Received by OCD: 3/13/2025 2:15:08 PM

General Information

NMOCD District:	District 1	Incident ID:	nRM1933052987
Landowner:	New Mexico State Land Office	Facility:	fAPP2130647365
Client:	Devon Energy Production Company, LP	Site Location:	Thistle Unit 10 CTB
Date:	March 12, 2025	Project #:	23E-04784
Client Contact:	Jim Raley	Phone #:	575.689.7597
Vertex PM:	Kent Stallings	Phone #:	346.814.1413

Objective

The objective of the environmental remediation work plan is to identify exceedances found during the site assessment/characterization activity and propose an appropriate remediation technique to address the release at Thistle Unit 10 CTB. The release occurred when the water tanks were struck by lighting causing 407 barrels (bbl) of produced water to be released into the containment. Areas of environmental concern identified and delineated include the containment area and the pad northwest of the containment, as shown on Figure 1 (Attachment 1). Closure criteria have been selected as per New Mexico Administrative Code 19.15.29. The closure criteria for the site are presented below.

Table 1. 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 = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)
BTEX – Benzene, toluene, ethylbenzene, and xylenes

Site Assessment/Characterization

Site characterization was started on October 19, 2023, and completed on November 8, 2023. Forty-five sample points (boreholes) were established, and 96 samples collected for field screening. Samples were obtained at various depths for horizontal and vertical delineation, and samples at the greatest lateral limits and the deepest vertical distance below criteria were submitted to the laboratory for analysis. Characterization was executed with hand tools, and samples were not collected below 3 feet bgs due to caliche refusal. In total, 96 samples were submitted to Eurofins Environmental Testing in Albuquerque, New Mexico, for analysis. The sample locations are presented on Figure 1 (Attachment 1). Laboratory analysis results have been compared to the above noted closure criteria and the results from the characterization activity are presented in Table 2 (Attachment 2); exceedances to criteria are identified in the table as bold with a grey background. Laboratory data reports are included in Attachment 3. Daily Field Reports are in included Attachment 4. All applicable research as it pertains to closure criteria selection is presented in Attachment 5.

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Proposed Remedial Activities

General

Areas identified with contaminant concentrations above closure criteria will be remediated through excavation. Laboratory results from the site assessment/characterization have been referenced to estimate both the vertical and horizontal limits of the impacts and the volume of soil to be removed. Soil will be excavated to the extents of the known contamination or in 1-foot increments, whichever is less. Field screening will be utilized to confirm removal of impacted soil below the applicable closure criteria. Impacted soils will be stored on a 30mil liner prior to disposal at an approved facility. Once excavation is complete, confirmatory samples will be collected and laboratory analysis completed to confirm closure criteria guidelines are met. Excavations will be backfilled with clean soil sourced locally.

nRM1933052987 (August 30, 2019) - Release on Pad Northwest of Tank Battery and Containment

Field screening and laboratory analysis were utilized to find the horizontal and vertical extents of the release area. A total of 96 samples were collected for laboratory analysis on the immediate pad area around the tank battery. The sample locations are presented on Figure 1 (Attachment 2). Vertical delineation will be completed using heavy equipment at the time of remediation. Exceedances to closure criteria identified around sample point BH23-34 will be remediated to closure criteria via excavation. Heavy equipment will be used to excavate open areas on the pad to remove impacted soil. A hydrovac truck may be utilized to identify utility and buried pipelines where necessary, and hand tools will be utilized to remove impacted soil in close proximity to buried utilities and pipelines. Field screening will be utilized to find the horizontal and vertical extents of the release area. Confirmatory samples will be collected as per New Mexico Oil Conservation Division guidance and submitted for laboratory analysis of all applicable parameters. The area of impact is approximately 11,204 square feet as presented on Figure 1 (Attachment 1). Excavation is planned to be completed within 90 days of approval of this Environmental Site Remediation Work Plan. The estimated volume to be excavated with the current closure criteria is approximately **16 cubic yards**.

Sample Point	Excavation Depth	Remediation Method
BH23-34	1'	Excavator

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

John Rewis

John Rewis, B. Sc.
ENVIRONMENTAL TECHNICIAN, REPORTING

March 12, 2025
Date

Kent Stallings

Kent Stallings, P.G.
SENIOR GEOLOGIST, REPORT REVIEW

March 13, 2025
Date

Received by OCD: 3/13/2025 2:15:08 PM

Attachments

Attachment 1. Characterization Sampling Site Schematic
Attachment 2. Tables
Attachment 3. Laboratory Data Reports and Chain of Custody Forms
Attachment 4. Daily Field Reports with Photographs
Attachment 5. Closure Criteria Research

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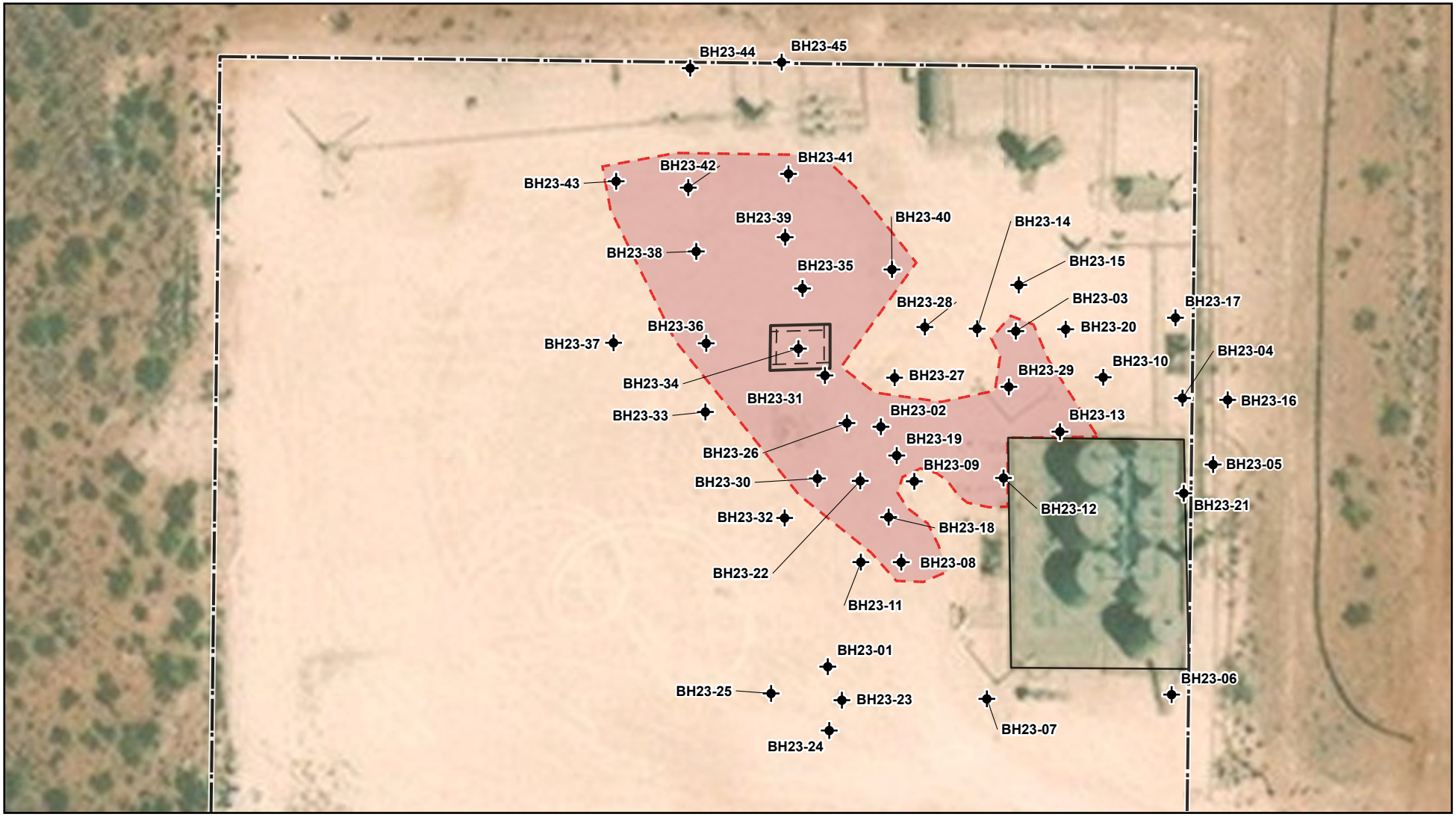
ATTACHMENT 1



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

VERTEX

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

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

N

Characterization Sampling and Proposed Excavation Site Schematic Thistle Unit 10 Battery

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

VERSATILITY. EXPERTISE.

Document Path: S:\04 - Geomatics\1-Projects\ US PROJECTS\Devon Energy Corporation\2023\23E-04784 - Thistle Unit 10 Battery\23E-04784 - Thistle Unit 10 Battery

ATTACHMENT 2

Client Name: Devon Energy Production Company, LP
Site Name: Thistle Unit 10 CTB
NMOCD Tracking #: nRM1933052987
Project #: 23E-04784
Lab ReportS: 2310A65, 2310B06, 2311452, and 2311556

Table 2. Characterization Field Screen and 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	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	74
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-02	0	October 19, 2023	ND	ND	ND	12	ND	12	12	740
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	450
BH23-03	0	October 19, 2023	ND	ND	ND	20	ND	20	20	1600
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	790
BH23-04	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-05	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	84
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	99
BH23-06	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	120
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-07	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	190
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-08	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	1100
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	220
BH23-09	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	170
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	150
BH23-10	0	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	64
	2	October 19, 2023	ND	ND	ND	ND	ND	ND	ND	130
BH23-11	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	390
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	330
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	340
BH23-12	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	1400
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	510
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	950
BH23-13	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	6900
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	890
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	2300
BH23-14	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	310
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	390
BH23-15	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	69
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	81
BH23-16	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	76
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-17	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	170
BH23-18	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	1500
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	510

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Client Name: Devon Energy Production Company, LP
Site Name: Thistle Unit 10 CTB
NMOCD Tracking #: nRM1933052987
Project #: 23E-04784
Lab ReportS: 2310A65, 2310B06, 2311452, and 2311556

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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)
BH23-19	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	820
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	200
BH23-20	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	97
	1	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-21	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	100
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	74
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	150
BH23-22	0	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	550
	2	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	970
	3	October 20, 2023	ND	ND	ND	ND	ND	ND	ND	190
BH23-23	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	100
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	4	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	360
BH23-24	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	94
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-25	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	120
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	75
BH23-26	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	1300
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	520
BH23-27	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	170
BH23-28	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	340
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	150
BH23-29	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	1300
	1	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	870
BH23-30	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	1800
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	200
BH23-31	0	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	1300
	2	November 7, 2023	ND	ND	ND	ND	ND	ND	ND	660
BH23-32	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	80
BH23-33	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	190
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	300
BH23-34	0	November 8, 2023	ND	ND	ND	1800	1600	**1800**	**3400**	4100
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	300
	3	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1400
BH23-35	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	880
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1500
BH23-36	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1600
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1800

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Client Name: Devon Energy Production Company, LP
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NMOCD Tracking #: nRM1933052987
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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)
BH23-37	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	130
BH23-38	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	560
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1100
BH23-39	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	430
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	1000
BH23-40	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	710
BH23-41	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	2000
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	2400
BH23-42	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	3100
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	2400
BH23-43	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	900
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	750
BH23-44	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	150
BH23-45	0	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 8, 2023	ND	ND	ND	ND	ND	ND	ND	ND

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

VERTEX

ATTACHMENT 3

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

November 02, 2023

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

RE: Thistle Unit 10 Battery OrderNo.: 2310A65

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 20 sample(s) on 10/21/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-001 **Matrix:** SOIL

Client Sample ID: BH23-01 0'
Collection Date: 10/19/2023 9:35:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-002 **Matrix:** SOIL

Client Sample ID: BH23-01 2'
Collection Date: 10/19/2023 9:40:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-003 **Matrix:** SOIL

Client Sample ID: BH23-02 0'
Collection Date: 10/19/2023 9:45:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-004 **Matrix:** SOIL

Client Sample ID: BH23-02 2'
Collection Date: 10/19/2023 9:50:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-005 **Matrix:** SOIL

Client Sample ID: BH23-03 0'
Collection Date: 10/19/2023 9:55:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-006 **Matrix:** SOIL

Client Sample ID: BH23-03 2'
Collection Date: 10/19/2023 10:00:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-007 **Matrix:** SOIL

Client Sample ID: BH23-04 0'
Collection Date: 10/19/2023 10:05:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-008 **Matrix:** SOIL

Client Sample ID: BH23-04 2'
Collection Date: 10/19/2023 10:10:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310A65**
Date Reported: **11/2/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-009 **Matrix:** SOIL

Client Sample ID: BH23-05 0'
Collection Date: 10/19/2023 10:15:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-010 **Matrix:** SOIL

Client Sample ID: BH23-05 2'
Collection Date: 10/19/2023 10:20:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-011 **Matrix:** SOIL

Client Sample ID: BH23-06 0'
Collection Date: 10/19/2023 10:25:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-012 **Matrix:** SOIL

Client Sample ID: BH23-06 2'
Collection Date: 10/19/2023 10:30:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310A65**
Date Reported: **11/2/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-013 **Matrix:** SOIL

Client Sample ID: BH23-07 0'
Collection Date: 10/19/2023 10:35:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-014 **Matrix:** SOIL

Client Sample ID: BH23-07 2'
Collection Date: 10/19/2023 10:40:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-015 **Matrix:** SOIL

Client Sample ID: BH23-08 0'
Collection Date: 10/19/2023 10:45:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-016 **Matrix:** SOIL

Client Sample ID: BH23-08 2'
Collection Date: 10/19/2023 10:50:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-017 **Matrix:** SOIL

Client Sample ID: BH23-09 0'
Collection Date: 10/19/2023 10:55:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-018 **Matrix:** SOIL

Client Sample ID: BH23-09 2'
Collection Date: 10/19/2023 11:00:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2310A65**
Date Reported: **11/2/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-019 **Matrix:** SOIL

Client Sample ID: BH23-10 0'
Collection Date: 10/19/2023 11:05:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310A65**
Date Reported: **11/2/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310A65-020 **Matrix:** SOIL

Client Sample ID: BH23-10 2'
Collection Date: 10/19/2023 11:10:00 AM
Received Date: 10/21/2023 8:00:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2310A65**
02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **MB-78374** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **78374** RunNo: **100717**
Prep Date: **10/25/2023** Analysis Date: **10/25/2023** SeqNo: **3695042** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78374** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **78374** RunNo: **100717**
Prep Date: **10/25/2023** Analysis Date: **10/25/2023** SeqNo: **3695043** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2310A65**
02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **2310A65-007AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-04 0'** Batch ID: **78319** RunNo: **100704**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693042** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.5	47.35	0	86.3	54.2	135			
Surr: DNOP	4.8		4.735		101	69	147			

Sample ID: **2310A65-007AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-04 0'** Batch ID: **78319** RunNo: **100704**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693043** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.1	45.70	0	105	54.2	135	15.9	29.2	
Surr: DNOP	5.9		4.570		129	69	147	0	0	

Sample ID: **LCS-78318** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78318** RunNo: **100704**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693070** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	61.9	130			
Surr: DNOP	4.8		5.000		95.8	69	147			

Sample ID: **LCS-78319** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78319** RunNo: **100704**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693071** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	105	61.9	130			
Surr: DNOP	5.4		5.000		107	69	147			

Sample ID: **MB-78318** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78318** RunNo: **100704**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693072** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		89.4	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2310A65**
02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **MB-78319** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78319** RunNo: **100704**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693073** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		133	69	147			

Sample ID: **LCS-78400** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78400** RunNo: **100779**
Prep Date: **10/26/2023** Analysis Date: **10/27/2023** SeqNo: **3697663** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.3		5.000		146	69	147			

Sample ID: **MB-78400** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78400** RunNo: **100779**
Prep Date: **10/26/2023** Analysis Date: **10/27/2023** SeqNo: **3697665** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		120	69	147			

Sample ID: **MB-78394** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78394** RunNo: **100812**
Prep Date: **10/26/2023** Analysis Date: **10/30/2023** SeqNo: **3698206** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		108	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2310A65**
02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **lcs-78308** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78308** RunNo: **100705**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3692721** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	70	130			
Surr: BFB	2200		1000		223	15	244			

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	15	244			

Sample ID: **lcs-78310** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78310** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693006** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.6	70	130			
Surr: BFB	2000		1000		199	15	244			

Sample ID: **lcs-78320** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78320** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693007** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		199	15	244			

Sample ID: **mb-78310** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **78310** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693008** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.1	15	244			

Sample ID: **mb-78320** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **78320** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693009** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.1	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2310A65**
02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **2310a65-007ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-04 0'** Batch ID: **78310** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693081** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.9	24.70	0	104	70	130			
Surr: BFB	2100		988.1		212	15	244			

Sample ID: **2310a65-007amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-04 0'** Batch ID: **78310** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693082** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.61	0	95.1	70	130	8.97	20	
Surr: BFB	2000		984.3		203	15	244	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2310A65**
02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **LCS-78310** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78310** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693018** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	100	70	130			
Toluene	1.0	0.050	1.000	0	100	70	130			
Ethylbenzene	1.0	0.050	1.000	0	100	70	130			
Xylenes, Total	3.0	0.10	3.000	0	101	70	130			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	39.1	146			

Sample ID: **LCS-78320** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78320** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693019** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	39.1	146			

Sample ID: **mb-78310** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78310** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693020** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	39.1	146			

Sample ID: **mb-78320** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78320** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693021** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	39.1	146			

Sample ID: **2310a65-008ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-04 2'** Batch ID: **78310** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693114** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9990	0	112	70	130			
Toluene	1.1	0.050	0.9990	0	112	70	130			
Ethylbenzene	1.1	0.050	0.9990	0	113	70	130			
Xylenes, Total	3.4	0.10	2.997	0	113	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2310A65**
02-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **2310a65-008ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-04 2'** Batch ID: **78310** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693114** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		0.9990		109	39.1	146			

Sample ID: **2310a65-008amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-04 2'** Batch ID: **78310** RunNo: **100707**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693115** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9950	0	107	70	130	4.68	20	
Toluene	1.1	0.050	0.9950	0	109	70	130	3.06	20	
Ethylbenzene	1.1	0.050	0.9950	0	109	70	130	4.32	20	
Xylenes, Total	3.3	0.10	2.985	0	110	70	130	3.52	20	
Surr: 4-Bromofluorobenzene	1.0		0.9950		103	39.1	146	0	0	

Sample ID: **lcs-78308** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78308** RunNo: **100705**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693265** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.4	70	130			
Toluene	0.88	0.050	1.000	0	87.6	70	130			
Ethylbenzene	0.88	0.050	1.000	0	88.1	70	130			
Xylenes, Total	2.7	0.10	3.000	0	88.7	70	130			
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	39.1	146			

Sample ID: **mb-78308** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78308** RunNo: **100705**
Prep Date: **10/23/2023** Analysis Date: **10/24/2023** SeqNo: **3693266** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.3	39.1	146			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2310A65 RcptNo: 1

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

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

Reviewed By: TM 10/23/23

Chain of Custody

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

Log In

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

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

Adjusted?

Checked by: TMC 10/21/23

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

16. Additional remarks:

17. Cooler Information

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

Received by OCD: 3/13/2025 2:15:08 PM

Released to Imaging: 3/20/2025 3:49:19 PM

Chain-of-Custody Record

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

Client: Devon

Mailing Address: On file

Phone #:

email or Fax#:

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

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

Turn-Around Time:
■ Standard ☒ Rush 5 Day

Project Name: Thistle Unit 10 Battery

Project #: 23E-04784

Project Manager: Kent Stallings

Sampler: Bryce Mortimer

On Ice: ☑ Yes ☐ No 4009

# of Coolers: 1

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2310A65	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)
10.19.23	9:35	Soil	BH23-01 0'	4oz jar	Ice	001										
	9:40		BH23-01 2'			002										
	9:45		BH23-02 0'			003										
	9:50		BH23-02 2'			004										
	9:55		BH23-03 0'			005										
	10:00		BH23-03 2'			006										
	10:05		BH23-04 0'			007										
	10:10		BH23-04 2'			008										
	10:15		BH23-05 0'			009										
	10:20		BH23-05 2'			010										
	10:25		BH23-06 0'			011										
	10:30		BH23-06 2'			012										

Date	Time	Relinquished by	Received by	Via	Date	Time
10.19.23		BM			10/20/23	930
10/20/23	1900			courier	10/21/23	8:00

Remarks: WO: 21206611

Please cc Bryce Mortimer at BMortimer@vertex.c

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: Devon

Mailing Address: On File

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5 Day

Project Name: Thistle Unit 10 Battery

Project #: 23E-04784

Project Manager: Kent Stallings

Sampler: Bryce Mortimer

On Ice: ☒ Yes ☐ No yogi

# of Coolers: 1

Cooler Temp (Including CF): 2.4-0=2.4 (°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. 2310A65	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)
10.19.23	10:35	Soil	BH23-07 0'	4oz jar	Ice	013	✓	✓					✓			
	10:40		BH23-07 2'			014										
	10:45		BH23-08 0'			015										
	10:50		BH23-08 2'			016										
	10:55		BH23-09 0'			017										
	~~10~~ 11:00		BH23-09 2'			018										
	11:05		BH23-10 0'			019										
	11:10		BH23-10 2'			020										
		TM 10/21/23														

Date	Time	Relinquished by	Received by	Via	Date	Time
10.19.23		BM	[illegible]		10/20/23	900
10/20/23	1900	[illegible]	[illegible]	courier	10/21/23	8:00

Remarks: WO: 21206611

Please cc Bryce Mortimer at BMortimer@vertex.c

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

November 03, 2023

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

RE: Thistle Unit 10 Battery OrderNo.: 2310B06

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 28 sample(s) on 10/24/2023 for the analyses presented in the following report.

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

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-001 **Matrix:** SOIL

Client Sample ID: BH23-11 0'
Collection Date: 10/20/2023 9:00:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	10/25/2023 11:02:25 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2023 11:02:25 AM
Surr: DNOP	89.4	69-147		%Rec	1	10/25/2023 11:02:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2023 11:27:00 AM
Surr: BFB	106	15-244		%Rec	1	10/25/2023 11:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/25/2023 11:27:00 AM
Toluene	ND	0.047		mg/Kg	1	10/25/2023 11:27:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/25/2023 11:27:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/25/2023 11:27:00 AM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	10/25/2023 11:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	390	60		mg/Kg	20	10/28/2023 1:13:51 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-002 **Matrix:** SOIL

Client Sample ID: BH23-11 2'
Collection Date: 10/20/2023 9:10:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/25/2023 11:48:20 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2023 11:48:20 AM
Surr: DNOP	118	69-147		%Rec	1	10/25/2023 11:48:20 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2023 11:49:00 AM
Surr: BFB	107	15-244		%Rec	1	10/25/2023 11:49:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	10/25/2023 11:49:00 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2023 11:49:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2023 11:49:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2023 11:49:00 AM
Surr: 4-Bromofluorobenzene	91.0	39.1-146		%Rec	1	10/25/2023 11:49:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	330	60		mg/Kg	20	10/28/2023 1:51:05 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-003 **Matrix:** SOIL

Client Sample ID: BH23-11 3'
Collection Date: 10/20/2023 9:20:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/25/2023 11:59:00 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 11:59:00 AM
Surr: DNOP	122	69-147		%Rec	1	10/25/2023 11:59:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 12:11:00 PM
Surr: BFB	99.7	15-244		%Rec	1	10/25/2023 12:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/25/2023 12:11:00 PM
Toluene	ND	0.048		mg/Kg	1	10/25/2023 12:11:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2023 12:11:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2023 12:11:00 PM
Surr: 4-Bromofluorobenzene	87.3	39.1-146		%Rec	1	10/25/2023 12:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	340	60		mg/Kg	20	10/28/2023 2:28:18 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-004 **Matrix:** SOIL

Client Sample ID: BH23-12 0'
Collection Date: 10/20/2023 9:30:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/25/2023 12:09:42 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2023 12:09:42 PM
Surr: DNOP	109	69-147		%Rec	1	10/25/2023 12:09:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2023 12:32:00 PM
Surr: BFB	98.2	15-244		%Rec	1	10/25/2023 12:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/25/2023 12:32:00 PM
Toluene	ND	0.049		mg/Kg	1	10/25/2023 12:32:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2023 12:32:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2023 12:32:00 PM
Surr: 4-Bromofluorobenzene	87.2	39.1-146		%Rec	1	10/25/2023 12:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1400	60		mg/Kg	20	10/28/2023 3:05:31 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-005 **Matrix:** SOIL

Client Sample ID: BH23-12 2'
Collection Date: 10/20/2023 9:40:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	10/25/2023 12:31:09 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2023 12:31:09 PM
Surr: DNOP	105	69-147		%Rec	1	10/25/2023 12:31:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2023 12:54:00 PM
Surr: BFB	103	15-244		%Rec	1	10/25/2023 12:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/25/2023 12:54:00 PM
Toluene	ND	0.049		mg/Kg	1	10/25/2023 12:54:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2023 12:54:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2023 12:54:00 PM
Surr: 4-Bromofluorobenzene	88.5	39.1-146		%Rec	1	10/25/2023 12:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	510	60		mg/Kg	20	10/28/2023 3:17:56 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-006 **Matrix:** SOIL

Client Sample ID: BH23-12 3'
Collection Date: 10/20/2023 9:50:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/25/2023 12:41:52 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2023 12:41:52 PM
Surr: DNOP	108	69-147		%Rec	1	10/25/2023 12:41:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 1:16:00 PM
Surr: BFB	101	15-244		%Rec	1	10/25/2023 1:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/25/2023 1:16:00 PM
Toluene	ND	0.048		mg/Kg	1	10/25/2023 1:16:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2023 1:16:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2023 1:16:00 PM
Surr: 4-Bromofluorobenzene	88.9	39.1-146		%Rec	1	10/25/2023 1:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	950	60		mg/Kg	20	10/28/2023 3:30:21 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-007 **Matrix:** SOIL

Client Sample ID: BH23-13 0'
Collection Date: 10/20/2023 10:00:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/25/2023 12:52:37 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 12:52:37 PM
Surr: DNOP	118	69-147		%Rec	1	10/25/2023 12:52:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2023 1:37:00 PM
Surr: BFB	103	15-244		%Rec	1	10/25/2023 1:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/25/2023 1:37:00 PM
Toluene	ND	0.047		mg/Kg	1	10/25/2023 1:37:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/25/2023 1:37:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/25/2023 1:37:00 PM
Surr: 4-Bromofluorobenzene	89.2	39.1-146		%Rec	1	10/25/2023 1:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	6900	300		mg/Kg	100	10/31/2023 12:10:56 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-008 **Matrix:** SOIL

Client Sample ID: BH23-13 2'
Collection Date: 10/20/2023 10:10:00 AM
Received Date: 10/24/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-009 **Matrix:** SOIL

Client Sample ID: BH23-13 3'
Collection Date: 10/20/2023 10:20:00 AM
Received Date: 10/24/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-010 **Matrix:** SOIL

Client Sample ID: BH23-14 0'
Collection Date: 10/20/2023 10:30:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	10/25/2023 1:35:40 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	10/25/2023 1:35:40 PM
Surr: DNOP	86.0	69-147		%Rec	1	10/25/2023 1:35:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2023 2:43:00 PM
Surr: BFB	102	15-244		%Rec	1	10/25/2023 2:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	10/25/2023 2:43:00 PM
Toluene	ND	0.050		mg/Kg	1	10/25/2023 2:43:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2023 2:43:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/25/2023 2:43:00 PM
Surr: 4-Bromofluorobenzene	86.7	39.1-146		%Rec	1	10/25/2023 2:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	310	60		mg/Kg	20	10/28/2023 4:20:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-011 **Matrix:** SOIL

Client Sample ID: BH23-14 2'
Collection Date: 10/20/2023 10:40:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/25/2023 1:46:29 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 1:46:29 PM
Surr: DNOP	111	69-147		%Rec	1	10/25/2023 1:46:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 3:26:00 PM
Surr: BFB	106	15-244		%Rec	1	10/25/2023 3:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/26/2023 5:01:00 PM
Toluene	ND	0.048		mg/Kg	1	10/26/2023 5:01:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/26/2023 5:01:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/26/2023 5:01:00 PM
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	10/26/2023 5:01:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	390	60		mg/Kg	20	10/28/2023 4:32:25 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-012 **Matrix:** SOIL

Client Sample ID: BH23-15 0'
Collection Date: 10/20/2023 10:50:00 AM
Received Date: 10/24/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Client Sample ID: BH23-15 2'
Project: Thistle Unit 10 Battery
Collection Date: 10/20/2023 11:00:00 AM
Lab ID: 2310B06-013 **Matrix:** SOIL
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/25/2023 2:08:17 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/25/2023 2:08:17 PM
Surr: DNOP	113	69-147		%Rec	1	10/25/2023 2:08:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2023 4:10:00 PM
Surr: BFB	102	15-244		%Rec	1	10/25/2023 4:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/26/2023 5:44:00 PM
Toluene	ND	0.049		mg/Kg	1	10/26/2023 5:44:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/26/2023 5:44:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/26/2023 5:44:00 PM
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	10/26/2023 5:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	81	60		mg/Kg	20	10/28/2023 11:03:44 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-014 **Matrix:** SOIL

Client Sample ID: BH23-16 0'
Collection Date: 10/20/2023 11:10:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/25/2023 2:19:16 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 2:19:16 PM
Surr: DNOP	83.7	69-147		%Rec	1	10/25/2023 2:19:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/25/2023 4:31:00 PM
Surr: BFB	104	15-244		%Rec	1	10/25/2023 4:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	10/26/2023 6:06:00 PM
Toluene	ND	0.047		mg/Kg	1	10/26/2023 6:06:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/26/2023 6:06:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/26/2023 6:06:00 PM
Surr: 4-Bromofluorobenzene	88.5	39.1-146		%Rec	1	10/26/2023 6:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	76	60		mg/Kg	20	10/28/2023 11:16:09 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Client Sample ID: BH23-16 2'
Project: Thistle Unit 10 Battery
Collection Date: 10/20/2023 11:20:00 AM
Lab ID: 2310B06-015 **Matrix:** SOIL
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/25/2023 2:30:11 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 2:30:11 PM
Surr: DNOP	101	69-147		%Rec	1	10/25/2023 2:30:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/25/2023 4:53:00 PM
Surr: BFB	99.7	15-244		%Rec	1	10/25/2023 4:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	10/26/2023 6:27:00 PM
Toluene	ND	0.046		mg/Kg	1	10/26/2023 6:27:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/26/2023 6:27:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/26/2023 6:27:00 PM
Surr: 4-Bromofluorobenzene	87.0	39.1-146		%Rec	1	10/26/2023 6:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	10/28/2023 11:28:33 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-016 **Matrix:** SOIL

Client Sample ID: BH23-17 0'
Collection Date: 10/20/2023 11:30:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/25/2023 2:41:05 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2023 2:41:05 PM
Surr: DNOP	103	69-147		%Rec	1	10/25/2023 2:41:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2023 5:15:00 PM
Surr: BFB	99.8	15-244		%Rec	1	10/25/2023 5:15:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/26/2023 6:49:00 PM
Toluene	ND	0.048		mg/Kg	1	10/26/2023 6:49:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/26/2023 6:49:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/26/2023 6:49:00 PM
Surr: 4-Bromofluorobenzene	90.2	39.1-146		%Rec	1	10/26/2023 6:49:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	170	60		mg/Kg	20	10/28/2023 11:40:57 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-017 **Matrix:** SOIL

Client Sample ID: BH23-18 0'
Collection Date: 10/20/2023 11:40:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/25/2023 5:58:06 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2023 5:58:06 PM
Surr: DNOP	104	69-147		%Rec	1	10/25/2023 5:58:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/26/2023 3:45:00 AM
Surr: BFB	103	15-244		%Rec	1	10/26/2023 3:45:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/26/2023 11:10:00 PM
Toluene	ND	0.048		mg/Kg	1	10/26/2023 11:10:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/26/2023 11:10:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/26/2023 11:10:00 PM
Surr: 4-Bromofluorobenzene	88.7	39.1-146		%Rec	1	10/26/2023 11:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1500	61		mg/Kg	20	10/28/2023 11:53:22 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-018 **Matrix:** SOIL

Client Sample ID: BH23-18 2'
Collection Date: 10/20/2023 11:50:00 AM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/25/2023 6:21:51 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 6:21:51 PM
Surr: DNOP	102	69-147		%Rec	1	10/25/2023 6:21:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/26/2023 4:06:00 AM
Surr: BFB	106	15-244		%Rec	1	10/26/2023 4:06:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/26/2023 11:32:00 PM
Toluene	ND	0.048		mg/Kg	1	10/26/2023 11:32:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/26/2023 11:32:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/26/2023 11:32:00 PM
Surr: 4-Bromofluorobenzene	90.9	39.1-146		%Rec	1	10/26/2023 11:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	510	61		mg/Kg	20	10/28/2023 12:05:46 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-019 **Matrix:** SOIL

Client Sample ID: BH23-19 0'
Collection Date: 10/20/2023 12:00:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/25/2023 6:45:36 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2023 6:45:36 PM
Surr: DNOP	102	69-147		%Rec	1	10/25/2023 6:45:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/26/2023 4:28:00 AM
Surr: BFB	101	15-244		%Rec	1	10/26/2023 4:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/26/2023 11:53:00 PM
Toluene	ND	0.049		mg/Kg	1	10/26/2023 11:53:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/26/2023 11:53:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/26/2023 11:53:00 PM
Surr: 4-Bromofluorobenzene	89.7	39.1-146		%Rec	1	10/26/2023 11:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	820	60		mg/Kg	20	10/28/2023 12:42:59 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-020 **Matrix:** SOIL

Client Sample ID: BH23-19 2'
Collection Date: 10/20/2023 12:10:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/25/2023 7:09:26 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2023 7:09:26 PM
Surr: DNOP	105	69-147		%Rec	1	10/25/2023 7:09:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/26/2023 4:50:00 AM
Surr: BFB	104	15-244		%Rec	1	10/26/2023 4:50:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/27/2023 12:15:00 AM
Toluene	ND	0.048		mg/Kg	1	10/27/2023 12:15:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/27/2023 12:15:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	10/27/2023 12:15:00 AM
Surr: 4-Bromofluorobenzene	91.4	39.1-146		%Rec	1	10/27/2023 12:15:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	200	59		mg/Kg	20	10/28/2023 12:55:24 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-021 **Matrix:** SOIL

Client Sample ID: BH23-20 0'
Collection Date: 10/20/2023 12:20:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/27/2023 11:34:42 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/27/2023 11:34:42 AM
Surr: DNOP	96.9	69-147		%Rec	1	10/27/2023 11:34:42 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/27/2023 12:50:00 PM
Surr: BFB	102	15-244		%Rec	1	10/27/2023 12:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/27/2023 12:50:00 PM
Toluene	ND	0.047		mg/Kg	1	10/27/2023 12:50:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/27/2023 12:50:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/27/2023 12:50:00 PM
Surr: 4-Bromofluorobenzene	88.5	39.1-146		%Rec	1	10/27/2023 12:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	97	60		mg/Kg	20	10/28/2023 1:07:48 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-022 **Matrix:** SOIL

Client Sample ID: BH23-20 1'
Collection Date: 10/20/2023 12:30:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	10/27/2023 12:46:13 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/27/2023 12:46:13 PM
Surr: DNOP	113	69-147		%Rec	1	10/27/2023 12:46:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/27/2023 1:55:00 PM
Surr: BFB	99.7	15-244		%Rec	1	10/27/2023 1:55:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/27/2023 1:55:00 PM
Toluene	ND	0.047		mg/Kg	1	10/27/2023 1:55:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/27/2023 1:55:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/27/2023 1:55:00 PM
Surr: 4-Bromofluorobenzene	90.0	39.1-146		%Rec	1	10/27/2023 1:55:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	10/28/2023 1:20:12 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-023 **Matrix:** SOIL

Client Sample ID: BH23-21 0'
Collection Date: 10/20/2023 12:40:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/27/2023 1:10:01 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/27/2023 1:10:01 PM
Surr: DNOP	118	69-147		%Rec	1	10/27/2023 1:10:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/27/2023 4:27:00 PM
Surr: BFB	103	15-244		%Rec	1	10/27/2023 4:27:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/27/2023 4:27:00 PM
Toluene	ND	0.048		mg/Kg	1	10/27/2023 4:27:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/27/2023 4:27:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/27/2023 4:27:00 PM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	10/27/2023 4:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	100	60		mg/Kg	20	10/28/2023 1:32:37 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-024 **Matrix:** SOIL

Client Sample ID: BH23-21 2'
Collection Date: 10/20/2023 12:50:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/27/2023 1:33:55 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/27/2023 1:33:55 PM
Surr: DNOP	108	69-147		%Rec	1	10/27/2023 1:33:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/27/2023 4:49:00 PM
Surr: BFB	100	15-244		%Rec	1	10/27/2023 4:49:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/27/2023 4:49:00 PM
Toluene	ND	0.048		mg/Kg	1	10/27/2023 4:49:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/27/2023 4:49:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/27/2023 4:49:00 PM
Surr: 4-Bromofluorobenzene	90.1	39.1-146		%Rec	1	10/27/2023 4:49:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	74	59		mg/Kg	20	10/28/2023 1:45:01 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-025 **Matrix:** SOIL

Client Sample ID: BH23-21 3'
Collection Date: 10/20/2023 1:00:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/27/2023 1:57:45 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/27/2023 1:57:45 PM
Surr: DNOP	109	69-147		%Rec	1	10/27/2023 1:57:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/27/2023 5:10:00 PM
Surr: BFB	104	15-244		%Rec	1	10/27/2023 5:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/27/2023 5:10:00 PM
Toluene	ND	0.047		mg/Kg	1	10/27/2023 5:10:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/27/2023 5:10:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/27/2023 5:10:00 PM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	10/27/2023 5:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	150	60		mg/Kg	20	10/28/2023 1:57:26 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2310B06**
Date Reported: **11/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-026 **Matrix:** SOIL

Client Sample ID: BH23-22 0'
Collection Date: 10/20/2023 1:10:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/27/2023 2:21:38 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/27/2023 2:21:38 PM
Surr: DNOP	83.4	69-147		%Rec	1	10/27/2023 2:21:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/27/2023 5:32:00 PM
Surr: BFB	104	15-244		%Rec	1	10/27/2023 5:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/27/2023 5:32:00 PM
Toluene	ND	0.049		mg/Kg	1	10/27/2023 5:32:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/27/2023 5:32:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/27/2023 5:32:00 PM
Surr: 4-Bromofluorobenzene	88.8	39.1-146		%Rec	1	10/27/2023 5:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	550	60		mg/Kg	20	10/28/2023 2:09:51 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-027 **Matrix:** SOIL

Client Sample ID: BH23-22 2'
Collection Date: 10/20/2023 1:20:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/27/2023 2:45:29 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/27/2023 2:45:29 PM
Surr: DNOP	111	69-147		%Rec	1	10/27/2023 2:45:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/27/2023 5:53:00 PM
Surr: BFB	104	15-244		%Rec	1	10/27/2023 5:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	10/27/2023 5:53:00 PM
Toluene	ND	0.047		mg/Kg	1	10/27/2023 5:53:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/27/2023 5:53:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/27/2023 5:53:00 PM
Surr: 4-Bromofluorobenzene	88.6	39.1-146		%Rec	1	10/27/2023 5:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	970	60		mg/Kg	20	10/28/2023 2:22:16 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2310B06**
Date Reported: **11/3/2023**

CLIENT: Devon Energy
Project: Thistle Unit 10 Battery
Lab ID: 2310B06-028 **Matrix:** SOIL

Client Sample ID: BH23-22 3'
Collection Date: 10/20/2023 1:30:00 PM
Received Date: 10/24/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/27/2023 3:09:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/27/2023 3:09:20 PM
Surr: DNOP	118	69-147		%Rec	1	10/27/2023 3:09:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/27/2023 6:15:00 PM
Surr: BFB	101	15-244		%Rec	1	10/27/2023 6:15:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	10/27/2023 6:15:00 PM
Toluene	ND	0.050		mg/Kg	1	10/27/2023 6:15:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/27/2023 6:15:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/27/2023 6:15:00 PM
Surr: 4-Bromofluorobenzene	88.6	39.1-146		%Rec	1	10/27/2023 6:15:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	190	60		mg/Kg	20	10/28/2023 2:34:41 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2310B06**
03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **MB-78426** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **78426** RunNo: **100786**
Prep Date: **10/27/2023** Analysis Date: **10/27/2023** SeqNo: **3697349** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78426** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **78426** RunNo: **100786**
Prep Date: **10/27/2023** Analysis Date: **10/27/2023** SeqNo: **3697350** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.3	90	110			

Sample ID: **MB-78427** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **78427** RunNo: **100819**
Prep Date: **10/28/2023** Analysis Date: **10/28/2023** SeqNo: **3698683** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78427** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **78427** RunNo: **100819**
Prep Date: **10/28/2023** Analysis Date: **10/28/2023** SeqNo: **3698684** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2310B06**
03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **MB-78364** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78364** RunNo: **100744**
Prep Date: **10/25/2023** Analysis Date: **10/25/2023** SeqNo: **3695174** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		99.2	69	147			

Sample ID: **LCS-78364** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78364** RunNo: **100744**
Prep Date: **10/25/2023** Analysis Date: **10/25/2023** SeqNo: **3695175** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	61.9	130			
Surr: DNOP	5.1		5.000		103	69	147			

Sample ID: **2310B06-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-11 0'** Batch ID: **78354** RunNo: **100748**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3695332** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.2	45.87	0	108	54.2	135			
Surr: DNOP	5.3		4.587		115	69	147			

Sample ID: **2310B06-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-11 0'** Batch ID: **78354** RunNo: **100748**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3695333** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	8.9	44.56	0	102	54.2	135	8.98	29.2	
Surr: DNOP	4.9		4.456		109	69	147	0	0	

Sample ID: **LCS-78336** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78336** RunNo: **100748**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3695349** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.1		5.000		122	69	147			

Sample ID: **LCS-78354** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78354** RunNo: **100748**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3695350** Units: **mg/Kg**

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2310B06**
03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **LCS-78354** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78354** RunNo: **100748**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3695350** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	10	50.00	0	128	61.9	130			
Surr: DNOP	6.9		5.000		137	69	147			

Sample ID: **MB-78336** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78336** RunNo: **100748**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3695351** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		107	69	147			

Sample ID: **MB-78354** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78354** RunNo: **100748**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3695352** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		126	69	147			

Sample ID: **LCS-78394** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78394** RunNo: **100806**
Prep Date: **10/26/2023** Analysis Date: **10/27/2023** SeqNo: **3697480** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	50.00	0	118	61.9	130			
Surr: DNOP	5.9		5.000		117	69	147			

Sample ID: **2310B06-021AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-20 0'** Batch ID: **78394** RunNo: **100806**
Prep Date: **10/26/2023** Analysis Date: **10/27/2023** SeqNo: **3697482** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	10	49.80	0	118	54.2	135			
Surr: DNOP	5.8		4.980		117	69	147			

Sample ID: **2310B06-021AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-20 0'** Batch ID: **78394** RunNo: **100806**
Prep Date: **10/26/2023** Analysis Date: **10/27/2023** SeqNo: **3697483** Units: **mg/Kg**

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2310B06**
03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **2310B06-021AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-20 0'** Batch ID: **78394** RunNo: **100806**
Prep Date: **10/26/2023** Analysis Date: **10/27/2023** SeqNo: **3697483** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.4	47.04	0	103	54.2	135	18.6	29.2	
Surr: DNOP	4.7		4.704		99.2	69	147	0	0	

Sample ID: **MB-78394** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78394** RunNo: **100812**
Prep Date: **10/26/2023** Analysis Date: **10/30/2023** SeqNo: **3698206** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		108	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2310B06**
03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **lcs-78340** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78340** RunNo: **100731**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3694360** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.3	70	130			
Surr: BFB	2200		1000		219	15	244			

Sample ID: **mb-78340** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **78340** RunNo: **100731**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3694361** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		109	15	244			

Sample ID: **lcs-78352** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78352** RunNo: **100731**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3694380** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.5	70	130			
Surr: BFB	2200		1000		219	15	244			

Sample ID: **mb-78352** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **78352** RunNo: **100731**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3694381** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		99.1	15	244			

Sample ID: **lcs-78365** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78365** RunNo: **100788**
Prep Date: **10/25/2023** Analysis Date: **10/27/2023** SeqNo: **3696966** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	70	130			
Surr: BFB	2300		1000		229	15	244			

Sample ID: **mb-78365** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **78365** RunNo: **100788**
Prep Date: **10/25/2023** Analysis Date: **10/27/2023** SeqNo: **3698542** Units: **mg/Kg**

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2310B06**
03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **mb-78365** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **78365** RunNo: **100788**
Prep Date: **10/25/2023** Analysis Date: **10/27/2023** SeqNo: **3698542** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		105	15	244			

Sample ID: **2310B06-021ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-20 0'** Batch ID: **78365** RunNo: **100788**
Prep Date: **10/25/2023** Analysis Date: **10/27/2023** SeqNo: **3698544** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.7	23.63	0	107	70	130			
Surr: BFB	2100		945.2		227	15	244			

Sample ID: **2310B06-021amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-20 0'** Batch ID: **78365** RunNo: **100788**
Prep Date: **10/25/2023** Analysis Date: **10/27/2023** SeqNo: **3698545** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.7	23.63	0	105	70	130	1.28	20	
Surr: BFB	2100		945.2		222	15	244	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2310B06**
03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **lcs-78340** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78340** RunNo: **100731**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3694404** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	84.7	70	130			
Toluene	0.87	0.050	1.000	0	86.6	70	130			
Ethylbenzene	0.87	0.050	1.000	0	87.4	70	130			
Xylenes, Total	2.6	0.10	3.000	0	86.9	70	130			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.5	39.1	146			

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.4	39.1	146			

Sample ID: **lcs-78352** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78352** RunNo: **100731**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3694424** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	87.7	70	130			
Toluene	0.89	0.050	1.000	0	89.2	70	130			
Ethylbenzene	0.90	0.050	1.000	0	89.6	70	130			
Xylenes, Total	2.7	0.10	3.000	0	89.1	70	130			
Surr: 4-Bromofluorobenzene	0.90		1.000		89.5	39.1	146			

Sample ID: **mb-78352** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78352** RunNo: **100731**
Prep Date: **10/24/2023** Analysis Date: **10/25/2023** SeqNo: **3694425** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.88		1.000		88.5	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2310B06**
03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **lcs-78340** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78340** RunNo: **100755**
Prep Date: **10/24/2023** Analysis Date: **10/26/2023** SeqNo: **3696781** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	84.9	70	130			
Toluene	0.86	0.050	1.000	0	85.7	70	130			
Ethylbenzene	0.88	0.050	1.000	0	87.6	70	130			
Xylenes, Total	2.6	0.10	3.000	0	86.9	70	130			
Surr: 4-Bromofluorobenzene	0.89		1.000		89.1	39.1	146			

Sample ID: **mb-78340** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78340** RunNo: **100755**
Prep Date: **10/24/2023** Analysis Date: **10/26/2023** SeqNo: **3696782** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.87		1.000		87.3	39.1	146			

Sample ID: **lcs-78352** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78352** RunNo: **100755**
Prep Date: **10/24/2023** Analysis Date: **10/26/2023** SeqNo: **3696790** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.9	70	130			
Toluene	0.92	0.050	1.000	0	92.1	70	130			
Ethylbenzene	0.93	0.050	1.000	0	93.4	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.0	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.2	39.1	146			

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.6	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2310B06**
03-Nov-23

Client: Devon Energy
Project: Thistle Unit 10 Battery

Sample ID: **lcs-78365** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78365** RunNo: **100788**
Prep Date: **10/25/2023** Analysis Date: **10/27/2023** SeqNo: **3696961** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.5	70	130			
Toluene	0.89	0.050	1.000	0	88.6	70	130			
Ethylbenzene	0.91	0.050	1.000	0	90.7	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.7	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.7	39.1	146			

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		92.1	39.1	146			

Sample ID: **2310B06-022ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-20 1'** Batch ID: **78365** RunNo: **100788**
Prep Date: **10/25/2023** Analysis Date: **10/27/2023** SeqNo: **3698605** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9497	0	87.4	70	130			
Toluene	0.84	0.047	0.9497	0	88.2	70	130			
Ethylbenzene	0.87	0.047	0.9497	0	91.2	70	130			
Xylenes, Total	2.6	0.095	2.849	0	91.1	70	130			
Surr: 4-Bromofluorobenzene	0.85		0.9497		89.4	39.1	146			

Sample ID: **2310B06-022amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-20 1'** Batch ID: **78365** RunNo: **100788**
Prep Date: **10/25/2023** Analysis Date: **10/27/2023** SeqNo: **3698606** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9452	0	88.1	70	130	0.272	20	
Toluene	0.84	0.047	0.9452	0	89.0	70	130	0.339	20	
Ethylbenzene	0.86	0.047	0.9452	0	90.7	70	130	1.02	20	
Xylenes, Total	2.6	0.095	2.836	0	90.3	70	130	1.33	20	
Surr: 4-Bromofluorobenzene	0.85		0.9452		90.4	39.1	146	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2310B06 RcptNo: 1

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

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

Reviewed By: SCM 10/24/23

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: JM 10/24/23

Special Handling (if applicable)

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

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions: Mailing address,phone number, Email/Fax, time of relinquishment, and times of collection

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes	Morty		

Received by OCD: 3/13/2025 2:15:08 PM

Released to Imaging: 3/20/2025 3:49:19 PM

Chain-of-Custody Record

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

Client: Devon

Mailing Address: On file

Phone #:

email or Fax#:

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

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

Turn-Around Time:
● Standard ☒ Rush 5 Day

Project Name: Thistle Unit 10 Battery

Project #: 23E-04784

Project Manager: Kent Stallings

Sampler: Bryce Mortimer

On Ice: ☒ Yes ☐ No morty

# of Coolers: 1

Cooler Temp(including CF): 5.5-0.1=5.4 (°C)

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2310B06	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)
10.20.23	9:00	soil	BH23-11 0'	4oz jar	Ice	001										
	9:10		BH23-11 2'			002										
	9:20		BH23-11 3'			003										
	9:30		BH23-12 0'			004										
	9:40		BH23-12 2'			005										
	9:50		BH23-12 3'			006										
	10:00		BH23-13 0'			007										
	10:10		BH23-13 2'			008										
	10:20		BH23-13 3'			009										
	10:30		BH23-14 0'			010										
	10:40		BH23-14 2'			011										
	10:50		BH23-15 0'			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10.20.23		[signature]	[signature]		10/23/23	1100
10/23/23	1900	[signature]	[signature]	courier	10/24/23	7:50

Remarks: WO: 21206611

Please cc Bryce Mortimer at BMortimer@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

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

Client: Devon

Mailing Address: On file

Phone #:

email or Fax#:

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

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

Turn-Around Time:
☐ Standard ☒ Rush 5 Day

Project Name: Thistle Unit 10 Battery

Project #: 23E-04784

Project Manager: Kent Stallings

Sampler: Bryce Mortimer

On Ice: ☒ Yes ☐ No morty

# of Coolers: 1

Cooler Temp (including CF): 5.5 - 0.1 = 5.4 (°C)

Analysis Request: BTEX / MTBE / TMB's (8021); TPH:8015D(GRO / DRO / MRO); 8081 Pesticides/8082 PCB's; EDB (Method 504.1); PAHs by 8310 or 8270SIMS; RCRA 8 Metals; Cl, F, Br, NO_3, NO_2, PO_4, SO_4; 8260 (VOA); 8270 (Semi-VOA); Total Coliform (Present/Absent)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2310B06
10.20.23	11:00	soil	BH23-15 2'	4oz jar	Ice	013
	11:10		BH23-16 0'			014
	11:20		BH23-16 2'			015
	11:30		BH23-17 0'			016
	11:40		BH23-18 0'			017
	11:50		BH23-18 2'			018
	12:00		BH23-19 0'			019
	12:10		BH23-19 2'			020
	12:20		BH23-20 0'			021
	12:30		BH23-20 1'			022
	12:40		BH23-21 0'			023
	12:50		BH23-21 2'			024

Date	Time	Relinquished by	Received by	Via	Date	Time
10.20.23		BM	[illegible]		10/23/23	1100
10/23/23	1900	[illegible]	[illegible]	courier	10/24/23	7:50

Remarks: WO: 21206611

Please cc Bryce Mortimer at BMortimer@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: Devon

Mailing Address: On file

Phone #:

email or Fax#:

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

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

Turn-Around Time:
■ Standard ☒ Rush 5 Day

Project Name: Thistle Unit 10 Battery

Project #: 23E-04784

Project Manager: Kent Stallings

Sampler: Bryce Mortimer

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 5.5 (°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. 2310306	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)
10.20.23	13:00	Soil	BH23-21 3'	4oz jar	Ice	025	✓	✓					✓			
↓	13:10		BH23-22 0'	↓	↓	026										
	13:20		BH23-22 2'			027										
↓	13:30	TMC 10/24/23	BH23-22 3'	↓	↓	028	✓	✓					✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10.20.23		BM	[illegible]		10/23/23	1120
10/23/23	1210	[illegible]	[illegible]	courier	10/24/23	7:50

Remarks: WO: 21206611

Please cc Bryce Mortimer at BMortimer@vertexca

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

November 22, 2023

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

RE: Thistle Unit 10 CTB OrderNo.: 2311452

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 18 sample(s) on 11/9/2023 for the analyses presented in the following report.

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

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-23 0'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 9:00:00 AM
Lab ID: 2311452-001 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-23 2'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 9:10:00 AM
Lab ID: 2311452-002 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-24 0'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 9:20:00 AM
Lab ID: 2311452-003 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-24 2'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 9:30:00 AM
Lab ID: 2311452-004 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2311452**
Date Reported: **11/22/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-25 0'
Project: Thistle Unit 10 CTB
Collection Date: 11/7/2023 9:40:00 AM
Lab ID: 2311452-005
Matrix: SOIL
Received Date: 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-25 2'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 9:50:00 AM
Lab ID: 2311452-006 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-26 0'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 10:00:00 AM
Lab ID: 2311452-007 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-26 2'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 10:10:00 AM
Lab ID: 2311452-008 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-27 0'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 10:20:00 AM
Lab ID: 2311452-009 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/15/2023 4:01:39 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/15/2023 4:01:39 PM
Surr: DNOP	77.6	69-147		%Rec	1	11/15/2023 4:01:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/15/2023 5:13:00 PM
Surr: BFB	94.1	15-244		%Rec	1	11/15/2023 5:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/15/2023 5:13:00 PM
Toluene	ND	0.049		mg/Kg	1	11/15/2023 5:13:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/15/2023 5:13:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/15/2023 5:13:00 PM
Surr: 4-Bromofluorobenzene	96.2	39.1-146		%Rec	1	11/15/2023 5:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/15/2023 9:34:40 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-27 2'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 10:30:00 AM
Lab ID: 2311452-010 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/16/2023 12:22:08 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 12:22:08 AM
Surr: DNOP	104	69-147		%Rec	1	11/16/2023 12:22:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/15/2023 12:51:00 PM
Surr: BFB	103	15-244		%Rec	1	11/15/2023 12:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	11/15/2023 12:51:00 PM
Toluene	ND	0.047		mg/Kg	1	11/15/2023 12:51:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/15/2023 12:51:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/15/2023 12:51:00 PM
Surr: 4-Bromofluorobenzene	99.8	39.1-146		%Rec	1	11/15/2023 12:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	170	60		mg/Kg	20	11/15/2023 10:11:53 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2311452**
Date Reported: **11/22/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-28 0'
Project: Thistle Unit 10 CTB
Collection Date: 11/7/2023 10:40:00 AM
Lab ID: 2311452-011 **Matrix:** SOIL
Received Date: 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/16/2023 12:45:46 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/16/2023 12:45:46 AM
Surr: DNOP	101	69-147		%Rec	1	11/16/2023 12:45:46 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/15/2023 1:56:00 PM
Surr: BFB	99.9	15-244		%Rec	1	11/15/2023 1:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	11/15/2023 1:56:00 PM
Toluene	ND	0.047		mg/Kg	1	11/15/2023 1:56:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/15/2023 1:56:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/15/2023 1:56:00 PM
Surr: 4-Bromofluorobenzene	99.3	39.1-146		%Rec	1	11/15/2023 1:56:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	340	60		mg/Kg	20	11/15/2023 10:24:18 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-28 2'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 10:50:00 AM
Lab ID: 2311452-012 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/16/2023 1:09:23 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 1:09:23 AM
Surr: DNOP	102	69-147		%Rec	1	11/16/2023 1:09:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/15/2023 3:01:00 PM
Surr: BFB	104	15-244		%Rec	1	11/15/2023 3:01:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	11/15/2023 3:01:00 PM
Toluene	ND	0.049		mg/Kg	1	11/15/2023 3:01:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/15/2023 3:01:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/15/2023 3:01:00 PM
Surr: 4-Bromofluorobenzene	98.2	39.1-146		%Rec	1	11/15/2023 3:01:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	150	59		mg/Kg	20	11/15/2023 10:36:43 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-29 0'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 11:00:00 AM
Lab ID: 2311452-013 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-29 1'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 11:10:00 AM
Lab ID: 2311452-014 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-30 0'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 11:20:00 AM
Lab ID: 2311452-015 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-30 2'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 11:30:00 AM
Lab ID: 2311452-016 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/16/2023 2:43:49 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/16/2023 2:43:49 AM
Surr: DNOP	105	69-147		%Rec	1	11/16/2023 2:43:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/15/2023 4:28:00 PM
Surr: BFB	104	15-244		%Rec	1	11/15/2023 4:28:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	11/15/2023 4:28:00 PM
Toluene	ND	0.049		mg/Kg	1	11/15/2023 4:28:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/15/2023 4:28:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/15/2023 4:28:00 PM
Surr: 4-Bromofluorobenzene	98.0	39.1-146		%Rec	1	11/15/2023 4:28:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	200	60		mg/Kg	20	11/15/2023 11:26:21 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-31 0'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 11:40:00 AM
Lab ID: 2311452-017 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311452**
Date Reported: **11/22/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-31 2'
Project: Thistle Unit 10 CTB **Collection Date:** 11/7/2023 11:50:00 AM
Lab ID: 2311452-018 **Matrix:** SOIL **Received Date:** 11/9/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/16/2023 3:30:57 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/16/2023 3:30:57 AM
Surr: DNOP	107	69-147		%Rec	1	11/16/2023 3:30:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/15/2023 5:11:00 PM
Surr: BFB	99.9	15-244		%Rec	1	11/15/2023 5:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	11/15/2023 5:11:00 PM
Toluene	ND	0.047		mg/Kg	1	11/15/2023 5:11:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/15/2023 5:11:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/15/2023 5:11:00 PM
Surr: 4-Bromofluorobenzene	93.4	39.1-146		%Rec	1	11/15/2023 5:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	660	61		mg/Kg	20	11/15/2023 11:51:10 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2311452**
22-Nov-23

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

Sample ID: **MB-78811** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **78811** RunNo: **101219**
Prep Date: **11/15/2023** Analysis Date: **11/15/2023** SeqNo: **3720672** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78811** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **78811** RunNo: **101219**
Prep Date: **11/15/2023** Analysis Date: **11/15/2023** SeqNo: **3720673** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2311452**
22-Nov-23

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

Sample ID: **LCS-78757** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78757** RunNo: **101145**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3717324** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.9	61.9	130			
Surr: DNOP	4.2		5.000		84.9	69	147			

Sample ID: **MB-78757** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78757** RunNo: **101145**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3717326** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.1		10.00		90.5	69	147			

Sample ID: **MB-78774** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78774** RunNo: **101201**
Prep Date: **11/14/2023** Analysis Date: **11/15/2023** SeqNo: **3719857** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		106	69	147			

Sample ID: **LCS-78774** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78774** RunNo: **101201**
Prep Date: **11/14/2023** Analysis Date: **11/15/2023** SeqNo: **3719858** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	61.9	130			
Surr: DNOP	4.8		5.000		95.9	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2311452**
22-Nov-23

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

Sample ID: **lcs-78754** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78754** RunNo: **101194**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3718682** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.9	70	130			
Surr: BFB	1900		1000		190	15	244			

Sample ID: **mb-78754** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **78754** RunNo: **101194**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3718683** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		94.0	15	244			

Sample ID: **lcs-78756** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78756** RunNo: **101220**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3720827** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.1	70	130			
Surr: BFB	2200		1000		223	15	244			

Sample ID: **mb-78756** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **78756** RunNo: **101220**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3720828** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	15	244			

Sample ID: **2311452-010ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-27 2'** Batch ID: **78756** RunNo: **101220**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3720830** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.58	0	102	70	130			
Surr: BFB	2200		943.4		233	15	244			

Sample ID: **2311452-010amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-27 2'** Batch ID: **78756** RunNo: **101220**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3720831** Units: **mg/Kg**

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2311452**
22-Nov-23

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

Sample ID: **2311452-010amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-27 2'** Batch ID: **78756** RunNo: **101220**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3720831** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.43	0	101	70	130	1.72	20	
Surr: BFB	2100		937.2		224	15	244	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2311452**
22-Nov-23

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

Sample ID: **LCS-78754** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78754** RunNo: **101194**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3718687** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	93.7	70	130			
Toluene	0.94	0.050	1.000	0	94.2	70	130			
Ethylbenzene	0.94	0.050	1.000	0	93.8	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.8	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.5	39.1	146			

Sample ID: **mb-78754** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78754** RunNo: **101194**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3718688** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	39.1	146			

Sample ID: **lcs-78756** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78756** RunNo: **101220**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3720712** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.2	70	130			
Toluene	0.99	0.050	1.000	0	98.7	70	130			
Ethylbenzene	1.0	0.050	1.000	0	99.8	70	130			
Xylenes, Total	3.0	0.10	3.000	0	99.1	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.3	39.1	146			

Sample ID: **mb-78756** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78756** RunNo: **101220**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3720715** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.5	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2311452**
22-Nov-23

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

Sample ID: **2311452-011ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-28 0'** Batch ID: **78756** RunNo: **101220**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3720721** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.023	0.9363	0	97.1	70	130			
Toluene	0.93	0.047	0.9363	0	99.2	70	130			
Ethylbenzene	0.96	0.047	0.9363	0	102	70	130			
Xylenes, Total	2.9	0.094	2.809	0	102	70	130			
Surr: 4-Bromofluorobenzene	0.93		0.9363		98.9	39.1	146			

Sample ID: **2311452-011amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-28 0'** Batch ID: **78756** RunNo: **101220**
Prep Date: **11/13/2023** Analysis Date: **11/15/2023** SeqNo: **3720723** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.023	0.9328	0	96.5	70	130	0.999	20	
Toluene	0.92	0.047	0.9328	0	98.3	70	130	1.28	20	
Ethylbenzene	0.94	0.047	0.9328	0	101	70	130	1.74	20	
Xylenes, Total	2.8	0.093	2.799	0	100	70	130	1.79	20	
Surr: 4-Bromofluorobenzene	0.92		0.9328		98.2	39.1	146	0	0	

Qualifiers:

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

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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: 2311452 RcptNo: 1

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

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

Reviewed By: TM 11/9/23

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: SUM 11/9/23

Special Handling (if applicable)

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

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions: Mailing address, phone number, and Email/Fax are missing on COC- TMC 11/9/23

16. Additional remarks:
    Client did not relinquish chain of custody

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Yes	Yogi		

Received by OCD: 3/13/2025 2:15:08 PM

Released to Imaging: 3/20/2025 3:49:19 PM

Chain-of-Custody Record

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

Client: Vertex (Deron)

Mailing Address: on file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☑ Rush 5 Day

Project Name: Thistle Unit 10 CTB

Project #: 23E-04784

Project Manager: Kent Stallings

Sampler: Zach Englebert

On Ice: ☑ Yes ☐ No 4001

# of Coolers: 1

Cooler Temp(including CF): 2.8+0.1=2.9 (°C)

HEAL No. 2311452

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11-7-23	9:00	soil	BH23-23 0'	jar 1	ice	001										
	9:10		BH23-23 2'	jar 1		002										
	9:20		BH23-24 0'	jar 1		003										
	9:30		BH23-24 2'	jar 1		004										
	9:40		BH23-25 0'			005										
	9:50		BH23-25 2'			006										
	10:00		BH23-26 0'			007										
	10:10		BH23-26 2'			008										
	10:20		BH23-27 0'			009										
	10:30		BH23-27 2'			010										
	10:40		BH23-28 0'			011										
	10:50		BH23-28 2'			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			[illegible]		11/8/23	945
Date: 11/8/23	Time: 1700	Relinquished by: [illegible]	Received by:	Via: courier	Date 11/9/23	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.

Chain-of-Custody Record

Client: Vertex (Devon)

Mailing Address: on file

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☑ Standard ☐ Rush 5 Days

Project Name: Thistle Unit 10 CTB

Project #: 23E-04784

Project Manager: Kent Stallings

Sampler: Zach Englebert

On Ice: ☑ Yes ☐ No yogi

# of Coolers: 1

Cooler Temp(including CF): 2.8+0.1=2.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2311452	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11-7-23	11:00	soil	BH23-29 0'	1 jar	ice	013										
	11:10		BH23-29 1'			014										
	11:20		BH23-30 0'			015										
	11:30		BH23-30 2'			016										
	11:40		BH23-31 0'			017										
	11:50		BH23-31 2'			018										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			[signature]		11/8/23	945
Date: 11/8/23	Time: 1900	Relinquished by: [signature]	Received by: [signature]	Via: courier	Date 11/9/23	Time 7:40

Remarks: Direct Bill to Devon
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 South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 29, 2023

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

RE: Thistle Unit 10 Battery OrderNo.: 2311556

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 30 sample(s) on 11/10/2023 for the analyses presented in the following report.

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

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Project: Thistle Unit 10 Battery
Lab ID: 2311556-001 **Matrix:** SOIL

Client Sample ID: BH23-23 4'
Collection Date: 11/8/2023 9:00:00 AM
Received Date: 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-32 0'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 9:10:00 AM
Lab ID: 2311556-002 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-32 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 9:20:00 AM
Lab ID: 2311556-003 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-33 0'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 9:30:00 AM
Lab ID: 2311556-004 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-33 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 9:40:00 AM
Lab ID: 2311556-005 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-34 0'
Project: Thistle Unit 10 Battery
Collection Date: 11/8/2023 9:50:00 AM
Lab ID: 2311556-006 **Matrix:** SOIL
Received Date: 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-34 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 10:00:00 AM
Lab ID: 2311556-007 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-34 3'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 10:10:00 AM
Lab ID: 2311556-008 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-35 0'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 10:20:00 AM
Lab ID: 2311556-009 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-35 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 10:30:00 AM
Lab ID: 2311556-010 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-36 0'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 10:40:00 AM
Lab ID: 2311556-011 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-36 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 10:50:00 AM
Lab ID: 2311556-012 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-37 0'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 11:00:00 AM
Lab ID: 2311556-013 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-37 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 11:10:00 AM
Lab ID: 2311556-014 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2311556**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-38 0'
Project: Thistle Unit 10 Battery
Collection Date: 11/8/2023 11:20:00 AM
Lab ID: 2311556-015 **Matrix:** SOIL
Received Date: 11/10/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2311556**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Project: Thistle Unit 10 Battery
Lab ID: 2311556-016 **Matrix:** SOIL

Client Sample ID: BH23-38 2'
Collection Date: 11/8/2023 11:30:00 AM
Received Date: 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-39 0'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 11:40:00 AM
Lab ID: 2311556-017 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-39 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 11:50:00 AM
Lab ID: 2311556-018 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2311556**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-40 0'
Project: Thistle Unit 10 Battery
Collection Date: 11/8/2023 12:00:00 PM
Lab ID: 2311556-019 **Matrix:** SOIL
Received Date: 11/10/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2311556**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Project: Thistle Unit 10 Battery
Lab ID: 2311556-020 **Matrix:** SOIL

Client Sample ID: BH23-40 2'
Collection Date: 11/8/2023 12:10:00 PM
Received Date: 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-41 0'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 12:20:00 PM
Lab ID: 2311556-021 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/17/2023 2:25:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/17/2023 2:25:51 PM
Surr: DNOP	94.0	69-147		%Rec	1	11/17/2023 2:25:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/17/2023 8:35:00 PM
Surr: BFB	111	15-244		%Rec	1	11/17/2023 8:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/17/2023 8:35:00 PM
Toluene	ND	0.047		mg/Kg	1	11/17/2023 8:35:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/17/2023 8:35:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/17/2023 8:35:00 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	11/17/2023 8:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	2000	60		mg/Kg	20	11/16/2023 2:33:08 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-41 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 12:30:00 PM
Lab ID: 2311556-022 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-42 0'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 12:40:00 PM
Lab ID: 2311556-023 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-42 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 12:50:00 PM
Lab ID: 2311556-024 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2311556**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Project: Thistle Unit 10 Battery
Lab ID: 2311556-025 **Matrix:** SOIL

Client Sample ID: BH23-43 0'
Collection Date: 11/8/2023 1:00:00 PM
Received Date: 11/10/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/17/2023 11:39:57 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/17/2023 11:39:57 AM
Surr: DNOP	70.1	69-147		%Rec	1	11/17/2023 11:39:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/17/2023 10:25:00 PM
Surr: BFB	106	15-244		%Rec	1	11/17/2023 10:25:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/17/2023 10:25:00 PM
Toluene	ND	0.048		mg/Kg	1	11/17/2023 10:25:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/17/2023 10:25:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/17/2023 10:25:00 PM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	11/17/2023 10:25:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	900	60		mg/Kg	20	11/16/2023 3:47:36 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-43 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 1:10:00 PM
Lab ID: 2311556-026 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-44 0'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 1:20:00 PM
Lab ID: 2311556-027 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-44 2'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 1:30:00 PM
Lab ID: 2311556-028 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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 **2311556**
Date Reported: **11/29/2023**

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-45 0'
Project: Thistle Unit 10 Battery
Collection Date: 11/8/2023 1:40:00 PM
Lab ID: 2311556-029 **Matrix:** SOIL
Received Date: 11/10/2023 7:50:00 AM

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

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

Qualifiers:

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

Analytical Report
Lab Order **2311556**
Date Reported: **11/29/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-45 1'
Project: Thistle Unit 10 Battery **Collection Date:** 11/8/2023 1:50:00 PM
Lab ID: 2311556-030 **Matrix:** SOIL **Received Date:** 11/10/2023 7:50:00 AM

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: **2311556**
29-Nov-23

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

Sample ID: **MB-78839** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **78839** RunNo: **101256**
Prep Date: **11/16/2023** Analysis Date: **11/16/2023** SeqNo: **3722958** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78839** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **78839** RunNo: **101256**
Prep Date: **11/16/2023** Analysis Date: **11/16/2023** SeqNo: **3722959** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.6	90	110			

Sample ID: **MB-78843** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **78843** RunNo: **101241**
Prep Date: **11/16/2023** Analysis Date: **11/16/2023** SeqNo: **3723318** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78843** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **78843** RunNo: **101241**
Prep Date: **11/16/2023** Analysis Date: **11/16/2023** SeqNo: **3723319** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2311556**
29-Nov-23

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

Sample ID: **2311556-020AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-40 2'** Batch ID: **78804** RunNo: **101145**
Prep Date: **11/15/2023** Analysis Date: **11/16/2023** SeqNo: **3719804** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.4	46.95	0	102	54.2	135			
Surr: DNOP	4.2		4.695		90.2	69	147			

Sample ID: **2311556-020AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-40 2'** Batch ID: **78804** RunNo: **101145**
Prep Date: **11/15/2023** Analysis Date: **11/16/2023** SeqNo: **3719805** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.8	48.97	0	90.6	54.2	135	7.15	29.2	
Surr: DNOP	4.2		4.897		85.7	69	147	0	0	

Sample ID: **LCS-78804** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78804** RunNo: **101145**
Prep Date: **11/15/2023** Analysis Date: **11/15/2023** SeqNo: **3719806** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.2	61.9	130			
Surr: DNOP	4.2		5.000		84.0	69	147			

Sample ID: **MB-78804** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78804** RunNo: **101145**
Prep Date: **11/15/2023** Analysis Date: **11/15/2023** SeqNo: **3719808** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.5		10.00		84.7	69	147			

Sample ID: **2311556-021AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-41 0'** Batch ID: **78823** RunNo: **101250**
Prep Date: **11/15/2023** Analysis Date: **11/16/2023** SeqNo: **3722263** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.8	48.97	0	93.9	54.2	135			
Surr: DNOP	5.1		4.897		105	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2311556**
29-Nov-23

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

Sample ID: **2311556-021AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-41 0'** Batch ID: **78823** RunNo: **101250**
Prep Date: **11/15/2023** Analysis Date: **11/16/2023** SeqNo: **3722264** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.8	49.16	0	89.7	54.2	135	4.24	29.2	
Surr: DNOP	5.0		4.916		102	69	147	0	0	

Sample ID: **LCS-78823** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78823** RunNo: **101250**
Prep Date: **11/15/2023** Analysis Date: **11/16/2023** SeqNo: **3722305** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.3	61.9	130			
Surr: DNOP	4.7		5.000		93.8	69	147			

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		103	69	147			

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		103	69	147			

Sample ID: **LCS-78826** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78826** RunNo: **101255**
Prep Date: **11/15/2023** Analysis Date: **11/16/2023** SeqNo: **3722615** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	112	61.9	130			
Surr: DNOP	4.5		5.000		89.3	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2311556**
29-Nov-23

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

Sample ID: **LCS-78879** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78879** RunNo: **101270**
Prep Date: **11/17/2023** Analysis Date: **11/17/2023** SeqNo: **3725652** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.8	61.9	130			
Surr: DNOP	4.3		5.000		85.3	69	147			

Sample ID: **MB-78879** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78879** RunNo: **101270**
Prep Date: **11/17/2023** Analysis Date: **11/17/2023** SeqNo: **3725654** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		105	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2311556**
29-Nov-23

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

Sample ID: **lcs-78796** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78796** RunNo: **101268**
Prep Date: **11/14/2023** Analysis Date: **11/16/2023** SeqNo: **3723596** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.8	70	130			
Surr: BFB	2200		1000		217	15	244			

Sample ID: **mb-78796** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **78796** RunNo: **101268**
Prep Date: **11/14/2023** Analysis Date: **11/16/2023** SeqNo: **3723597** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		105	15	244			

Sample ID: **2311556-001ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-23 4'** Batch ID: **78796** RunNo: **101268**
Prep Date: **11/14/2023** Analysis Date: **11/16/2023** SeqNo: **3723601** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.56	0	95.8	70	130			
Surr: BFB	2200		982.3		224	15	244			

Sample ID: **2311556-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-23 4'** Batch ID: **78796** RunNo: **101268**
Prep Date: **11/14/2023** Analysis Date: **11/16/2023** SeqNo: **3723602** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.46	0	96.8	70	130	0.688	20	
Surr: BFB	2100		978.5		215	15	244	0	0	

Sample ID: **lcs-78820** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78820** RunNo: **101297**
Prep Date: **11/15/2023** Analysis Date: **11/17/2023** SeqNo: **3725415** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.5	70	130			
Surr: BFB	2200		1000		220	15	244			

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

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2311556**
29-Nov-23

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

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	15	244			

Sample ID: **2311556-030ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-45 1'** Batch ID: **78820** RunNo: **101297**
Prep Date: **11/15/2023** Analysis Date: **11/17/2023** SeqNo: **3725418** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.56	0	96.7	70	130			
Surr: BFB	2200		982.3		222	15	244			

Sample ID: **2311556-030amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-45 1'** Batch ID: **78820** RunNo: **101297**
Prep Date: **11/15/2023** Analysis Date: **11/17/2023** SeqNo: **3725419** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.49	0	90.9	70	130	6.48	20	
Surr: BFB	2100		979.4		216	15	244	0	0	

Sample ID: **lcs-78810** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **78810** RunNo: **101297**
Prep Date: **11/15/2023** Analysis Date: **11/17/2023** SeqNo: **3725421** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.4	70	130			
Surr: BFB	2200		1000		219	15	244			

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		101	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2311556**
29-Nov-23

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

Sample ID: **lcs-78796** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78796** RunNo: **101268**
Prep Date: **11/14/2023** Analysis Date: **11/16/2023** SeqNo: **3723535** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.1	70	130			
Toluene	0.90	0.050	1.000	0	90.2	70	130			
Ethylbenzene	0.92	0.050	1.000	0	92.3	70	130			
Xylenes, Total	2.7	0.10	3.000	0	91.2	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.5	39.1	146			

Sample ID: **mb-78796** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78796** RunNo: **101268**
Prep Date: **11/14/2023** Analysis Date: **11/16/2023** SeqNo: **3723536** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.2	39.1	146			

Sample ID: **2311556-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-32 0'** Batch ID: **78796** RunNo: **101268**
Prep Date: **11/14/2023** Analysis Date: **11/17/2023** SeqNo: **3723539** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9775	0	92.1	70	130			
Toluene	0.93	0.049	0.9775	0	95.0	70	130			
Ethylbenzene	0.95	0.049	0.9775	0	97.1	70	130			
Xylenes, Total	2.8	0.098	2.933	0	96.5	70	130			
Surr: 4-Bromofluorobenzene	0.96		0.9775		98.7	39.1	146			

Sample ID: **2311556-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-32 0'** Batch ID: **78796** RunNo: **101268**
Prep Date: **11/14/2023** Analysis Date: **11/17/2023** SeqNo: **3723540** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.024	0.9737	0	90.8	70	130	1.79	20	
Toluene	0.91	0.049	0.9737	0	93.6	70	130	1.82	20	
Ethylbenzene	0.92	0.049	0.9737	0	94.7	70	130	2.92	20	
Xylenes, Total	2.7	0.097	2.921	0	93.8	70	130	3.19	20	
Surr: 4-Bromofluorobenzene	0.93		0.9737		95.8	39.1	146	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: **2311556**
29-Nov-23

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

Sample ID: **lcs-78820** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78820** RunNo: **101297**
Prep Date: **11/15/2023** Analysis Date: **11/17/2023** SeqNo: **3725925** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.7	70	130			
Toluene	0.84	0.050	1.000	0	84.0	70	130			
Ethylbenzene	0.87	0.050	1.000	0	86.8	70	130			
Xylenes, Total	2.6	0.10	3.000	0	86.3	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.7	39.1	146			

Sample ID: **mb-78820** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78820** RunNo: **101297**
Prep Date: **11/15/2023** Analysis Date: **11/17/2023** SeqNo: **3725926** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	39.1	146			

Sample ID: **lcs-78810** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **78810** RunNo: **101297**
Prep Date: **11/15/2023** Analysis Date: **11/17/2023** SeqNo: **3725929** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.8	70	130			
Toluene	0.93	0.050	1.000	0	93.4	70	130			
Ethylbenzene	0.95	0.050	1.000	0	94.7	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.9	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.6	39.1	146			

Sample ID: **mb-78810** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **78810** RunNo: **101297**
Prep Date: **11/15/2023** Analysis Date: **11/17/2023** SeqNo: **3725930** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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.		

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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: 2311556 RcptNo: 1

Received By: Juan Rojas 11/10/2023 7:50:00 AM

Completed By: Tracy Casarrubias 11/10/2023 8:39:25 AM

Reviewed By: DAD 11/10/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? Yes ☑ TMC 11/10/23 No ☑
    (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: JH 11/10/23

Special Handling (if applicable)

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

Person Notified: Erin C. Date: 11/10/23
By Whom: Tracy Casarrubias Via: ☐ eMail ☑ Phone ☐ Fax ☐ In Person
Regarding: Collection time discrepancy.
Client Instructions: Mailing address,phone number, and Email/Fax are missing on COC- TMC 11/10/23

16. Additional remarks: COC collection times are accurate. Moving forward with those per client. -TMC 11/10/23

Client did not relinquish chain of custody

17. **Cooler Information**

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

Received by OCD: 3/13/2025 2:15:08 PM

Released to Imaging: 3/20/2025 3:49:19 PM

Chain-of-Custody Record

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

Client: Vertex (Devon)

Mailing Address: on file

Phone #:

email or Fax#:

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

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

Turn-Around Time:
☑ Standard ☑ Rush 5 day

Project Name: Thistle Unit 10 Battery

Project #: 23E-04784

Project Manager: Kstallings@vertex.ca

Sampler: Zach Englebert

On Ice: ☑ Yes ☐ No

# of Coolers: 1 4 oz

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2311556	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)
11-8-23	9:00	soil	BH23-23 4'	1 jar	ice	001										
	9 10		BH23-32 0'			002										
	9 20		BH23-32 2'			003										
	9 30		BH23-33 0'			004										
	9 40		BH23-33 2'			005										
	9 50		BH23-34 0'			006										
	10 00		BH23-34 2'			007										
	10 10		BH23-34 3'			008										
	1020		BH23-35 0'			009										
	1030		BH23-35 2'			010										
	1040		BH23-36 0'			011										
	1050		BH23-36 2'			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			ACumming		11/9/23	900
Date: 11/9/23	Time: ~~1400~~ 11/9/23 1900	Relinquished by: ~~[illegible]~~ ACumming	Received by: [signature]	Via: courier	Date 11/10/23	Time 7:50

Remarks: Direct Bill to Devon
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.

Chain-of-Custody Record

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

Client: Vertex (Devon)

Mailing Address: on file

Phone #:

email or Fax#:

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

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

Turn-Around Time:
☑ Standard ☑ Rush 5 Day

Project Name: Thistle Unit 10 Battery

Project #: 23E-04784

Project Manager: Kent Stallings

Sampler: Zach Englebert

On Ice: ☑ Yes ☐ No

# of Coolers: 1 4oz

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2311556	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)
11-8-23	11:00	soil	BH23-37 0'	1 jar	ice	013										
	11:10		BH23-37 2'			014										
	11:20		BH23-38 0'			015										
	11:30		BH23-38 2'			016										
	11:40		BH23-39 0'			017										
	11:50		BH23-39 2'			018										
	1200		BH23-40 0'			019										
	12:10		BH23-40 2'			020										
	12:20		BH23-41 0'			021										
	12:30		BH23-41 2'			022										
	12:40		BH23-42 0'			023										
	12:50		BH23-42 2'			024										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
			[signature]		11/9/23	900
11/9/23	1900	[signature]	[signature]	Courier	11/10/23	7:50

Remarks: Direct Bill to Devon
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.

Chain-of-Custody Record

Client: Vertex (Deron)

Mailing Address: on file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☑ Rush 5 Day

Project Name: Thistle Unit 10 Battery

Project #: 23E-04784

Project Manager: Kent Stallings

Sampler: Zach Englebert

On Ice: ☑ Yes ☐ No

# of Coolers: 1 Yes

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

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2311556	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)
11-8-23	13:00	soil	BH23-43 0'	1 jar	ice	025										
	13:10		BH23-43 2'			026										
	13:20		BH23-44 0'			027										
	13:30		BH23-44 2'			028										
	13:40		BH23-45 0'			029										
	13:50		BH23-45 1'			030										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			acumuno		11/9/23	900
Date: 11/9/23	Time: 1900	Relinquished by: acumuno	Received by:	Via: courier	Date 11/10/23	Time 7:50

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.

ATTACHMENT 4

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	
Site Location Name:	Thistle Unit 10 CTB	Report Run Date:	10/19/2023 10:08 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	
Departed Site	

Field Notes

9:19 On site with Bryce for delineation / field screening.

11:37 Gathered samples BH-01 through BH-06 at 0' and 2'.

11:38 Tested samples 01-06 for chlorides. 02 was hot at surface and 03 was hot at surface and 2'.

14:27 Gathered sample points 07 through 10 at surface and 2'. samples tested mostly clean except for sample 8.

14:28 Attempted to grab several samples at 4' but reached refusal at 2.25 feet in all attempts.

Next Steps & Recommendations

1

Daily Site Visit Report

VERTEX

Site Photos

Viewing Direction: North

Placard

Viewing Direction: Northeast

Sample point BH-09

Viewing Direction: South

Sample point BH-10

Viewing Direction: North

Sample point BH-01

Daily Site Visit Report

Viewing Direction: East

Sample point BH-02

Viewing Direction: South

Sample point BH-03

Viewing Direction: Southwest

Sample point BH-04

Viewing Direction: West

Sample point BH-05

Daily Site Visit Report

Viewing Direction: North

Sample point BH-06

Viewing Direction: Northeast

Sample point BH-07

Viewing Direction: Northeast

Sample point BH-08

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Zachery Englebert

Signature:

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	
Site Location Name:	Thistle Unit 10 CTB	Report Run Date:	11/8/2023 10:40 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	
Departed Site	

Field Notes

14:19 Krinkle lost/deleted the field report I had been working on, so had to start new one.

14:19 On site 8am, held safety meeting, ran line locator.

14:21 Gathered samples 23 at 4', and samples 32 through 45 at surface and 2', with the exception of a couple that hit rejection before 2' feet.

14:22 Samples tested a mixture of clean and high for chlorides. No samples tested high for hydrocarbons. Clean or close to clean boundaries were found and delineation might be complete, pending conversation with project manager.

Next Steps & Recommendations

1

Daily Site Visit Report

VERTEX

Site Photos

Viewing Direction: Northwest

Sample point 23

Viewing Direction: East

Sample location

Viewing Direction: East

Sample location

Viewing Direction: East

Sample location

Daily Site Visit Report

Viewing Direction: Southeast

Sample location

Viewing Direction: South

Sample location

Viewing Direction: North

Placard

Viewing Direction: East

Sample location

Daily Site Visit Report

Viewing Direction: East
Sample location

Daily Site Visit Report

VERTEX

Daily Site Visit Signature

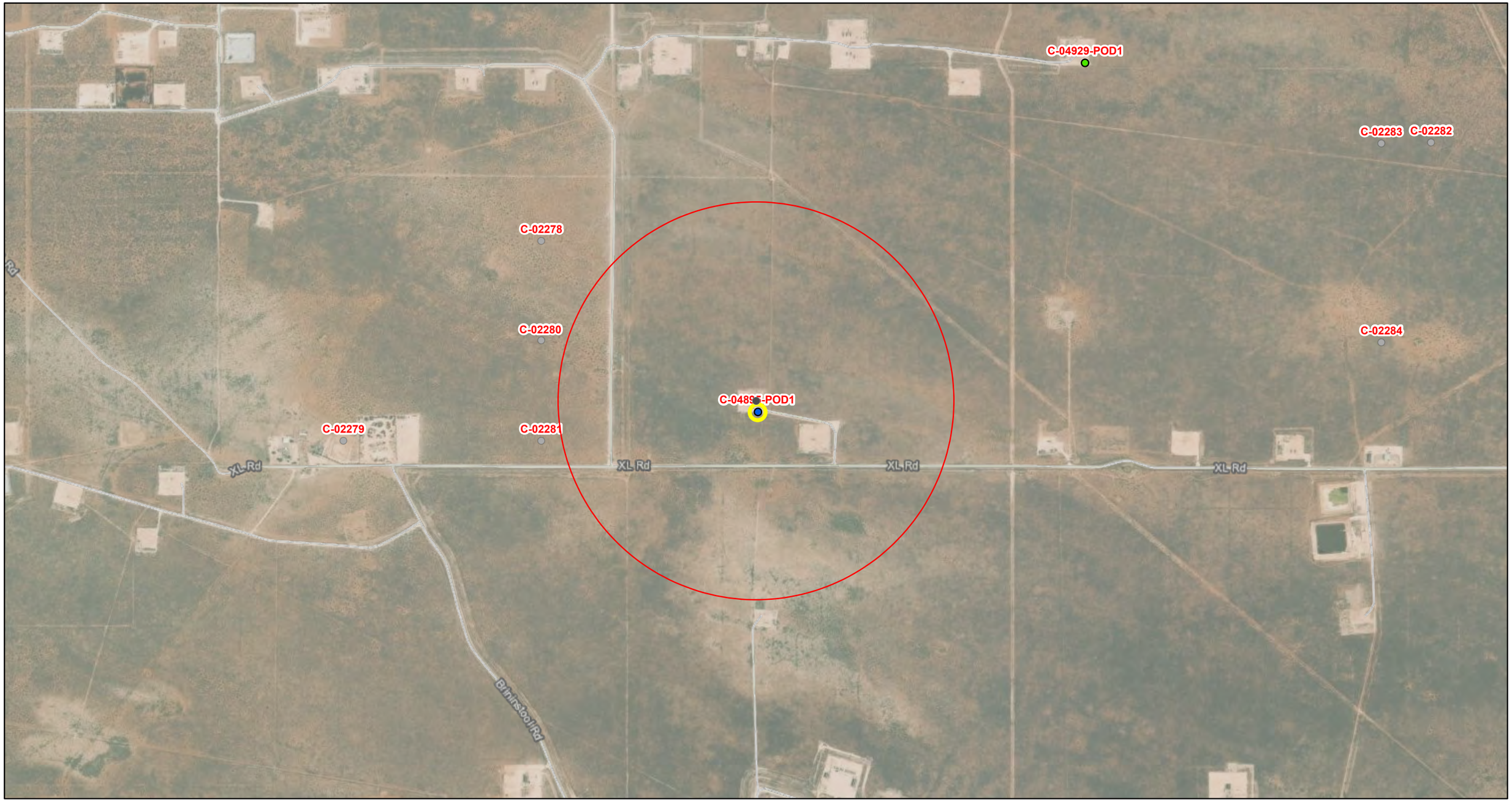
Inspector: Zachery Englebert

Signature:

ATTACHMENT 5

Closure Criteria Worksheet				
Site Name: Thistle Unit 10 CTB				
Spill Coordinates: 32.270765,-103.562696		X: 635367	Y: 3571355	
Site Specific Conditions		**Value**	**Unit**	**Reference**
1	Depth to Groundwater (nearest reference)	**>55**	feet	1
	Distance between release and nearest DTGW reference	**153**	feet	
		0.03	miles	
	Date of nearest DTGW reference measurement	**December 16, 2024**		
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	10,076	feet	2
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	22,615	feet	3
4	Within 300 feet from an occupied residence, school, hospital, institution or church	6,314	feet	4
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	2,916	feet	5
	ii) Within 1000 feet of any fresh water well or spring	2,916	feet	5
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)	6
7	Within 300 feet of a wetland	10,191	feet	7
8	Within the area overlying a subsurface mine	No	(Y/N)	8
	Distance between release and nearest registered mine	104,310	feet	
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low	9
	Distance between release and nearest high or critical karst zone	97,680	feet	
10	Within a 100-year Floodplain	Undetermined	year	10
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	83,391	feet	
11	Soil Type	Fine sand, fine sandy loam		11
12	Ecological Classification	Loamy Sand		12
13	Geology	Eolian and piedmont deposits		13
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	51-100'	<50' 51-100' >100'	

OSE POD 0.5 miles



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

1:18,056

GIS WATERS PODs
- Active
- Pending

OSE District Boundary

Water Right Regulations
- Closure Area
- Artesian Planning Area

0 0.17 0.35 0.7 mi
0 0.3 0.6 1.2 km

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

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

OSE POD Location Map

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

GIS WATERS PODs

Pending

OSE District Boundary

1:1,128

0 0.01 0.02 0.04 mi

0 0.02 0.04 0.07 km

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

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

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replaced, O=orphaned, C=the file is closed)			(quarters are smallest to largest)						(NAD83 UTM in meters)				(In feet)	(In feet)	(In feet)
POD Number	**Code**	**Sub basin**	**County**	**Q64**	**Q16**	**Q4**	**Sec**	**Tws**	**Range**	**X**	**Y**	**Map**	**Distance**	**Well Depth**	**Depth Water**	**Water Column**
C 04895 POD1		CUB	LE	NW	SE	SW	27	23S	33E	635374.0	3571309.0		46	55		
C 02281		CUB	LE	SW	SE	SE	28	23S	33E	634495.0	3571183.0 *		888	545	400	145
C 02280		CUB	LE	SW	NE	SE	28	23S	33E	634489.0	3571586.0 *		907	650	400	250
C 02278		CUB	LE	SW	SE	NE	28	23S	33E	634484.0	3571989.0 *		1087	650	400	250
C 02279		CUB	LE	SW	SE	SW	28	23S	33E	633691.0	3571173.0 *		1685	650	400	250
C 04595 POD1		CUB	LE	SE	SW	SW	34	23S	33E	635149.5	3569564.9		1803	55		
														Average Depth to Water: **400 fe**		
														Minimum Depth: **400 feet**		
														Maximum Depth: **400 feet**		

Record Count: 6

UTM Filters (in meters):
Easting: 635367
Northing: 3571355
Radius: 002000

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

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

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Point of Diversion Summary

quarters are 1=NW 2=NE 3=SW 4=SE
quarters are smallest to largest

NAD83 UTM in meters

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

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

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

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Water Right Summary

get image list

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

Documents on File

(acre-feet per annum)

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

Current Points of Diversion

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

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

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

3/12/25 8:27 AM MST **Water Rights Summary**

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PROJECT: 23E-04784

THISTLE UNIT 10 BATTERY

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
C-4895-POD1		C-4895-POD1

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

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
5315 Buena Vista DR	Carlsbad	NM	88220

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	16	13.2564	N
	LONGITUDE	-103	33	45.453	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

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

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12-16-24	12-16-24	55'	55'	N/A

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

STATIC WATER LEVEL IN COMPLETED WELL (FT): 0'

DATE STATIC MEASURED: 12-16-24

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	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"	PVC 2" SCH40	Thread	2"	SCH40	N/A
45	55	6"	PVC 2" SCH40	Thread	2"	SCH40	.02

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE

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

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

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES **(attach supplemental sheets to fully describe all units)**	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	10	10'	Brown sand with caliche	Y ✓ N	
10	30	20'	Tan fine sand with small rock	Y ✓ N	
30	55	25'	Tan fine sand	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0

5. TEST; RIG SUPERVISION

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

MISCELLANEOUS INFORMATION:

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

Jason Maley

6. SIGNATURE

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

Jason Maley — 12/31/24

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

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

PLUGGING RECORD

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

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4895

Well owner: Devon Energy Resources Phone No.: _____

Mailing address: 205 E. Bender Road

City: Hobbs State: NM Zip code: 88240

II. WELL PLUGGING INFORMATION:

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

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

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

4) Date well plugging began: 12-19-24 Date well plugging concluded: 12-19-24

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

6) Depth of well confirmed at initiation of plugging as: 55 ft below ground level (bgl), by the following manner: Tape

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

8) Date well plugging plan of operations was approved by the State Engineer: 10-30-2024

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

Version: September 8, 2009
Page 1 of 2

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

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	0	77.50	77.50	Tremie Pipe Open hole	
	Wyoming Bentonite				
	55'				

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

III. SIGNATURE:

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

Signature of Well Driller — Date: 12/31/24

Version: September 8, 2009
Page 2 of 2

Received by OCD: 3/13/2025 2:15:08 PM

U.S. Fish and Wildlife Service
National Wetlands Inventory

Thistle Unit 10 Battery Riverine 10,076 ft.

January 2, 2024

Wetlands

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

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

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

Released to Imaging: 3/20/2025 3:49:19 PM

Received by OCD: 3/13/2025 2:15:08 PM

U.S. Fish and Wildlife Service
National Wetlands Inventory

Thistle Unit 10 Battery Pond 22,615 ft.

January 2, 2024

Wetlands

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

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

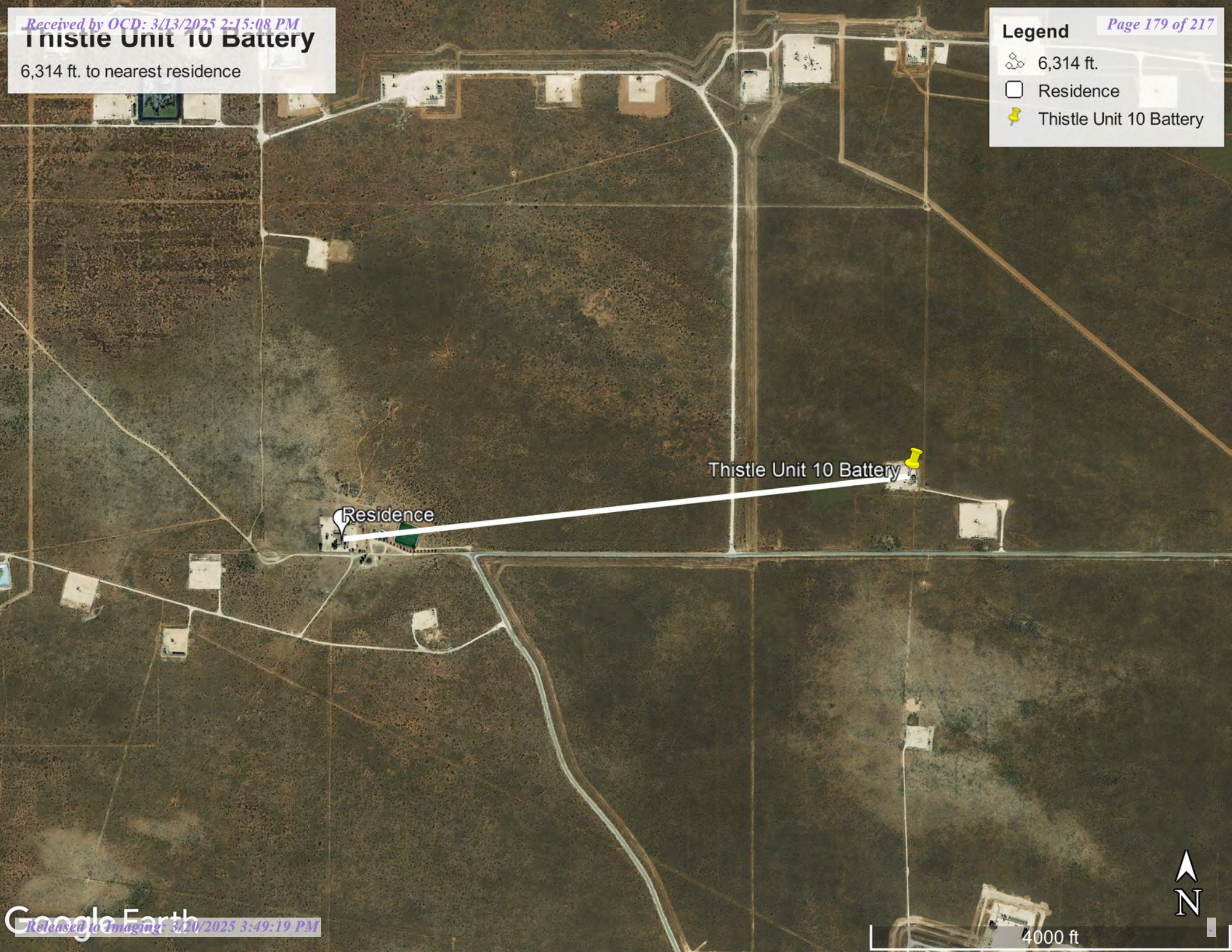
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Released to Imaging: 3/20/2025 3:49:19 PM

Received by OCD: 3/13/2025 2:15:08 PM

Thistle Unit 10 Battery

6,314 ft. to nearest residence



Released to Imaging: 3/20/2025 3:49:19 PM

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 04895	CUB	EXP	0.000	DEVON ENERGY	LE	C 04895 POD1	NA				NW	SE	SW	27	23S	33E	635374.0	3571309.0		46.5
C 02281	CUB	COM	11.300	BRININSTOOL XL RANCH LLC	LE	C 02281				Shallow	SW	SE	SE	28	23S	33E	634495.0	3571183.0 *		888.8
C 02280	CUB	COM	64.500	BRININSTOOL XL RANCH LLC	LE	C 02280				Shallow	SW	NE	SE	28	23S	33E	634489.0	3571586.0 *		907.9
C 02278	CUB	COM	64.500	BRININSTOOL XL RANCH LLC	LE	C 02278				Shallow	SW	SE	NE	28	23S	33E	634484.0	3571989.0 *		1,087.0
C 02279	CUB	COM	64.500	BRININSTOOL XL RANCH LLC	LE	C 02279				Shallow	SW	SE	SW	28	23S	33E	633691.0	3571173.0 *		1,685.9
C 04595	CUB	MON	0.000	DEVON ENERGY	LE	C 04595 POD1	NA				SE	SW	SW	34	23S	33E	635149.5	3569564.9		1,803.3
C 04929	CUB	MON	0.000	DEVON ENERGY PRODUCTION CO. LP	LE	C 04929 POD1	NA				SE	SW	SW	23	23S	33E	636685.4	3572738.9		1,911.4

Record Count: 7

Filters Applied:

UTM Filters (in meters):
Easting: 635367
Northing: 3571355
Radius: 002000

Sorted By: Distance

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

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Point of Diversion Summary

quarters are 1=NW 2=NE 3=SW 4=SE
quarters are smallest to largest

NAD83 UTM in meters

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

* UTM location was derived from PLSS - see Help

Driller License:		**Driller Company:**			
Driller Name:	YANK BRININSTOOL				
Drill Start Date:		**Drill Finish Date:**	1944-12-31	**Plug Date:**	
Log File Date:		**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	7
Casing Size:	6.50	**Depth Well:**	545	**Depth Water:**	400

Meter Information

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

Meter Readings (in Acre-Feet)

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

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

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

YTD Meter Amounts:

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

Water Right Summary

get image list

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

Documents on File

(acre-feet per annum)

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

Current Points of Diversion

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

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

Place of Use

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

Source

Acres	Diversion	CU	Use	Priority	Source	Description
0.000	11.300		COM		GW	

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U.S. Fish and Wildlife Service
National Wetlands Inventory

Thistle Unit 10 Battery Wetland 10,191 ft.

January 2, 2024

Wetlands

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

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

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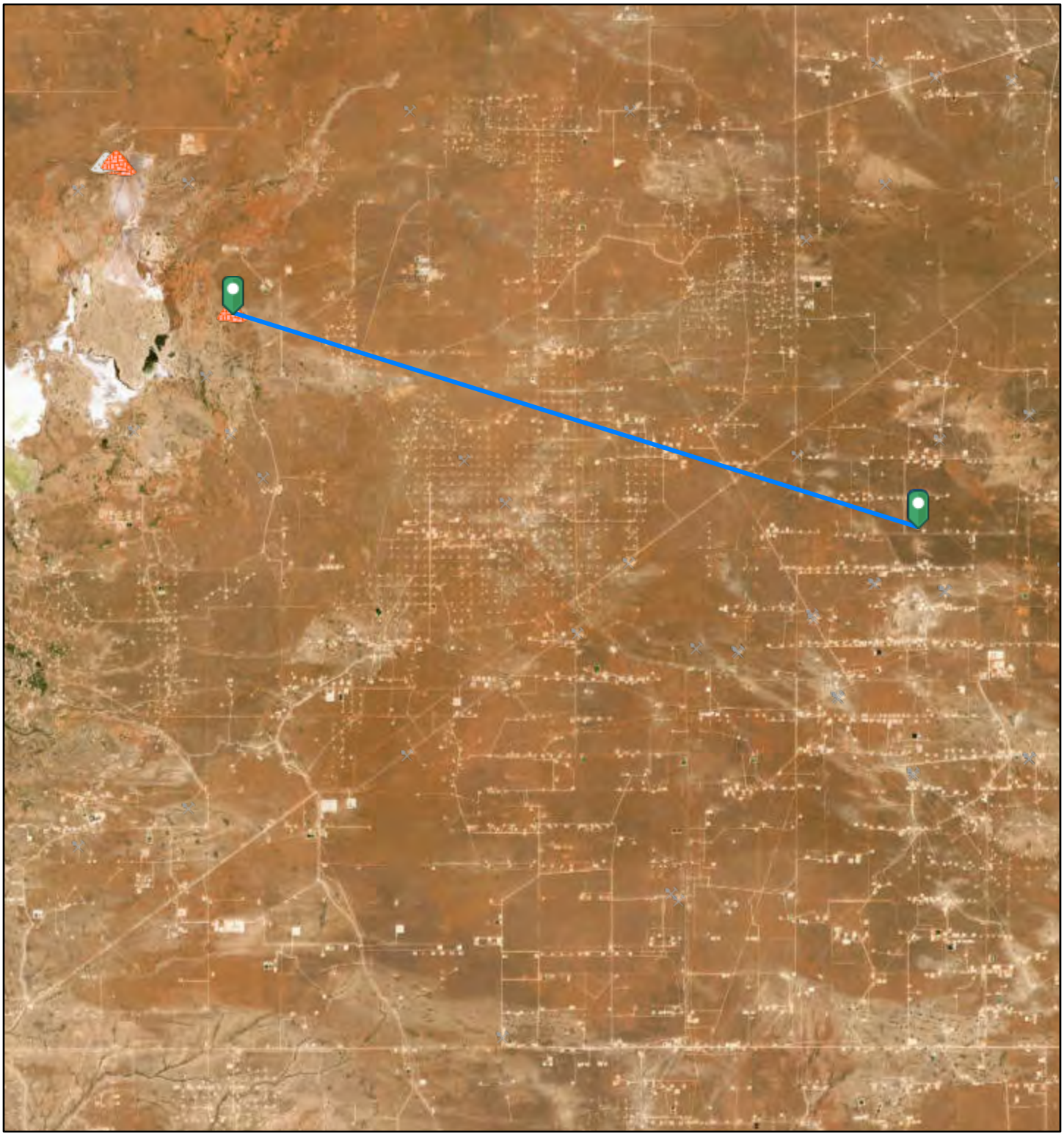
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Thistle Unit 10 Battery Mine 104,310ft



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

1:288,895

0 2 4 8 mi

0 3.25 6.5 13 km

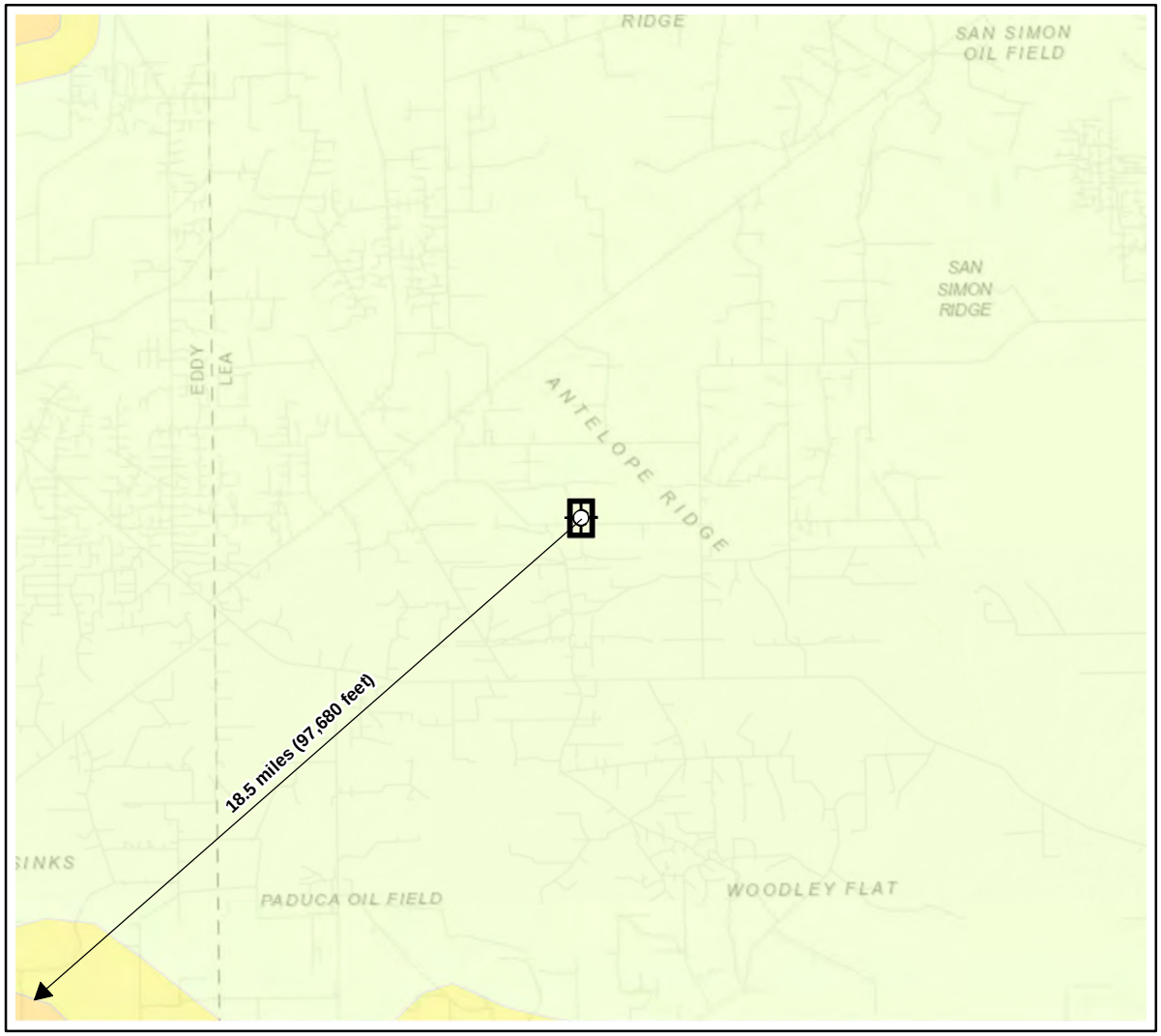
Registered Mines

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

Earthstar Geographics

EMNRD MMD GIS Coordinator

Powered by Esri | 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 (1000 ft.)

Overview Map

0 1 2 4 mi

Detail Map

0 150 300 600 ft

VERTEX

Map Center:
32.2708, -103.5630

NAD 1983 UTM Zone 13N

Date: Jan 03/24

N

Karst Potential Map
Thistle Unit 10 Battery

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 sources from Roswell Field Office, Bureau of Land Mangement, 2020 or United States Department of the Interior, Bureau of Land Management, (2018). Karst Potential.

Document Path: D:\Vertex\GeoRequests\23E-04784\Figure X Karst Potential (23E-04784)ID17607.mxd

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National Flood Hazard Layer FIRMette

FEMA

103°34'4"W 32°16'30"N

103°33'27"W 32°16'N

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

1:6,000

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
- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

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

N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/12/2025 at 3:07 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

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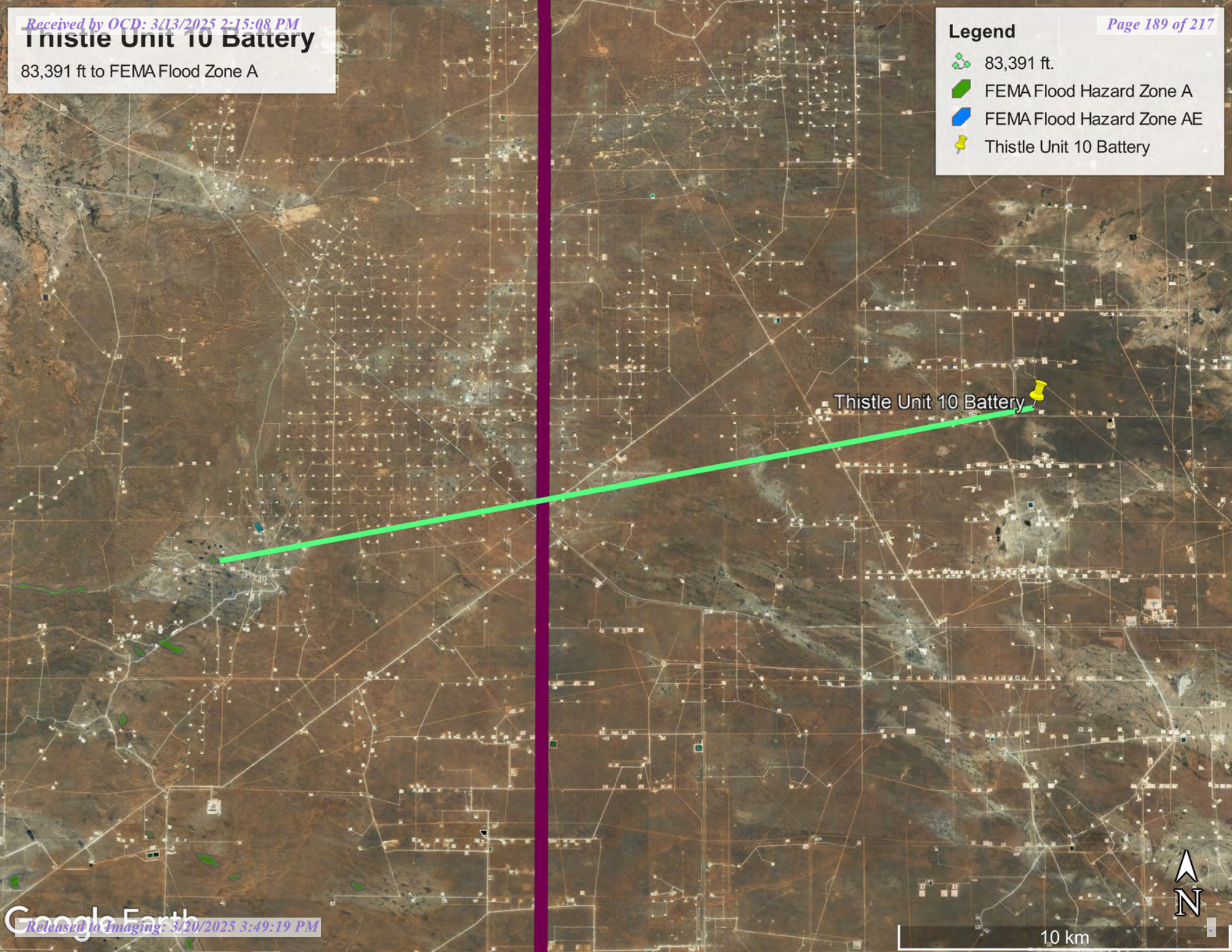
Thistle Unit 10 Battery

83,391 ft to FEMA Flood Zone A



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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for

Lea County, New Mexico

January 2, 2024

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 20, Sep 6, 2023

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

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

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

Map Unit Legend (Thistle Unit 10 Battery)

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

Map Unit Descriptions (Thistle Unit 10 Battery)

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

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development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

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Lea County, New Mexico

BE—Berino-Cacique loamy fine sands association

Map Unit Setting

National map unit symbol: dmpd
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 50 percent
Cacique and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

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

Typical profile

A - 0 to 6 inches: loamy fine sand
Btk - 6 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: B
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Description of Cacique

Setting

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

Typical profile

A - 0 to 12 inches: loamy fine sand
Bt - 12 to 28 inches: sandy clay loam
Bkm - 28 to 38 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 40 inches to petrocalcic
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: C
Ecological site: R070BD004NM - Sandy
Hydric soil rating: No

Minor Components

Maljamar

Percent of map unit: 6 percent
Ecological site: R077CY028TX - Limy Upland 16-21" PZ
Hydric soil rating: No

Palomas

Percent of map unit: 4 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

PU—Pyote and Maljamar fine sands

Map Unit Setting

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

Map Unit Composition

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

Description of Pyote

Setting

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

Typical profile

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

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

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

Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Description of Maljamar

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 10 percent
Ecological site: R070BC022NM - Sandhills
Hydric soil rating: No

USDA Natural Resources Conservation Service

Ecological site R070BD003NM
Loamy Sand

Accessed: 01/02/2024

General information

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

Figure 1. Mapped extent

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

Associated sites

R070BD004NM	**Sandy** Sandy
R070BD005NM	**Deep Sand** Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

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

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

Table 2. Representative physiographic features

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

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity-short duration thunderstorms.
Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes.

The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.
The average frost-free season is 207 to 220 days. The last killing frost being late March or early April and the first killing frost being in later October or early November.
Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Strong winds blow from the southwest from January through June, which accelerates soil drying during a critical period for cool season plant growth.

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

Table 3. Representative climatic features

Frost-free period (average)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

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

Soil features

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

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

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

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

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

Characteristic soils are:
Maljamar
Berino
Parjarito
Palomas
Wink
Pyote

Table 4. Representative soil features

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

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

Ecological dynamics

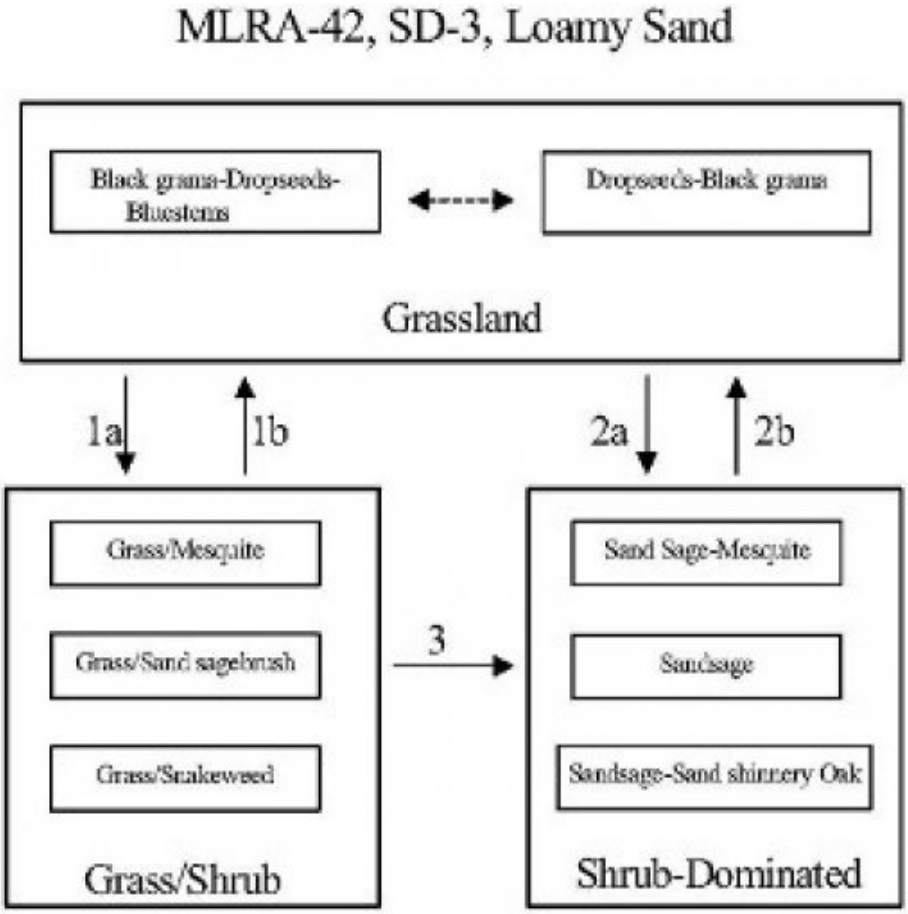
Overview

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

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

State and transition model

Plant Communities and Transitional Pathways (diagram):



1a. Drought, over grazing, fire suppression.
1b. Brush control, prescribed grazing

2.a Severe loss of grass cover, fire suppression, erosion.
2b. Brush control, seeding, prescribed grazing.

3. Continued loss of grass cover, erosion.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

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

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

Table 5. Annual production by plant type

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

Table 6. Ground cover

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

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

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

State 2
Grass/Shrub

Community 2.1
Grass/Shrub

Grass/Shrub

• Black grama/Mesquite community, with some dropseeds, threeawns, and scattered sand shinnery oak
• Grass cover low to moderate

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

State 3
Shrub Dominated

Community 3.1
Shrub Dominated

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

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

Additional community tables

Table 7. Community 1.1 plant community composition

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

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

Animal community

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

Hydrological functions

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.
Hydrologic Interpretations
Soil Series Hydrologic Group
Berino B
Kinco A
Maljamar B
Pajarito B
Palomas B
Wink B
Pyote A

Recreational uses

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

Wood products

This site has no potential for wood products.

Other products

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

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index Ac/AUM
100 - 76 2.3 – 3.5
75 – 51 3.0 – 4.5
50 – 26 4.6 – 9.0
25 – 0 9.1 +

Inventory data references

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains, Major Land Resource Areas of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Eddy County, Lea County, and Chaves County.

Other references

Literature Cited:

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

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

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

McDaniel, Kirk C.; Pieper, Rex D.; Loomis, Lyn E.; Osman, Abdelgader A. 1984. Taxonomy and ecology of perennial snakeweeds in New Mexico. Bulletin 711. Las Cruces, NM: New Mexico State University, Agricultural Experiment Station. 34 p.

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

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

Contributors

Don Sylvester
Quinn Hodgson

Rangeland health reference sheet

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

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

Indicators

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

   _____

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

   _____

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

   _____

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

   _____

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

   _____

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

   _____

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

---

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

---

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

---

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

---

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

---

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

    Dominant:

    Sub-dominant:

    Other:

    Additional:

---

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

---

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

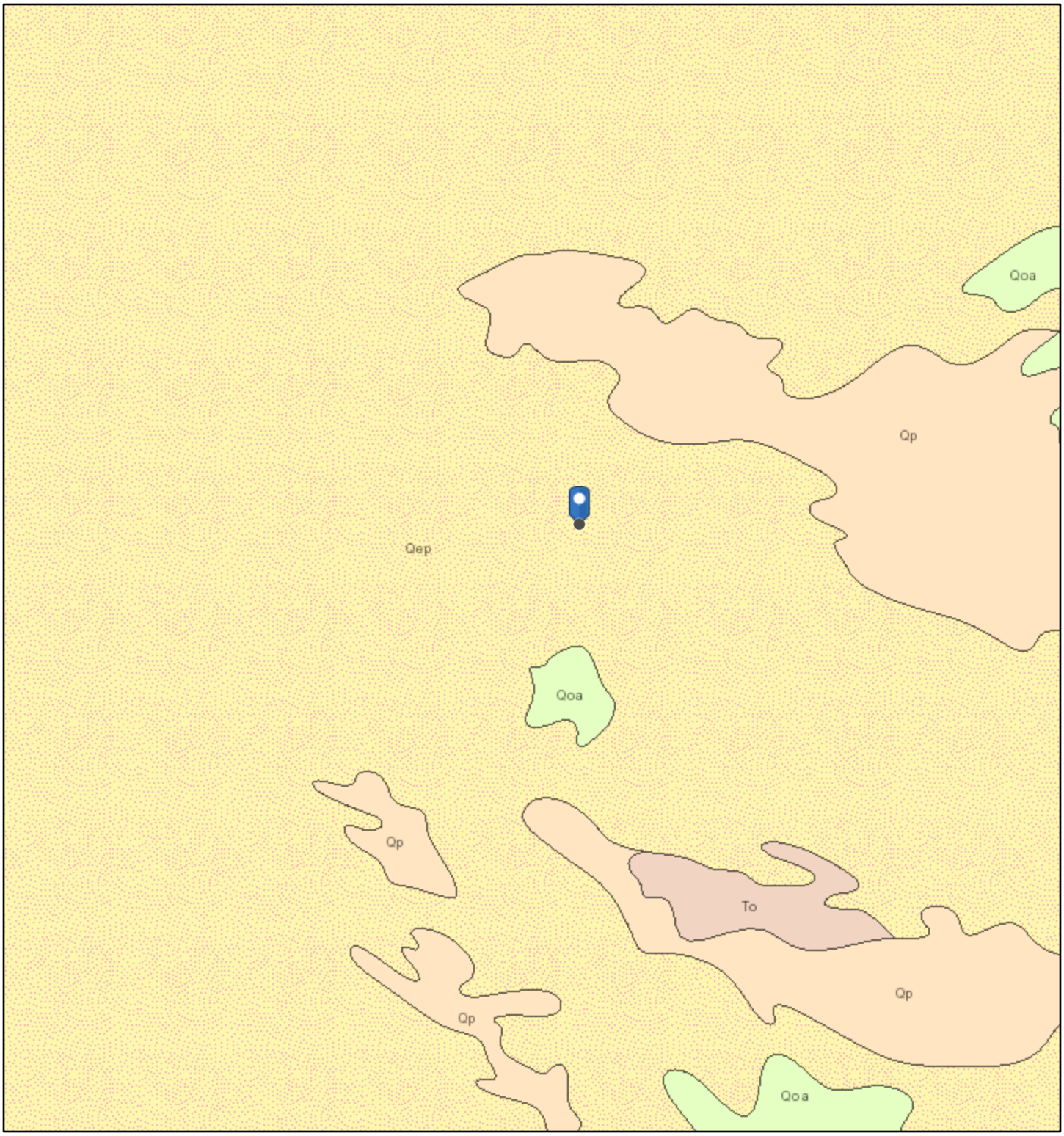
---

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

---

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

Thistle Unit 10 Battery Geology



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

1:144,448

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

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Santa Fe, NM 87505

QUESTIONS

Action 442314

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442314
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

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

Location of Release Source *Please answer all the questions in this group.*	
Site Name	THISTLE UNIT 10 CTB
Date Release Discovered	08/30/2019
Surface Owner	State

Incident Details *Please answer all the questions in this group.*	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release *Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.*	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Lightning | Water Tank | Produced Water | Released: 407 BBL | Recovered: 407 BBL | Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
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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	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 03/13/2025

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QUESTIONS (continued)

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	Action Number: 442314
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
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)	4100
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3400
GRO+DRO (EPA SW-846 Method 8015M)	1800
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	04/07/2025
On what date will (or did) the final sampling or liner inspection occur	08/31/2024
On what date will (or was) the remediation complete(d)	07/06/2025
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	324
What is the estimated volume (in cubic yards) that will be remediated	12
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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	Action Number: 442314
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

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	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
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: 03/13/2025
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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	Action Number: 442314
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

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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General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442314
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	***{Unavailable.}***

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 442314

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Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442314
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	The Remediation Plan is Conditionally Approved. Floor confirmation samples should be delineated/excavated to meet closure criteria standards from Table 1 of the OCD Spill Rule for site assessment/characterization/proven depth to water determination. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Sidewall/Edge samples should be delineated/excavated to 10,000 mg/kg for chlorides and 2,500 mg/kg for TPH to define the edge of the release. All sidewall samples should be taken from the sidewall of the excavation. Please make sure that the edge of the release extent is accurately defined. All off-pad areas must meet reclamation standards set forth in the OCD Spill Rule. The work will need to occur in 90 days from receipt of this determination.	3/20/2025