/25 10:50	04/10/25 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*113*		*62 - 134*	*04/10/25 10:50*	*04/10/25 16:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**140**		60		mg/Kg		04/09/25 14:12	04/10/25 00:35	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: SS 25-01

Date Collected: 04/04/25 10:10
Date Received: 04/08/25 08:05

Lab Sample ID: 885-22760-8

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		04/09/25 10:08	04/11/25 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*35 - 166*	*04/09/25 10:08*	*04/11/25 20:10*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:08	04/11/25 20:10	1
Ethylbenzene	ND		0.050		mg/Kg		04/09/25 10:08	04/11/25 20:10	1
Toluene	ND		0.050		mg/Kg		04/09/25 10:08	04/11/25 20:10	1
Xylenes, Total	ND		0.099		mg/Kg		04/09/25 10:08	04/11/25 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*48 - 145*	*04/09/25 10:08*	*04/11/25 20:10*	*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]	**22**		9.9		mg/Kg		04/10/25 10:50	04/10/25 17:01	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/10/25 10:50	04/10/25 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*119*		*62 - 134*	*04/10/25 10:50*	*04/10/25 17:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**360**		60		mg/Kg		04/10/25 09:45	04/10/25 13:04	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: SS 25-02

Date Collected: 04/04/25 10:20
Date Received: 04/08/25 08:05

Lab Sample ID: 885-22760-9

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.9		mg/Kg		04/09/25 10:08	04/11/25 20:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*35 - 166*	*04/09/25 10:08*	*04/11/25 20:34*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:08	04/11/25 20:34	1
Ethylbenzene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 20:34	1
Toluene	ND		0.049		mg/Kg		04/09/25 10:08	04/11/25 20:34	1
Xylenes, Total	ND		0.098		mg/Kg		04/09/25 10:08	04/11/25 20:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*48 - 145*	*04/09/25 10:08*	*04/11/25 20:34*	*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		04/10/25 10:50	04/10/25 17:13	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/10/25 10:50	04/10/25 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*109*		*62 - 134*	*04/10/25 10:50*	*04/10/25 17:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/10/25 09:45	04/10/25 16:31	20

QC Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

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

Lab Sample ID: MB 885-23910/1-A
Matrix: Solid
Analysis Batch: 24123

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23910

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		04/09/25 10:07	04/11/25 13:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*35 - 166*	*04/09/25 10:07*	*04/11/25 13:25*	*1*

Lab Sample ID: LCS 885-23910/2-A
Matrix: Solid
Analysis Batch: 24123

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23910

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	30.7		mg/Kg		123	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*236*		*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-23910/1-A
Matrix: Solid
Analysis Batch: 24124

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23910

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/09/25 10:07	04/11/25 13:25	1
Ethylbenzene	ND		0.050		mg/Kg		04/09/25 10:07	04/11/25 13:25	1
Toluene	ND		0.050		mg/Kg		04/09/25 10:07	04/11/25 13:25	1
Xylenes, Total	ND		0.10		mg/Kg		04/09/25 10:07	04/11/25 13:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*48 - 145*	*04/09/25 10:07*	*04/11/25 13:25*	*1*

Lab Sample ID: LCS 885-23910/3-A
Matrix: Solid
Analysis Batch: 24124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23910

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.07		mg/Kg		107	70 - 130		
Ethylbenzene			1.00	1.10		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			2.00	2.30		mg/Kg		115	70 - 130		
o-Xylene			1.00	1.12		mg/Kg		112	70 - 130		
Toluene			1.00	1.09		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*48 - 145*

QC Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

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

Lab Sample ID: MB 885-24003/1-A
Matrix: Solid
Analysis Batch: 23979

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24003

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/10/25 10:50	04/10/25 14:01	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/10/25 10:50	04/10/25 14:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*110*		*62 - 134*	*04/10/25 10:50*	*04/10/25 14:01*	*1*

Lab Sample ID: LCS 885-24003/2-A
Matrix: Solid
Analysis Batch: 23979

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24003

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	40.6		mg/Kg		81	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*76*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-23901/1-A
Matrix: Solid
Analysis Batch: 23904

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23901

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5		mg/Kg		04/09/25 09:07	04/09/25 17:16	1

Lab Sample ID: LCS 885-23901/2-A
Matrix: Solid
Analysis Batch: 23904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23901

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			15.0	14.9		mg/Kg		99	90 - 110		

Lab Sample ID: MB 885-23989/1-A
Matrix: Solid
Analysis Batch: 24001

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23989

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5		mg/Kg		04/10/25 09:45	04/10/25 11:36	1

Lab Sample ID: LCS 885-23989/3-A
Matrix: Solid
Analysis Batch: 24001

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23989

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			15.0	15.0		mg/Kg		100	90 - 110		

QC Sample Results

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LLCS 885-23989/2-A
Matrix: Solid
Analysis Batch: 24001

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23989

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			1.50	1.55		mg/Kg		103	50 - 150		

QC Association Summary

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

GC VOA

Prep Batch: 23910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-1	BS25-01 1	Total/NA	Solid	5030C	
885-22760-2	BS25-02 1	Total/NA	Solid	5030C	
885-22760-3	BS25-03 1	Total/NA	Solid	5030C	
885-22760-4	BS25-04 1	Total/NA	Solid	5030C	
885-22760-5	BS25-05 1	Total/NA	Solid	5030C	
885-22760-6	WS25-03 0-1	Total/NA	Solid	5030C	
885-22760-7	WS25-06 0-3	Total/NA	Solid	5030C	
885-22760-8	SS 25-01	Total/NA	Solid	5030C	
885-22760-9	SS 25-02	Total/NA	Solid	5030C	
MB 885-23910/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-23910/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-23910/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 24123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-1	BS25-01 1	Total/NA	Solid	8015M/D	23910
885-22760-2	BS25-02 1	Total/NA	Solid	8015M/D	23910
885-22760-3	BS25-03 1	Total/NA	Solid	8015M/D	23910
885-22760-4	BS25-04 1	Total/NA	Solid	8015M/D	23910
885-22760-5	BS25-05 1	Total/NA	Solid	8015M/D	23910
885-22760-6	WS25-03 0-1	Total/NA	Solid	8015M/D	23910
885-22760-7	WS25-06 0-3	Total/NA	Solid	8015M/D	23910
885-22760-8	SS 25-01	Total/NA	Solid	8015M/D	23910
885-22760-9	SS 25-02	Total/NA	Solid	8015M/D	23910
MB 885-23910/1-A	Method Blank	Total/NA	Solid	8015M/D	23910
LCS 885-23910/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	23910

Analysis Batch: 24124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-1	BS25-01 1	Total/NA	Solid	8021B	23910
885-22760-2	BS25-02 1	Total/NA	Solid	8021B	23910
885-22760-3	BS25-03 1	Total/NA	Solid	8021B	23910
885-22760-4	BS25-04 1	Total/NA	Solid	8021B	23910
885-22760-5	BS25-05 1	Total/NA	Solid	8021B	23910
885-22760-6	WS25-03 0-1	Total/NA	Solid	8021B	23910
885-22760-7	WS25-06 0-3	Total/NA	Solid	8021B	23910
885-22760-8	SS 25-01	Total/NA	Solid	8021B	23910
885-22760-9	SS 25-02	Total/NA	Solid	8021B	23910
MB 885-23910/1-A	Method Blank	Total/NA	Solid	8021B	23910
LCS 885-23910/3-A	Lab Control Sample	Total/NA	Solid	8021B	23910

GC Semi VOA

Analysis Batch: 23979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-1	BS25-01 1	Total/NA	Solid	8015M/D	24003
885-22760-2	BS25-02 1	Total/NA	Solid	8015M/D	24003
885-22760-3	BS25-03 1	Total/NA	Solid	8015M/D	24003
885-22760-4	BS25-04 1	Total/NA	Solid	8015M/D	24003
885-22760-5	BS25-05 1	Total/NA	Solid	8015M/D	24003
885-22760-6	WS25-03 0-1	Total/NA	Solid	8015M/D	24003

QC Association Summary

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

GC Semi VOA (Continued)

Analysis Batch: 23979 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-7	WS25-06 0-3	Total/NA	Solid	8015M/D	24003
885-22760-8	SS 25-01	Total/NA	Solid	8015M/D	24003
885-22760-9	SS 25-02	Total/NA	Solid	8015M/D	24003
MB 885-24003/1-A	Method Blank	Total/NA	Solid	8015M/D	24003
LCS 885-24003/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24003

Prep Batch: 24003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-1	BS25-01 1	Total/NA	Solid	SHAKE	
885-22760-2	BS25-02 1	Total/NA	Solid	SHAKE	
885-22760-3	BS25-03 1	Total/NA	Solid	SHAKE	
885-22760-4	BS25-04 1	Total/NA	Solid	SHAKE	
885-22760-5	BS25-05 1	Total/NA	Solid	SHAKE	
885-22760-6	WS25-03 0-1	Total/NA	Solid	SHAKE	
885-22760-7	WS25-06 0-3	Total/NA	Solid	SHAKE	
885-22760-8	SS 25-01	Total/NA	Solid	SHAKE	
885-22760-9	SS 25-02	Total/NA	Solid	SHAKE	
MB 885-24003/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-24003/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

HPLC/IC

Prep Batch: 23901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-1	BS25-01 1	Total/NA	Solid	300_Prep	
885-22760-2	BS25-02 1	Total/NA	Solid	300_Prep	
885-22760-3	BS25-03 1	Total/NA	Solid	300_Prep	
885-22760-4	BS25-04 1	Total/NA	Solid	300_Prep	
885-22760-5	BS25-05 1	Total/NA	Solid	300_Prep	
885-22760-6	WS25-03 0-1	Total/NA	Solid	300_Prep	
885-22760-7	WS25-06 0-3	Total/NA	Solid	300_Prep	
MB 885-23901/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-23901/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 23904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-1	BS25-01 1	Total/NA	Solid	300.0	23901
885-22760-2	BS25-02 1	Total/NA	Solid	300.0	23901
885-22760-3	BS25-03 1	Total/NA	Solid	300.0	23901
885-22760-4	BS25-04 1	Total/NA	Solid	300.0	23901
885-22760-5	BS25-05 1	Total/NA	Solid	300.0	23901
885-22760-6	WS25-03 0-1	Total/NA	Solid	300.0	23901
885-22760-7	WS25-06 0-3	Total/NA	Solid	300.0	23901
MB 885-23901/1-A	Method Blank	Total/NA	Solid	300.0	23901
LCS 885-23901/2-A	Lab Control Sample	Total/NA	Solid	300.0	23901

Prep Batch: 23989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-8	SS 25-01	Total/NA	Solid	300_Prep	
885-22760-9	SS 25-02	Total/NA	Solid	300_Prep	
MB 885-23989/1-A	Method Blank	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

HPLC/IC (Continued)

Prep Batch: 23989 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 885-23989/3-A	Lab Control Sample	Total/NA	Solid	300_Prep	
LLCS 885-23989/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 24001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22760-8	SS 25-01	Total/NA	Solid	300.0	23989
885-22760-9	SS 25-02	Total/NA	Solid	300.0	23989
MB 885-23989/1-A	Method Blank	Total/NA	Solid	300.0	23989
LCS 885-23989/3-A	Lab Control Sample	Total/NA	Solid	300.0	23989
LLCS 885-23989/2-A	Lab Control Sample	Total/NA	Solid	300.0	23989

Lab Chronicle

Client: Vertex
Job ID: 885-22760-1
Project/Site: Todd 36D State 002

Client Sample ID: BS25-01 1
Lab Sample ID: 885-22760-1
Date Collected: 04/04/25 09:00
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8015M/D		1	24123	JP	EET ALB	04/11/25 16:36
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8021B		1	24124	JP	EET ALB	04/11/25 16:36
Total/NA	Prep	SHAKE			24003	MI	EET ALB	04/10/25 10:50
Total/NA	Analysis	8015M/D		1	23979	MI	EET ALB	04/10/25 15:25
Total/NA	Prep	300_Prep			23901	DL	EET ALB	04/09/25 14:12
Total/NA	Analysis	300.0		20	23904	RC	EET ALB	04/09/25 22:42

Client Sample ID: BS25-02 1
Lab Sample ID: 885-22760-2
Date Collected: 04/04/25 09:10
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8015M/D		1	24123	JP	EET ALB	04/11/25 17:00
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8021B		1	24124	JP	EET ALB	04/11/25 17:00
Total/NA	Prep	SHAKE			24003	MI	EET ALB	04/10/25 10:50
Total/NA	Analysis	8015M/D		2	23979	MI	EET ALB	04/10/25 15:37
Total/NA	Prep	300_Prep			23901	DL	EET ALB	04/09/25 14:12
Total/NA	Analysis	300.0		20	23904	RC	EET ALB	04/09/25 22:56

Client Sample ID: BS25-03 1
Lab Sample ID: 885-22760-3
Date Collected: 04/04/25 09:20
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8015M/D		1	24123	JP	EET ALB	04/11/25 17:24
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8021B		1	24124	JP	EET ALB	04/11/25 17:24
Total/NA	Prep	SHAKE			24003	MI	EET ALB	04/10/25 10:50
Total/NA	Analysis	8015M/D		1	23979	MI	EET ALB	04/10/25 15:49
Total/NA	Prep	300_Prep			23901	DL	EET ALB	04/09/25 14:12
Total/NA	Analysis	300.0		20	23904	RC	EET ALB	04/09/25 23:10

Client Sample ID: BS25-04 1
Lab Sample ID: 885-22760-4
Date Collected: 04/04/25 09:30
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8015M/D		1	24123	JP	EET ALB	04/11/25 17:47

Lab Chronicle

Client: Vertex
Project/Site: Todd 36D State 002

Job ID: 885-22760-1

Client Sample ID: BS25-04 1

Lab Sample ID: 885-22760-4

Date Collected: 04/04/25 09:30
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8021B		1	24124	JP	EET ALB	04/11/25 17:47
Total/NA	Prep	SHAKE			24003	MI	EET ALB	04/10/25 10:50
Total/NA	Analysis	8015M/D		2	23979	MI	EET ALB	04/10/25 16:13
Total/NA	Prep	300_Prep			23901	DL	EET ALB	04/09/25 14:12
Total/NA	Analysis	300.0		20	23904	RC	EET ALB	04/09/25 23:24

Client Sample ID: BS25-05 1

Lab Sample ID: 885-22760-5

Date Collected: 04/04/25 09:40
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8015M/D		1	24123	JP	EET ALB	04/11/25 18:11
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8021B		1	24124	JP	EET ALB	04/11/25 18:11
Total/NA	Prep	SHAKE			24003	MI	EET ALB	04/10/25 10:50
Total/NA	Analysis	8015M/D		2	23979	MI	EET ALB	04/10/25 16:25
Total/NA	Prep	300_Prep			23901	DL	EET ALB	04/09/25 14:12
Total/NA	Analysis	300.0		20	23904	RC	EET ALB	04/09/25 23:38

Client Sample ID: WS25-03 0-1

Lab Sample ID: 885-22760-6

Date Collected: 04/04/25 09:50
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8015M/D		1	24123	JP	EET ALB	04/11/25 18:35
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8021B		1	24124	JP	EET ALB	04/11/25 18:35
Total/NA	Prep	SHAKE			24003	MI	EET ALB	04/10/25 10:50
Total/NA	Analysis	8015M/D		1	23979	MI	EET ALB	04/10/25 16:37
Total/NA	Prep	300_Prep			23901	DL	EET ALB	04/09/25 14:12
Total/NA	Analysis	300.0		20	23904	RC	EET ALB	04/10/25 00:21

Client Sample ID: WS25-06 0-3

Lab Sample ID: 885-22760-7

Date Collected: 04/04/25 10:00
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8015M/D		1	24123	JP	EET ALB	04/11/25 19:46
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8021B		1	24124	JP	EET ALB	04/11/25 19:46

Lab Chronicle

Client: Vertex
Job ID: 885-22760-1
Project/Site: Todd 36D State 002

Client Sample ID: WS25-06 0-3
Lab Sample ID: 885-22760-7
Date Collected: 04/04/25 10:00
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			24003	MI	EET ALB	04/10/25 10:50
Total/NA	Analysis	8015M/D		1	23979	MI	EET ALB	04/10/25 16:49
Total/NA	Prep	300_Prep			23901	DL	EET ALB	04/09/25 14:12
Total/NA	Analysis	300.0		20	23904	RC	EET ALB	04/10/25 00:35

Client Sample ID: SS 25-01
Lab Sample ID: 885-22760-8
Date Collected: 04/04/25 10:10
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8015M/D		1	24123	JP	EET ALB	04/11/25 20:10
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8021B		1	24124	JP	EET ALB	04/11/25 20:10
Total/NA	Prep	SHAKE			24003	MI	EET ALB	04/10/25 10:50
Total/NA	Analysis	8015M/D		1	23979	MI	EET ALB	04/10/25 17:01
Total/NA	Prep	300_Prep			23989	DL	EET ALB	04/10/25 09:45
Total/NA	Analysis	300.0		20	24001	DL	EET ALB	04/10/25 13:04

Client Sample ID: SS 25-02
Lab Sample ID: 885-22760-9
Date Collected: 04/04/25 10:20
Matrix: Solid
Date Received: 04/08/25 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8015M/D		1	24123	JP	EET ALB	04/11/25 20:34
Total/NA	Prep	5030C			23910	JP	EET ALB	04/09/25 10:08
Total/NA	Analysis	8021B		1	24124	JP	EET ALB	04/11/25 20:34
Total/NA	Prep	SHAKE			24003	MI	EET ALB	04/10/25 10:50
Total/NA	Analysis	8015M/D		1	23979	MI	EET ALB	04/10/25 17:13
Total/NA	Prep	300_Prep			23989	DL	EET ALB	04/10/25 09:45
Total/NA	Analysis	300.0		20	24001	DL	EET ALB	04/10/25 16:31

Laboratory References:

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

Accreditation/Certification Summary

Client: Vertex
Job ID: 885-22760-1
Project/Site: Todd 36D State 002

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: ~~Devon Energy~~ Vertex
(bill to Devon)

Mailing Address: 3101 Boyd dr
& Carlsbad NM, 88220

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:
Todd 36 D State #002

Project #:
23E-05197

Project Manager: Sally Carttar
SCarttar@vertex.ca
KStallings@vetex.ca, Kent Stallings

Sampler: Katrina Taylor

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.6 +0.2 = 2.8 (°C) (mo)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109 885-22760 COC
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)
4/4	9:00	Soil	BS25-01 1	4oz	Ice		X	X					X			
	9:10		BS25-02 1													
	9:20		BS25-03 1													
	9:30		BS25-04 1													
	9:40		BS25-05 1													
	9:50		WS25-030-1													
	10:00		WS25-06 0-3													
	10:10		SS25-01													
	10:20		SS25-02													

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/4	5pm				4/7/25	1000
4/7/25	1900			courier	4-8-25	8:05

Remarks: please bill to devon
ATTN: i
CC: SCarttar@vertex.ca, kstalling@vetex.ca
* Katrina.Taylor@vertex.ca

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: 885-22760-1

Login Number: 22760 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Alderette, Joseph

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/22/2025 12:33:38 PM

JOB DESCRIPTION

Todd 36D State #002

JOB NUMBER

885-23045-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
4/22/2025 12:33:38 PM

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

Client: Vertex
Project/Site: Todd 36D State #002

Laboratory Job ID: 885-23045-1

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Definitions/Glossary

Client: Vertex Job ID: 885-23045-1
Project/Site: Todd 36D State #002

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
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: Todd 36D State #002

Job ID: 885-23045-1

Job ID: 885-23045-1 Eurofins Albuquerque

Job Narrative
885-23045-1

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 4/11/2025 8:30 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 1.4°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
Method 8015D_DRO: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 885-24238 and analytical batch 885-24267 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.

Method 8015D_DRO: Surrogate recovery for the following sample is outside the upper control limit: BS25-08 1' (885-23045-4). Despite this high bias, samples were discovered to be non-detect for target analytes; therefore data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

Client Sample ID: WS25-05 0-1'
Date Collected: 04/08/25 09:00
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-1
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.6		mg/Kg		04/11/25 12:06	04/15/25 02:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*35 - 166*	*04/11/25 12:06*	*04/15/25 02:29*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/11/25 12:06	04/15/25 02:29	1
Ethylbenzene	ND		0.046		mg/Kg		04/11/25 12:06	04/15/25 02:29	1
Toluene	ND		0.046		mg/Kg		04/11/25 12:06	04/15/25 02:29	1
Xylenes, Total	ND		0.093		mg/Kg		04/11/25 12:06	04/15/25 02:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*48 - 145*	*04/11/25 12:06*	*04/15/25 02:29*	*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	*+	20		mg/Kg		04/14/25 14:40	04/15/25 12:16	2
Motor Oil Range Organics [C28-C40]	ND		100		mg/Kg		04/14/25 14:40	04/15/25 12:16	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*126*		*62 - 134*	*04/14/25 14:40*	*04/15/25 12:16*	*2*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/13/25 13:44	04/13/25 21:17	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

Client Sample ID: BS25-06 4'
Date Collected: 04/08/25 09:10
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-2
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		04/13/25 13:53	04/14/25 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*	*04/13/25 13:53*	*04/14/25 19:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/13/25 13:53	04/14/25 19:21	1
Ethylbenzene	ND		0.050		mg/Kg		04/13/25 13:53	04/14/25 19:21	1
Toluene	ND		0.050		mg/Kg		04/13/25 13:53	04/14/25 19:21	1
Xylenes, Total	ND		0.10		mg/Kg		04/13/25 13:53	04/14/25 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*48 - 145*	*04/13/25 13:53*	*04/14/25 19:21*	*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]	**54**		9.9		mg/Kg		04/21/25 11:59	04/21/25 14:45	1
Motor Oil Range Organics [C28-C40]	**130**		50		mg/Kg		04/21/25 11:59	04/21/25 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*116*		*62 - 134*	*04/21/25 11:59*	*04/21/25 14:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**72**		60		mg/Kg		04/14/25 13:56	04/15/25 00:01	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

Client Sample ID: BS25-07 1'
Date Collected: 04/08/25 09:20
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-3
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.8		mg/Kg		04/13/25 13:53	04/14/25 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*04/13/25 13:53*	*04/14/25 19:42*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/13/25 13:53	04/14/25 19:42	1
Ethylbenzene	ND		0.048		mg/Kg		04/13/25 13:53	04/14/25 19:42	1
Toluene	ND		0.048		mg/Kg		04/13/25 13:53	04/14/25 19:42	1
Xylenes, Total	ND		0.097		mg/Kg		04/13/25 13:53	04/14/25 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*48 - 145*	*04/13/25 13:53*	*04/14/25 19:42*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND	*+	9.4		mg/Kg		04/14/25 14:40	04/15/25 13:04	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/14/25 14:40	04/15/25 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*133*		*62 - 134*	*04/14/25 14:40*	*04/15/25 13:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/14/25 13:56	04/15/25 00:12	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

Client Sample ID: BS25-08 1'
Date Collected: 04/08/25 09:30
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-4
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.7		mg/Kg		04/13/25 13:53	04/14/25 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*04/13/25 13:53*	*04/14/25 20:04*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/13/25 13:53	04/14/25 20:04	1
Ethylbenzene	ND		0.047		mg/Kg		04/13/25 13:53	04/14/25 20:04	1
Toluene	ND		0.047		mg/Kg		04/13/25 13:53	04/14/25 20:04	1
Xylenes, Total	ND		0.093		mg/Kg		04/13/25 13:53	04/14/25 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*04/13/25 13:53*	*04/14/25 20:04*	*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	*+	9.8		mg/Kg		04/14/25 14:40	04/15/25 13:16	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/14/25 14:40	04/15/25 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*167*	*S1+*	*62 - 134*	*04/14/25 14:40*	*04/15/25 13:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/14/25 13:56	04/15/25 00:22	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

Client Sample ID: BS25-09 1'
Date Collected: 04/08/25 09:40
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-5
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.8		mg/Kg		04/13/25 13:53	04/14/25 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*35 - 166*	*04/13/25 13:53*	*04/14/25 20:26*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/13/25 13:53	04/14/25 20:26	1
Ethylbenzene	ND		0.048		mg/Kg		04/13/25 13:53	04/14/25 20:26	1
Toluene	ND		0.048		mg/Kg		04/13/25 13:53	04/14/25 20:26	1
Xylenes, Total	ND		0.096		mg/Kg		04/13/25 13:53	04/14/25 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*04/13/25 13:53*	*04/14/25 20:26*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**190**		9.8		mg/Kg		04/21/25 11:59	04/21/25 14:57	1
Motor Oil Range Organics [C28-C40]	**180**		49		mg/Kg		04/21/25 11:59	04/21/25 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*112*		*62 - 134*	*04/21/25 11:59*	*04/21/25 14:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/14/25 13:56	04/15/25 00:32	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

Client Sample ID: WS25-02 0-1'
Date Collected: 04/08/25 10:10
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-6
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.8		mg/Kg		04/13/25 13:53	04/14/25 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*35 - 166*	*04/13/25 13:53*	*04/14/25 20:47*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/13/25 13:53	04/14/25 20:47	1
Ethylbenzene	ND		0.048		mg/Kg		04/13/25 13:53	04/14/25 20:47	1
Toluene	ND		0.048		mg/Kg		04/13/25 13:53	04/14/25 20:47	1
Xylenes, Total	ND		0.096		mg/Kg		04/13/25 13:53	04/14/25 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*48 - 145*	*04/13/25 13:53*	*04/14/25 20:47*	*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	*+	19		mg/Kg		04/14/25 14:40	04/15/25 13:40	2
Motor Oil Range Organics [C28-C40]	ND		93		mg/Kg		04/14/25 14:40	04/15/25 13:40	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*127*		*62 - 134*	*04/14/25 14:40*	*04/15/25 13:40*	*2*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**97**		60		mg/Kg		04/14/25 13:56	04/15/25 00:43	20

QC Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

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

Lab Sample ID: MB 885-24119/1-A
Matrix: Solid
Analysis Batch: 24236

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24119

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		04/11/25 12:06	04/14/25 16:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*35 - 166*	*04/11/25 12:06*	*04/14/25 16:34*	*1*

Lab Sample ID: LCS 885-24119/2-A
Matrix: Solid
Analysis Batch: 24236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24119

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	30.4		mg/Kg		122	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*222*		*35 - 166*

Lab Sample ID: MB 885-24167/1-A
Matrix: Solid
Analysis Batch: 24205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24167

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		04/13/25 13:53	04/14/25 13:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*35 - 166*	*04/13/25 13:53*	*04/14/25 13:31*	*1*

Lab Sample ID: LCS 885-24167/2-A
Matrix: Solid
Analysis Batch: 24205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24167

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	27.4		mg/Kg		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*213*		*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-24119/1-A
Matrix: Solid
Analysis Batch: 24235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24119

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/11/25 12:06	04/14/25 16:34	1
Ethylbenzene	ND		0.050		mg/Kg		04/11/25 12:06	04/14/25 16:34	1
Toluene	ND		0.050		mg/Kg		04/11/25 12:06	04/14/25 16:34	1

QC Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

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

Lab Sample ID: MB 885-24119/1-A
Matrix: Solid
Analysis Batch: 24235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24119

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		0.10		mg/Kg		04/11/25 12:06	04/14/25 16:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*48 - 145*	*04/11/25 12:06*	*04/14/25 16:34*	*1*

Lab Sample ID: LCS 885-24119/3-A
Matrix: Solid
Analysis Batch: 24235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24119

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.07		mg/Kg		107	70 - 130		
Ethylbenzene			1.00	1.08		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			2.00	2.29		mg/Kg		115	70 - 130		
o-Xylene			1.00	1.11		mg/Kg		111	70 - 130		
Toluene			1.00	1.07		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*48 - 145*

Lab Sample ID: MB 885-24167/1-A
Matrix: Solid
Analysis Batch: 24206

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24167

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/13/25 13:53	04/14/25 13:31	1
Ethylbenzene	ND		0.050		mg/Kg		04/13/25 13:53	04/14/25 13:31	1
Toluene	ND		0.050		mg/Kg		04/13/25 13:53	04/14/25 13:31	1
Xylenes, Total	ND		0.10		mg/Kg		04/13/25 13:53	04/14/25 13:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*48 - 145*	*04/13/25 13:53*	*04/14/25 13:31*	*1*

Lab Sample ID: LCS 885-24167/3-A
Matrix: Solid
Analysis Batch: 24206

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24167

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.951		mg/Kg		95	70 - 130		
Ethylbenzene			1.00	0.988		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			2.00	2.02		mg/Kg		101	70 - 130		
o-Xylene			1.00	1.00		mg/Kg		100	70 - 130		
Toluene			1.00	0.965		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*48 - 145*

QC Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

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

Lab Sample ID: MB 885-24238/1-A
Matrix: Solid
Analysis Batch: 24267

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24238

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/14/25 14:40	04/15/25 11:52	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/14/25 14:40	04/15/25 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*118*		*62 - 134*	*04/14/25 14:40*	*04/15/25 11:52*	*1*

Lab Sample ID: LCS 885-24238/2-A
Matrix: Solid
Analysis Batch: 24267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24238

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	80.8	*+	mg/Kg		162	51 - 148		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*151*	*S1+*	*62 - 134*

Lab Sample ID: 885-23045-1 MS
Matrix: Solid
Analysis Batch: 24267

Client Sample ID: WS25-05 0-1'
Prep Type: Total/NA
Prep Batch: 24238

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND	*+	46.9	67.9	F1	mg/Kg		145	44 - 136		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*116*		*62 - 134*

Lab Sample ID: 885-23045-1 MSD
Matrix: Solid
Analysis Batch: 24267

Client Sample ID: WS25-05 0-1'
Prep Type: Total/NA
Prep Batch: 24238

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	*+	47.0	58.1		mg/Kg		124	44 - 136	15	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*127*		*62 - 134*

Lab Sample ID: MB 885-24650/1-A
Matrix: Solid
Analysis Batch: 24616

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24650

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/21/25 11:56	04/21/25 14:09	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/21/25 11:56	04/21/25 14:09	1

QC Sample Results

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

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

Lab Sample ID: MB 885-24650/1-A
Matrix: Solid
Analysis Batch: 24616

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24650

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	105		62 - 134	04/21/25 11:56	04/21/25 14:09	1

Lab Sample ID: LCS 885-24650/2-A
Matrix: Solid
Analysis Batch: 24616

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24650

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	48.4		mg/Kg		97	51 - 148

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	93		62 - 134

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-24166/1-A
Matrix: Solid
Analysis Batch: 24163

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24166

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		04/13/25 13:44	04/13/25 14:33	1

Lab Sample ID: LCS 885-24166/2-A
Matrix: Solid
Analysis Batch: 24163

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24166

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	31.3		mg/Kg		104	90 - 110

Lab Sample ID: MB 885-24226/1-A
Matrix: Solid
Analysis Batch: 24228

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24226

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	mg/Kg		04/14/25 13:56	04/14/25 15:34	1

Lab Sample ID: LCS 885-24226/3-A
Matrix: Solid
Analysis Batch: 24228

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	15.0	14.3		mg/Kg		95	90 - 110

Lab Sample ID: LLCS 885-24226/2-A
Matrix: Solid
Analysis Batch: 24228

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24226

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1.50	ND		mg/Kg		97	50 - 150

QC Association Summary

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

GC VOA

Prep Batch: 24119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-1	WS25-05 0-1'	Total/NA	Solid	5030C	
MB 885-24119/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-24119/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-24119/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 24167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-2	BS25-06 4'	Total/NA	Solid	5030C	
885-23045-3	BS25-07 1'	Total/NA	Solid	5030C	
885-23045-4	BS25-08 1'	Total/NA	Solid	5030C	
885-23045-5	BS25-09 1'	Total/NA	Solid	5030C	
885-23045-6	WS25-02 0-1'	Total/NA	Solid	5030C	
MB 885-24167/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-24167/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-24167/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 24205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-2	BS25-06 4'	Total/NA	Solid	8015M/D	24167
885-23045-3	BS25-07 1'	Total/NA	Solid	8015M/D	24167
885-23045-4	BS25-08 1'	Total/NA	Solid	8015M/D	24167
885-23045-5	BS25-09 1'	Total/NA	Solid	8015M/D	24167
885-23045-6	WS25-02 0-1'	Total/NA	Solid	8015M/D	24167
MB 885-24167/1-A	Method Blank	Total/NA	Solid	8015M/D	24167
LCS 885-24167/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24167

Analysis Batch: 24206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-2	BS25-06 4'	Total/NA	Solid	8021B	24167
885-23045-3	BS25-07 1'	Total/NA	Solid	8021B	24167
885-23045-4	BS25-08 1'	Total/NA	Solid	8021B	24167
885-23045-5	BS25-09 1'	Total/NA	Solid	8021B	24167
885-23045-6	WS25-02 0-1'	Total/NA	Solid	8021B	24167
MB 885-24167/1-A	Method Blank	Total/NA	Solid	8021B	24167
LCS 885-24167/3-A	Lab Control Sample	Total/NA	Solid	8021B	24167

Analysis Batch: 24235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-1	WS25-05 0-1'	Total/NA	Solid	8021B	24119
MB 885-24119/1-A	Method Blank	Total/NA	Solid	8021B	24119
LCS 885-24119/3-A	Lab Control Sample	Total/NA	Solid	8021B	24119

Analysis Batch: 24236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-1	WS25-05 0-1'	Total/NA	Solid	8015M/D	24119
MB 885-24119/1-A	Method Blank	Total/NA	Solid	8015M/D	24119
LCS 885-24119/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24119

QC Association Summary

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

GC Semi VOA

Prep Batch: 24238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-1	WS25-05 0-1'	Total/NA	Solid	SHAKE	
885-23045-3	BS25-07 1'	Total/NA	Solid	SHAKE	
885-23045-4	BS25-08 1'	Total/NA	Solid	SHAKE	
885-23045-6	WS25-02 0-1'	Total/NA	Solid	SHAKE	
MB 885-24238/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-24238/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-23045-1 MS	WS25-05 0-1'	Total/NA	Solid	SHAKE	
885-23045-1 MSD	WS25-05 0-1'	Total/NA	Solid	SHAKE	

Analysis Batch: 24267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-1	WS25-05 0-1'	Total/NA	Solid	8015M/D	24238
885-23045-3	BS25-07 1'	Total/NA	Solid	8015M/D	24238
885-23045-4	BS25-08 1'	Total/NA	Solid	8015M/D	24238
885-23045-6	WS25-02 0-1'	Total/NA	Solid	8015M/D	24238
MB 885-24238/1-A	Method Blank	Total/NA	Solid	8015M/D	24238
LCS 885-24238/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24238
885-23045-1 MS	WS25-05 0-1'	Total/NA	Solid	8015M/D	24238
885-23045-1 MSD	WS25-05 0-1'	Total/NA	Solid	8015M/D	24238

Analysis Batch: 24616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-2	BS25-06 4'	Total/NA	Solid	8015M/D	24650
885-23045-5	BS25-09 1'	Total/NA	Solid	8015M/D	24650
MB 885-24650/1-A	Method Blank	Total/NA	Solid	8015M/D	24650
LCS 885-24650/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24650

Prep Batch: 24650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-2	BS25-06 4'	Total/NA	Solid	SHAKE	
885-23045-5	BS25-09 1'	Total/NA	Solid	SHAKE	
MB 885-24650/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-24650/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

HPLC/IC

Analysis Batch: 24163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-1	WS25-05 0-1'	Total/NA	Solid	300.0	24166
MB 885-24166/1-A	Method Blank	Total/NA	Solid	300.0	24166
LCS 885-24166/2-A	Lab Control Sample	Total/NA	Solid	300.0	24166

Prep Batch: 24166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-1	WS25-05 0-1'	Total/NA	Solid	300_Prep	
MB 885-24166/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-24166/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Prep Batch: 24226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-2	BS25-06 4'	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

HPLC/IC (Continued)

Prep Batch: 24226 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-3	BS25-07 1'	Total/NA	Solid	300_Prep	
885-23045-4	BS25-08 1'	Total/NA	Solid	300_Prep	
885-23045-5	BS25-09 1'	Total/NA	Solid	300_Prep	
885-23045-6	WS25-02 0-1'	Total/NA	Solid	300_Prep	
MB 885-24226/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-24226/3-A	Lab Control Sample	Total/NA	Solid	300_Prep	
LLCS 885-24226/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 24228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23045-2	BS25-06 4'	Total/NA	Solid	300.0	24226
885-23045-3	BS25-07 1'	Total/NA	Solid	300.0	24226
885-23045-4	BS25-08 1'	Total/NA	Solid	300.0	24226
885-23045-5	BS25-09 1'	Total/NA	Solid	300.0	24226
885-23045-6	WS25-02 0-1'	Total/NA	Solid	300.0	24226
MB 885-24226/1-A	Method Blank	Total/NA	Solid	300.0	24226
LCS 885-24226/3-A	Lab Control Sample	Total/NA	Solid	300.0	24226
LLCS 885-24226/2-A	Lab Control Sample	Total/NA	Solid	300.0	24226

Lab Chronicle

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

Client Sample ID: WS25-05 0-1'
Date Collected: 04/08/25 09:00
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24119	JP	EET ALB	04/11/25 12:06
Total/NA	Analysis	8015M/D		1	24236	JP	EET ALB	04/15/25 02:29
Total/NA	Prep	5030C			24119	JP	EET ALB	04/11/25 12:06
Total/NA	Analysis	8021B		1	24235	JP	EET ALB	04/15/25 02:29
Total/NA	Prep	SHAKE			24238	MI	EET ALB	04/14/25 14:40
Total/NA	Analysis	8015M/D		2	24267	MI	EET ALB	04/15/25 12:16
Total/NA	Prep	300_Prep			24166	JT	EET ALB	04/13/25 13:44
Total/NA	Analysis	300.0		20	24163	DL	EET ALB	04/13/25 21:17

Client Sample ID: BS25-06 4'
Date Collected: 04/08/25 09:10
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8015M/D		1	24205	AT	EET ALB	04/14/25 19:21
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8021B		1	24206	AT	EET ALB	04/14/25 19:21
Total/NA	Prep	SHAKE			24650	MI	EET ALB	04/21/25 11:59
Total/NA	Analysis	8015M/D		1	24616	MI	EET ALB	04/21/25 14:45
Total/NA	Prep	300_Prep			24226	DL	EET ALB	04/14/25 13:56
Total/NA	Analysis	300.0		20	24228	DL	EET ALB	04/15/25 00:01

Client Sample ID: BS25-07 1'
Date Collected: 04/08/25 09:20
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8015M/D		1	24205	AT	EET ALB	04/14/25 19:42
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8021B		1	24206	AT	EET ALB	04/14/25 19:42
Total/NA	Prep	SHAKE			24238	MI	EET ALB	04/14/25 14:40
Total/NA	Analysis	8015M/D		1	24267	MI	EET ALB	04/15/25 13:04
Total/NA	Prep	300_Prep			24226	DL	EET ALB	04/14/25 13:56
Total/NA	Analysis	300.0		20	24228	DL	EET ALB	04/15/25 00:12

Client Sample ID: BS25-08 1'
Date Collected: 04/08/25 09:30
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8015M/D		1	24205	AT	EET ALB	04/14/25 20:04

Lab Chronicle

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

Client Sample ID: BS25-08 1'
Date Collected: 04/08/25 09:30
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8021B		1	24206	AT	EET ALB	04/14/25 20:04
Total/NA	Prep	SHAKE			24238	MI	EET ALB	04/14/25 14:40
Total/NA	Analysis	8015M/D		1	24267	MI	EET ALB	04/15/25 13:16
Total/NA	Prep	300_Prep			24226	DL	EET ALB	04/14/25 13:56
Total/NA	Analysis	300.0		20	24228	DL	EET ALB	04/15/25 00:22

Client Sample ID: BS25-09 1'
Date Collected: 04/08/25 09:40
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8015M/D		1	24205	AT	EET ALB	04/14/25 20:26
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8021B		1	24206	AT	EET ALB	04/14/25 20:26
Total/NA	Prep	SHAKE			24650	MI	EET ALB	04/21/25 11:59
Total/NA	Analysis	8015M/D		1	24616	MI	EET ALB	04/21/25 14:57
Total/NA	Prep	300_Prep			24226	DL	EET ALB	04/14/25 13:56
Total/NA	Analysis	300.0		20	24228	DL	EET ALB	04/15/25 00:32

Client Sample ID: WS25-02 0-1'
Date Collected: 04/08/25 10:10
Date Received: 04/11/25 08:30

Lab Sample ID: 885-23045-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8015M/D		1	24205	AT	EET ALB	04/14/25 20:47
Total/NA	Prep	5030C			24167	AT	EET ALB	04/13/25 13:53
Total/NA	Analysis	8021B		1	24206	AT	EET ALB	04/14/25 20:47
Total/NA	Prep	SHAKE			24238	MI	EET ALB	04/14/25 14:40
Total/NA	Analysis	8015M/D		2	24267	MI	EET ALB	04/15/25 13:40
Total/NA	Prep	300_Prep			24226	DL	EET ALB	04/14/25 13:56
Total/NA	Analysis	300.0		20	24228	DL	EET ALB	04/15/25 00:43

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

Accreditation/Certification Summary

Client: Vertex
Project/Site: Todd 36D State #002

Job ID: 885-23045-1

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 (bill to 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: Todd 36 D Staff #002

Project #: 23E-05197

Project Manager: Sally Carttar SCarttar@vertex.ca & Kent Stallings KStallings@vertex.ca

Sampler:

On Ice: ☒ Yes ☐ No mgc

# of Coolers: 1

Cooler Temp(including CF): 1.2+0.2=1.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABOR
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 871(
Tel. 505-345-3975 Fax 505-345-4107
885-23045 COC

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)
4/8	9:00	Soil	WS25-05 0-1'	4oz	Ice		X	X					X			
	9:10		BS25-06 4'													
	9:20		BS25-07 1'													
	9:30		BS25-08 1'													
	9:40		BS25-09 1'													
	9:50		~~~													
	10:10		WS25-02 0-1'													

Date	Time	Relinquished by	Received by	Via	Date	Time
4/9	12	Katrina Taylor			4/10/25	915
4/10/25	1900			courier	4/11/25	8:30

Remarks: Bill to devon
ATTN: Jim Raley - jim.raley@dvn.com
CC: SCarttar@vertex.ca, KStallings@vertex.ca
Katrina.Taylor@vertex.ca

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: 885-23045-1

Login Number: 23045 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/21/2025 3:23:07 PM

JOB DESCRIPTION

Todd 36 D State #002

JOB NUMBER

885-23300-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

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4/21/2025 3:23:07 PM

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

Client: Vertex
Project/Site: Todd 36 D State #002

Laboratory Job ID: 885-23300-1

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Definitions/Glossary

Client: Vertex Job ID: 885-23300-1
Project/Site: Todd 36 D State #002

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: Todd 36 D State #002

Job ID: 885-23300-1

Job ID: 885-23300-1 Eurofins Albuquerque

Job Narrative
885-23300-1

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 4/16/2025 7:55 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 4.6°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 continuing calibration verification (CCV) associated with batch 885-24560 recovered above the upper control limit for Di-n-octyl phthalate (Surr) and Diesel Range Organics [C10-C28]. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is:WS25-03 0-1' (885-23300-1).

Method 8015D_DRO: Surrogate recovery for the following samples were outside the upper control limit: WS25-03 0-1' (885-23300-1) and (MB 885-24476/1-A). 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.

Client Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-23300-1

Client Sample ID: WS25-03 0-1'

Date Collected: 04/04/25 09:50
Date Received: 04/16/25 07:55

Lab Sample ID: 885-23300-1

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		3.7		mg/Kg		04/16/25 13:31	04/18/25 12:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*35 - 166*	*04/16/25 13:31*	*04/18/25 12:53*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.018		mg/Kg		04/16/25 13:31	04/18/25 12:53	1
Ethylbenzene	ND		0.037		mg/Kg		04/16/25 13:31	04/18/25 12:53	1
Toluene	ND		0.037		mg/Kg		04/16/25 13:31	04/18/25 12:53	1
Xylenes, Total	ND		0.074		mg/Kg		04/16/25 13:31	04/18/25 12:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*48 - 145*	*04/16/25 13:31*	*04/18/25 12:53*	*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		04/17/25 13:51	04/18/25 13:58	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/17/25 13:51	04/18/25 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*142*	*S1+*	*62 - 134*	*04/17/25 13:51*	*04/18/25 13:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**190**		60		mg/Kg		04/18/25 08:41	04/18/25 12:14	20

QC Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-23300-1

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

Lab Sample ID: MB 885-24400/1-A
Matrix: Solid
Analysis Batch: 24549

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24400

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/16/25 13:31	04/18/25 12:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*35 - 166*	*04/16/25 13:31*	*04/18/25 12:29*	*1*

Lab Sample ID: LCS 885-24400/2-A
Matrix: Solid
Analysis Batch: 24549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24400

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	31.3		mg/Kg		125	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*231*		*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-24400/1-A
Matrix: Solid
Analysis Batch: 24550

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24400

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/16/25 13:31	04/18/25 12:29	1
Ethylbenzene	ND		0.050		mg/Kg		04/16/25 13:31	04/18/25 12:29	1
Toluene	ND		0.050		mg/Kg		04/16/25 13:31	04/18/25 12:29	1
Xylenes, Total	ND		0.10		mg/Kg		04/16/25 13:31	04/18/25 12:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*48 - 145*	*04/16/25 13:31*	*04/18/25 12:29*	*1*

Lab Sample ID: LCS 885-24400/3-A
Matrix: Solid
Analysis Batch: 24550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24400

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.11		mg/Kg		111	70 - 130		
Ethylbenzene			1.00	1.08		mg/Kg		108	70 - 130		
m,p-Xylene			2.00	2.31		mg/Kg		116	70 - 130		
o-Xylene			1.00	1.10		mg/Kg		110	70 - 130		
Toluene			1.00	1.09		mg/Kg		109	70 - 130		
Xylenes, Total			3.00	3.42		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*48 - 145*

QC Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-23300-1

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

Lab Sample ID: MB 885-24476/1-A
Matrix: Solid
Analysis Batch: 24560

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24476

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/17/25 12:32	04/18/25 13:33	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/17/25 12:32	04/18/25 13:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*170*	*S1+*	*62 - 134*	*04/17/25 12:32*	*04/18/25 13:33*	*1*

Lab Sample ID: LCS 885-24476/2-A
Matrix: Solid
Analysis Batch: 24560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24476

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	57.5		mg/Kg		115	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*121*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MRL 885-24530/3
Matrix: Solid
Analysis Batch: 24530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			0.500	0.522		mg/L		104	50 - 150		

Lab Sample ID: MB 885-24532/1-A
Matrix: Solid
Analysis Batch: 24530

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24532

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5		mg/Kg		04/18/25 08:41	04/18/25 10:21	1

Lab Sample ID: LCS 885-24532/3-A
Matrix: Solid
Analysis Batch: 24530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24532

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: LLCS 885-24532/2-A
Matrix: Solid
Analysis Batch: 24530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24532

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			1.50	1.56		mg/Kg		104	50 - 150		

QC Association Summary

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-23300-1

GC VOA

Prep Batch: 24400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23300-1	WS25-03 0-1'	Total/NA	Solid	5035	
MB 885-24400/1-A	Method Blank	Total/NA	Solid	5035	
LCS 885-24400/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 885-24400/3-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 24549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23300-1	WS25-03 0-1'	Total/NA	Solid	8015M/D	24400
MB 885-24400/1-A	Method Blank	Total/NA	Solid	8015M/D	24400
LCS 885-24400/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24400

Analysis Batch: 24550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23300-1	WS25-03 0-1'	Total/NA	Solid	8021B	24400
MB 885-24400/1-A	Method Blank	Total/NA	Solid	8021B	24400
LCS 885-24400/3-A	Lab Control Sample	Total/NA	Solid	8021B	24400

GC Semi VOA

Prep Batch: 24476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23300-1	WS25-03 0-1'	Total/NA	Solid	SHAKE	
MB 885-24476/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-24476/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 24560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23300-1	WS25-03 0-1'	Total/NA	Solid	8015M/D	24476
MB 885-24476/1-A	Method Blank	Total/NA	Solid	8015M/D	24476
LCS 885-24476/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24476

HPLC/IC

Analysis Batch: 24530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23300-1	WS25-03 0-1'	Total/NA	Solid	300.0	24532
MB 885-24532/1-A	Method Blank	Total/NA	Solid	300.0	24532
LCS 885-24532/3-A	Lab Control Sample	Total/NA	Solid	300.0	24532
LLCS 885-24532/2-A	Lab Control Sample	Total/NA	Solid	300.0	24532
MRL 885-24530/3	Lab Control Sample	Total/NA	Solid	300.0	

Prep Batch: 24532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23300-1	WS25-03 0-1'	Total/NA	Solid	300_Prep	
MB 885-24532/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-24532/3-A	Lab Control Sample	Total/NA	Solid	300_Prep	
LLCS 885-24532/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Lab Chronicle

Client: Vertex
Job ID: 885-23300-1
Project/Site: Todd 36 D State #002

Client Sample ID: WS25-03 0-1'
Lab Sample ID: 885-23300-1

Date Collected: 04/04/25 09:50
Matrix: Solid
Date Received: 04/16/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			24400	JE	EET ALB	04/16/25 13:31
Total/NA	Analysis	8015M/D		1	24549	JP	EET ALB	04/18/25 12:53
Total/NA	Prep	5035			24400	JE	EET ALB	04/16/25 13:31
Total/NA	Analysis	8021B		1	24550	JP	EET ALB	04/18/25 12:53
Total/NA	Prep	SHAKE			24476	MI	EET ALB	04/17/25 13:51
Total/NA	Analysis	8015M/D		1	24560	JE	EET ALB	04/18/25 13:58
Total/NA	Prep	300_Prep			24532	DL	EET ALB	04/18/25 08:41
Total/NA	Analysis	300.0		20	24530	RC	EET ALB	04/18/25 12:14

Laboratory References:

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

Accreditation/Certification Summary

Client: Vertex Job ID: 885-23300-1
Project/Site: Todd 36 D State #002

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	5035	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5035	Solid	Benzene
8021B	5035	Solid	Ethylbenzene
8021B	5035	Solid	Toluene
8021B	5035	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-26

Chain-of-Custody Record

Client: **Vertex**

(direct bill to Devon, work order 1006092001)

Mailing Address:

Phone #:

email or Fax#:

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

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

Turn-Around Time:
X 48-hour Rush

Project Name:
Todd 36 D State #002

Project #
23E-05197

Project Manager:
Kent Stallings
kstallings@vertexresource.com

Sampler: K. Taylor
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 4.4 +0.2 - 4.6°c

HALL ENVIRONMENTAL ANALYSIS LABORA
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107
885-23300 COC

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)
04.04.25	9:50	Soil	WS25-03 0-1'	1, 4oz jar			X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4/15/25	10:30				4/15/25	1030
4/16/25	1900			courier	4/16/25	7:55

Remarks: ATTN Jim Raley
Direct bill to Devon work order 1006092001 Jim Raley
cc. permain@vertexresource.com, SCarttar@vertexresource.com, kstallings@vertexresource.com, SMcCarty@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: 885-23300-1

Login Number: 23300 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/21/2025 11:06:18 AM

JOB DESCRIPTION

Todd 36 D State #002

JOB NUMBER

885-23304-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
4/21/2025 11:06:18 AM

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

Client: Vertex
Project/Site: Todd 36 D State #002

Laboratory Job ID: 885-23304-1

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Definitions/Glossary

Client: Vertex Job ID: 885-23304-1
Project/Site: Todd 36 D State #002

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: Todd 36 D State #002

Job ID: 885-23304-1

Job ID: 885-23304-1 Eurofins Albuquerque

Job Narrative
885-23304-1

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 4/16/2025 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 4.6°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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 885-24457 and analytical batch 885-24440 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.

Client Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-23304-1

Client Sample ID: BS25-10 1'

Date Collected: 04/11/25 11:05
Date Received: 04/16/25 07:55

Lab Sample ID: 885-23304-1

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.8		mg/Kg		04/16/25 15:49	04/17/25 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*04/16/25 15:49*	*04/17/25 23:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/16/25 15:49	04/17/25 23:23	1
Ethylbenzene	ND		0.048		mg/Kg		04/16/25 15:49	04/17/25 23:23	1
Toluene	ND		0.048		mg/Kg		04/16/25 15:49	04/17/25 23:23	1
Xylenes, Total	ND		0.095		mg/Kg		04/16/25 15:49	04/17/25 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*48 - 145*	*04/16/25 15:49*	*04/17/25 23:23*	*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]	**60**		10		mg/Kg		04/17/25 10:25	04/18/25 07:54	1
Motor Oil Range Organics [C28-C40]	**63**		50		mg/Kg		04/17/25 10:25	04/18/25 07:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*117*		*62 - 134*	*04/17/25 10:25*	*04/18/25 07:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/17/25 09:22	04/17/25 21:50	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-23304-1

Client Sample ID: BS25-11 1'

Date Collected: 04/11/25 11:10
Date Received: 04/16/25 07:55

Lab Sample ID: 885-23304-2

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.6		mg/Kg		04/16/25 15:49	04/18/25 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*04/16/25 15:49*	*04/18/25 00:28*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		04/16/25 15:49	04/18/25 00:28	1
Ethylbenzene	ND		0.046		mg/Kg		04/16/25 15:49	04/18/25 00:28	1
Toluene	ND		0.046		mg/Kg		04/16/25 15:49	04/18/25 00:28	1
Xylenes, Total	ND		0.091		mg/Kg		04/16/25 15:49	04/18/25 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*04/16/25 15:49*	*04/18/25 00:28*	*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]	**240**		9.9		mg/Kg		04/17/25 10:25	04/18/25 08:06	1
Motor Oil Range Organics [C28-C40]	**190**		49		mg/Kg		04/17/25 10:25	04/18/25 08:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*127*		*62 - 134*	*04/17/25 10:25*	*04/18/25 08:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/17/25 09:22	04/17/25 22:04	20

Client Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-23304-1

Client Sample ID: WS25-01 0-1'

Date Collected: 04/11/25 11:20
Date Received: 04/16/25 07:55

Lab Sample ID: 885-23304-3

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.8		mg/Kg		04/16/25 15:49	04/18/25 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*04/16/25 15:49*	*04/18/25 00:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/16/25 15:49	04/18/25 00:50	1
Ethylbenzene	ND		0.048		mg/Kg		04/16/25 15:49	04/18/25 00:50	1
Toluene	ND		0.048		mg/Kg		04/16/25 15:49	04/18/25 00:50	1
Xylenes, Total	ND		0.097		mg/Kg		04/16/25 15:49	04/18/25 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*	*04/16/25 15:49*	*04/18/25 00:50*	*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		04/17/25 10:25	04/18/25 08:17	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/17/25 10:25	04/18/25 08:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*106*		*62 - 134*	*04/17/25 10:25*	*04/18/25 08:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/17/25 09:22	04/17/25 22:47	20

Client Sample Results

Client: Vertex
Job ID: 885-23304-1
Project/Site: Todd 36 D State #002

Client Sample ID: WS25-04 0-1'
Lab Sample ID: 885-23304-4
Date Collected: 04/11/25 11:35
Matrix: Solid
Date Received: 04/16/25 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		4.7		mg/Kg		04/16/25 15:49	04/18/25 01:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*	*04/16/25 15:49*	*04/18/25 01:12*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/16/25 15:49	04/18/25 01:12	1
Ethylbenzene	ND		0.047		mg/Kg		04/16/25 15:49	04/18/25 01:12	1
Toluene	ND		0.047		mg/Kg		04/16/25 15:49	04/18/25 01:12	1
Xylenes, Total	ND		0.094		mg/Kg		04/16/25 15:49	04/18/25 01:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*	*04/16/25 15:49*	*04/18/25 01:12*	*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		9.9		mg/Kg		04/17/25 10:25	04/18/25 08:29	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/17/25 10:25	04/18/25 08:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*109*		*62 - 134*	*04/17/25 10:25*	*04/18/25 08:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		60		mg/Kg		04/17/25 09:22	04/17/25 23:01	20

Client Sample Results

Client: Vertex
Job ID: 885-23304-1
Project/Site: Todd 36 D State #002

Client Sample ID: WS25-06 0-4'
Lab Sample ID: 885-23304-5
Date Collected: 04/11/25 13:00
Matrix: Solid
Date Received: 04/16/25 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		04/16/25 15:49	04/18/25 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*04/16/25 15:49*	*04/18/25 01:33*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/16/25 15:49	04/18/25 01:33	1
Ethylbenzene	ND		0.048		mg/Kg		04/16/25 15:49	04/18/25 01:33	1
Toluene	ND		0.048		mg/Kg		04/16/25 15:49	04/18/25 01:33	1
Xylenes, Total	ND		0.097		mg/Kg		04/16/25 15:49	04/18/25 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*	*04/16/25 15:49*	*04/18/25 01:33*	*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		9.8		mg/Kg		04/17/25 10:25	04/18/25 08:41	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/17/25 10:25	04/18/25 08:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*113*		*62 - 134*	*04/17/25 10:25*	*04/18/25 08:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/17/25 09:22	04/17/25 23:15	20

Client Sample Results

Client: Vertex
Job ID: 885-23304-1
Project/Site: Todd 36 D State #002

Client Sample ID: WS25-07 0-4'
Lab Sample ID: 885-23304-6
Date Collected: 04/11/25 13:05
Matrix: Solid
Date Received: 04/16/25 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		04/16/25 15:49	04/18/25 01:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*04/16/25 15:49*	*04/18/25 01:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		04/16/25 15:49	04/18/25 01:55	1
Ethylbenzene	ND		0.048		mg/Kg		04/16/25 15:49	04/18/25 01:55	1
Toluene	ND		0.048		mg/Kg		04/16/25 15:49	04/18/25 01:55	1
Xylenes, Total	ND		0.097		mg/Kg		04/16/25 15:49	04/18/25 01:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*	*04/16/25 15:49*	*04/18/25 01:55*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		04/17/25 10:25	04/18/25 08:52	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/17/25 10:25	04/18/25 08:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*111*		*62 - 134*	*04/17/25 10:25*	*04/18/25 08:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/17/25 09:22	04/17/25 23:29	20

QC Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-23304-1

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

Lab Sample ID: MB 885-24415/1-A
Matrix: Solid
Analysis Batch: 24571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24415

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		04/16/25 15:49	04/17/25 18:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*04/16/25 15:49*	*04/17/25 18:41*	*1*

Lab Sample ID: LCS 885-24415/2-A
Matrix: Solid
Analysis Batch: 24571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24415

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	29.2		mg/Kg		117	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*222*		*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-24415/1-A
Matrix: Solid
Analysis Batch: 24572

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24415

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/16/25 15:49	04/17/25 18:41	1
Ethylbenzene	ND		0.050		mg/Kg		04/16/25 15:49	04/17/25 18:41	1
Toluene	ND		0.050		mg/Kg		04/16/25 15:49	04/17/25 18:41	1
Xylenes, Total	ND		0.10		mg/Kg		04/16/25 15:49	04/17/25 18:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*	*04/16/25 15:49*	*04/17/25 18:41*	*1*

Lab Sample ID: LCS 885-24415/3-A
Matrix: Solid
Analysis Batch: 24572

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24415

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.03		mg/Kg		103	70 - 130		
Ethylbenzene			1.00	1.01		mg/Kg		101	70 - 130		
m-Xylene & p-Xylene			2.00	2.04		mg/Kg		102	70 - 130		
o-Xylene			1.00	1.04		mg/Kg		104	70 - 130		
Toluene			1.00	1.01		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*

QC Sample Results

Client: Vertex
Project/Site: Todd 36 D State #002

Job ID: 885-23304-1

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

Lab Sample ID: MB 885-24457/1-A
Matrix: Solid
Analysis Batch: 24440

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24457

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/17/25 10:25	04/18/25 05:24	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/17/25 10:25	04/18/25 05:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*112*		*62 - 134*	*04/17/25 10:25*	*04/18/25 05:24*	*1*

Lab Sample ID: LCS 885-24457/2-A
Matrix: Solid
Analysis Batch: 24440

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24457

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	45.9		mg/Kg		92	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-24447/1-A
Matrix: Solid
Analysis Batch: 24448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24447

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		04/17/25 09:22	04/17/25 12:10	1

Lab Sample ID: LCS 885-24447/2-A
Matrix: Solid
Analysis Batch: 24448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24447

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	30.1		mg/Kg		100	90 - 110		

QC Association Summary

Client: Vertex
Job ID: 885-23304-1
Project/Site: Todd 36 D State #002

GC VOA

Prep Batch: 24415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23304-1	BS25-10 1'	Total/NA	Solid	5030C	
885-23304-2	BS25-11 1'	Total/NA	Solid	5030C	
885-23304-3	WS25-01 0-1'	Total/NA	Solid	5030C	
885-23304-4	WS25-04 0-1'	Total/NA	Solid	5030C	
885-23304-5	WS25-06 0-4'	Total/NA	Solid	5030C	
885-23304-6	WS25-07 0-4'	Total/NA	Solid	5030C	
MB 885-24415/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-24415/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-24415/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 24571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23304-1	BS25-10 1'	Total/NA	Solid	8015M/D	24415
885-23304-2	BS25-11 1'	Total/NA	Solid	8015M/D	24415
885-23304-3	WS25-01 0-1'	Total/NA	Solid	8015M/D	24415
885-23304-4	WS25-04 0-1'	Total/NA	Solid	8015M/D	24415
885-23304-5	WS25-06 0-4'	Total/NA	Solid	8015M/D	24415
885-23304-6	WS25-07 0-4'	Total/NA	Solid	8015M/D	24415
MB 885-24415/1-A	Method Blank	Total/NA	Solid	8015M/D	24415
LCS 885-24415/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24415

Analysis Batch: 24572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23304-1	BS25-10 1'	Total/NA	Solid	8021B	24415
885-23304-2	BS25-11 1'	Total/NA	Solid	8021B	24415
885-23304-3	WS25-01 0-1'	Total/NA	Solid	8021B	24415
885-23304-4	WS25-04 0-1'	Total/NA	Solid	8021B	24415
885-23304-5	WS25-06 0-4'	Total/NA	Solid	8021B	24415
885-23304-6	WS25-07 0-4'	Total/NA	Solid	8021B	24415
MB 885-24415/1-A	Method Blank	Total/NA	Solid	8021B	24415
LCS 885-24415/3-A	Lab Control Sample	Total/NA	Solid	8021B	24415

GC Semi VOA

Analysis Batch: 24440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23304-1	BS25-10 1'	Total/NA	Solid	8015M/D	24457
885-23304-2	BS25-11 1'	Total/NA	Solid	8015M/D	24457
885-23304-3	WS25-01 0-1'	Total/NA	Solid	8015M/D	24457
885-23304-4	WS25-04 0-1'	Total/NA	Solid	8015M/D	24457
885-23304-5	WS25-06 0-4'	Total/NA	Solid	8015M/D	24457
885-23304-6	WS25-07 0-4'	Total/NA	Solid	8015M/D	24457
MB 885-24457/1-A	Method Blank	Total/NA	Solid	8015M/D	24457
LCS 885-24457/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	24457

Prep Batch: 24457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23304-1	BS25-10 1'	Total/NA	Solid	SHAKE	
885-23304-2	BS25-11 1'	Total/NA	Solid	SHAKE	
885-23304-3	WS25-01 0-1'	Total/NA	Solid	SHAKE	
885-23304-4	WS25-04 0-1'	Total/NA	Solid	SHAKE	

QC Association Summary

Client: Vertex
Job ID: 885-23304-1
Project/Site: Todd 36 D State #002

GC Semi VOA (Continued)

Prep Batch: 24457 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23304-5	WS25-06 0-4'	Total/NA	Solid	SHAKE	
885-23304-6	WS25-07 0-4'	Total/NA	Solid	SHAKE	
MB 885-24457/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-24457/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

HPLC/IC

Prep Batch: 24447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23304-1	BS25-10 1'	Total/NA	Solid	300_Prep	
885-23304-2	BS25-11 1'	Total/NA	Solid	300_Prep	
885-23304-3	WS25-01 0-1'	Total/NA	Solid	300_Prep	
885-23304-4	WS25-04 0-1'	Total/NA	Solid	300_Prep	
885-23304-5	WS25-06 0-4'	Total/NA	Solid	300_Prep	
885-23304-6	WS25-07 0-4'	Total/NA	Solid	300_Prep	
MB 885-24447/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-24447/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 24448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23304-1	BS25-10 1'	Total/NA	Solid	300.0	24447
885-23304-2	BS25-11 1'	Total/NA	Solid	300.0	24447
885-23304-3	WS25-01 0-1'	Total/NA	Solid	300.0	24447
885-23304-4	WS25-04 0-1'	Total/NA	Solid	300.0	24447
885-23304-5	WS25-06 0-4'	Total/NA	Solid	300.0	24447
885-23304-6	WS25-07 0-4'	Total/NA	Solid	300.0	24447
MB 885-24447/1-A	Method Blank	Total/NA	Solid	300.0	24447
LCS 885-24447/2-A	Lab Control Sample	Total/NA	Solid	300.0	24447

Lab Chronicle

Client: Vertex
Job ID: 885-23304-1
Project/Site: Todd 36 D State #002

Client Sample ID: BS25-10 1'
Lab Sample ID: 885-23304-1
Date Collected: 04/11/25 11:05
Matrix: Solid
Date Received: 04/16/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8015M/D		1	24571	AT	EET ALB	04/17/25 23:23
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8021B		1	24572	AT	EET ALB	04/17/25 23:23
Total/NA	Prep	SHAKE			24457	MI	EET ALB	04/17/25 10:25
Total/NA	Analysis	8015M/D		1	24440	EM	EET ALB	04/18/25 07:54
Total/NA	Prep	300_Prep			24447	JT	EET ALB	04/17/25 09:22
Total/NA	Analysis	300.0		20	24448	DL	EET ALB	04/17/25 21:50

Client Sample ID: BS25-11 1'
Lab Sample ID: 885-23304-2
Date Collected: 04/11/25 11:10
Matrix: Solid
Date Received: 04/16/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8015M/D		1	24571	AT	EET ALB	04/18/25 00:28
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8021B		1	24572	AT	EET ALB	04/18/25 00:28
Total/NA	Prep	SHAKE			24457	MI	EET ALB	04/17/25 10:25
Total/NA	Analysis	8015M/D		1	24440	EM	EET ALB	04/18/25 08:06
Total/NA	Prep	300_Prep			24447	JT	EET ALB	04/17/25 09:22
Total/NA	Analysis	300.0		20	24448	DL	EET ALB	04/17/25 22:04

Client Sample ID: WS25-01 0-1'
Lab Sample ID: 885-23304-3
Date Collected: 04/11/25 11:20
Matrix: Solid
Date Received: 04/16/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8015M/D		1	24571	AT	EET ALB	04/18/25 00:50
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8021B		1	24572	AT	EET ALB	04/18/25 00:50
Total/NA	Prep	SHAKE			24457	MI	EET ALB	04/17/25 10:25
Total/NA	Analysis	8015M/D		1	24440	EM	EET ALB	04/18/25 08:17
Total/NA	Prep	300_Prep			24447	JT	EET ALB	04/17/25 09:22
Total/NA	Analysis	300.0		20	24448	DL	EET ALB	04/17/25 22:47

Client Sample ID: WS25-04 0-1'
Lab Sample ID: 885-23304-4
Date Collected: 04/11/25 11:35
Matrix: Solid
Date Received: 04/16/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8015M/D		1	24571	AT	EET ALB	04/18/25 01:12

Lab Chronicle

Client: Vertex
Job ID: 885-23304-1
Project/Site: Todd 36 D State #002

Client Sample ID: WS25-04 0-1'
Lab Sample ID: 885-23304-4
Date Collected: 04/11/25 11:35
Matrix: Solid
Date Received: 04/16/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8021B		1	24572	AT	EET ALB	04/18/25 01:12
Total/NA	Prep	SHAKE			24457	MI	EET ALB	04/17/25 10:25
Total/NA	Analysis	8015M/D		1	24440	EM	EET ALB	04/18/25 08:29
Total/NA	Prep	300_Prep			24447	JT	EET ALB	04/17/25 09:22
Total/NA	Analysis	300.0		20	24448	DL	EET ALB	04/17/25 23:01

Client Sample ID: WS25-06 0-4'
Lab Sample ID: 885-23304-5
Date Collected: 04/11/25 13:00
Matrix: Solid
Date Received: 04/16/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8015M/D		1	24571	AT	EET ALB	04/18/25 01:33
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8021B		1	24572	AT	EET ALB	04/18/25 01:33
Total/NA	Prep	SHAKE			24457	MI	EET ALB	04/17/25 10:25
Total/NA	Analysis	8015M/D		1	24440	EM	EET ALB	04/18/25 08:41
Total/NA	Prep	300_Prep			24447	JT	EET ALB	04/17/25 09:22
Total/NA	Analysis	300.0		20	24448	DL	EET ALB	04/17/25 23:15

Client Sample ID: WS25-07 0-4'
Lab Sample ID: 885-23304-6
Date Collected: 04/11/25 13:05
Matrix: Solid
Date Received: 04/16/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8015M/D		1	24571	AT	EET ALB	04/18/25 01:55
Total/NA	Prep	5030C			24415	JP	EET ALB	04/16/25 15:49
Total/NA	Analysis	8021B		1	24572	AT	EET ALB	04/18/25 01:55
Total/NA	Prep	SHAKE			24457	MI	EET ALB	04/17/25 10:25
Total/NA	Analysis	8015M/D		1	24440	EM	EET ALB	04/18/25 08:52
Total/NA	Prep	300_Prep			24447	JT	EET ALB	04/17/25 09:22
Total/NA	Analysis	300.0		20	24448	DL	EET ALB	04/17/25 23:29

Laboratory References:

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

Accreditation/Certification Summary

Client: Vertex Job ID: 885-23304-1
Project/Site: Todd 36 D State #002

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 1006092001)

Mailing Address:

Phone #:

email or Fax#:

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

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

Turn-Around Time: X 72-hour Rush

Project Name: **Todd 36 D State #002**

Project #: **23E-05197**

Project Manager: Kent Stallings
kstallings@vertexresource.com

Sampler: L. Pullman

On Ice: ☒ Yes ☐ No mg.

# of Coolers: 1

Cooler Temp (including CF): 4.4 +0.2 = 4.6 °C

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

885-23304 COC

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
04.11.25	11:05	Soil	BS25-10 1'	1, 4oz jar			X	X					X			
04.11.25	11:10	Soil	BS25-11 1'	1, 4oz jar			X	X					X			
04.11.25	11:20	Soil	WS25-01 0-1'	1, 4oz jar			X	X					X			
04.11.25	11:35	Soil	WS25-04 0-1'	1, 4oz jar			X	X					X			
04.11.25	13:00	Soil	WS25-06 0-4'	1, 4oz jar			X	X					X			
04.11.25	13:05	Soil	WS25-07 0-4'	1, 4oz jar			X	X					X			

Date	Time	Relinquished by	Received by	Via	Date	Time
4-14-25	07:00	Jake Pullman				
4/15/25	1900				4/15/25	710
				courier	4/16/25	7:55

Remarks: ATTN Jim Raley
Direct bill to Devon work order 1006092001 Jim Raley
cc. permain@vertexresource.com, SCarttar@vertexresource.com, kstallings@vertexresource.com, SMcCarty@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: 885-23304-1

Login Number: 23304 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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QUESTIONS

Action 456341

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 456341
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1815052591**
Incident Name	**NAB1815052591 TODD 36 D STATE #002 @ 30-015-27365**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-015-27365] TODD 36 D STATE #002**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	TODD 36 D STATE #002
Date Release Discovered	05/10/2018
Surface Owner	Federal

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	Cause: Equipment Failure | Separator | Crude Oil | Released: 1 BBL | Recovered: 0 BBL | Lost: 1 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Separator | Produced Water | Released: 8 BBL | Recovered: 7 BBL | Lost: 1 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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QUESTIONS (continued)

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QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 04/28/2025

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 456341
	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	Greater than 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 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	2400
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	43000
GRO+DRO (EPA SW-846 Method 8015M)	26000
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	03/24/2025
On what date will (or did) the final sampling or liner inspection occur	06/24/2025
On what date will (or was) the remediation complete(d)	06/24/2025
What is the estimated surface area (in square feet) that will be reclaimed	431
What is the estimated volume (in cubic yards) that will be reclaimed	28
What is the estimated surface area (in square feet) that will be remediated	1900
What is the estimated volume (in cubic yards) that will be remediated	90
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	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
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 01/27/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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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 (continued)

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QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**450285**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**04/11/2025**
What was the (estimated) number of samples that were to be gathered	**16**
What was the sampling surface area in square feet	**1500**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	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	981
What was the total volume (cubic yards) remediated	1578
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	598
What was the total volume (in cubic yards) reclaimed	45
Summarize any additional remediation activities not included by answers (above)	Material on pad within closure criteria was not remediated.

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 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: 04/28/2025

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QUESTIONS (continued)

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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 456341

CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	The remediation closure is approved. Reclamation for all areas off pad, and in pasture, must be completed to reclamation, which includes the polygon area with sample points: WS25-05, BS25-08, BS25-07, BS25-06, WS25-07 and WS25-06. Please submit a reclamation report for that area in 30 days from receipt of this approval.	6/26/2025
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.	6/26/2025
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.	6/26/2025
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.	6/26/2025
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.	6/26/2025
michael.buchanan	Please utilize the alternative report form to submit the reclamation & revegetation reports for the pasture portion of the incident.	6/26/2025