Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2307924732
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	180 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☒ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2307924732
District RP	
Facility ID	
Application ID	

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

Printed Name: Dale Woodall Title: Environmental Professional

Signature: Dale Woodall Date: 10/11/2023

email: Dale.woodall@dvn.com Telephone 575-748-1838

OCD Only

Received by: Shelly Wells Date: 10/11/2023

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2307924732
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Dale Woodall Title: Environmental Professional

Signature: Dale Woodall Date: 10/11/2023

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: Shelly Wells Date: 10/11/2023

- [ ] Approved
- [ ] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature: Date:

Incident ID	nAPP2307924732
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Dale Woodall Title: Env. Professional

Signature: Dale Woodall Date: 10/11/2023

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: Shelly Wells Date: 10/11/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Incident Number: nAPP2307924732

Release Assessment and Closure

Bindel 4 Fee 1 Battery

Section 04, Township 23 South, Range 27 East

API: 30-015-45042

County: Eddy

Vertex File Number: 23E-01581

Prepared for:

Devon Energy Production Company, LP

Prepared by:

Vertex Resource Services Inc.

Date:

September 2023

Release Assessment and Closure
Bindel 4 Fee 1 Battery
Section 04, Township 23 South, Range 27 East
API: 30-015-45042
County: Eddy

Prepared for:
Devon Energy Production Company, LP
6488 Seven Rivers Highway
Artesia, New Mexico 88210

New Mexico Oil Conservation Division – District 2
811 S. 1st Street
Artesia, New Mexico 88210

Prepared by:
Vertex Resource Services Inc.
3101 Boyd Drive
Carlsbad, New Mexico 88220

Stephanie McCarty

Stephanie McCarty, B.Sc.
ENVIRONMENTAL TECHINICIAN, REPORTING

September 21, 2023
Date

Kent Stallings P.G.

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

September 30, 2023
Date

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1.0 Introduction

Devon Energy Production Company, LP (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for a produced water release that occurred on March 18, 2023, at Bindel 4 Fee 1 Battery API 30-015-45042 (hereafter referred to as the "site"). Devon submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 2 on March 22, 2023. Incident ID number nAPP2307924732, was assigned to this incident.

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

2.0 Incident Description

The release occurred on March 18, 2023, due to a drain line which came apart from the bottom of a 3-phase separator releasing fluid into containment and over spraying outside of containment. The incident was reported on March 22, 2023, and involved the release of 271 barrels (bbl.) of produced water. During initial clean-up, 270 bbl. of produced water was recovered from containment. Additional details relevant to the release are presented in the C-141 Report (Appendix A).

3.0 Site Characteristics

The site is located approximately 1.96 miles southeast of Carlsbad, New Mexico at 32.336466 ° N, 104.188824 ° W (Google Inc., 2023). The legal location for the site is Section 04, Township 23 South and Range 27 East in Eddy County, New Mexico. The release area is located on private property. An aerial photograph and characterization sampling site schematic is presented on Figure 1. Daily Field Reports (DFRs) with site photographs are included in Appendix C.

The location is typical of oil and gas exploration and production sites in the Permian Basin and is currently used for oil and gas production. The following sections specifically describe the release area at the site or in proximity to the constructed pad (Figure 1).

The *Geological Map of New Mexico* (New Mexico Bureau of Geology and Mineral Resources, 2023) indicates the surface geology at the site primarily comprises Qp – Piedmont alluvial deposits (Holocene to lower Pleistocene). The soil at the site is characterized as Reagan loam (United States Department of Agriculture, Natural Resources Conservation Service, 2023). Additional soil characteristics include well drained soil with low runoff and moderate available moisture levels in the soil profile. The karst geology potential for the site is medium (United States Department of the Interior, Bureau of Land Management, 2018).

The surrounding landscape is associated with uplands landforms, mainly on hill slopes, such as ridges, plains and terraces, and some fan piedmont remnants, at elevations of 2,842 to 5000 feet above sea level. The climate is semiarid

with average annual precipitation ranging between 8 and 14 inches. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be grasses with shrubs. Tobosa, black grama and blue grama are historically dominant species in this area. Overgrazing and extended drought can reduce grass cover, transitioning into a burrograss-grassland state with creosotebush, tarbush or mesquite expansion (United States Department of Agriculture, Natural Resources Conservation Service, 2023). Limited to no vegetation is allowed to grow on the compacted production pad, right-of-way and access road.

4.0 Closure Criteria Determination

The nearest wells within 0.5 miles to the site, according to the New Mexico Office of the State Engineer, show an average depth to groundwater of 79 below ground surface (bgs; New Mexico Office of the State Engineer, 2023b). Data from 1998 shows the United States Geological Survey well, USGS 322008104105701, located approximately 0.4 miles southeast of the site, last recorded a depth to groundwater 66 feet bgs (United States Geological Survey, 2023). Information pertaining to the depth to groundwater determination is included in Appendix B.

There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is an irrigation canal that leads into the Pecos River. It is identified in the National Wetlands Inventory approximately 0.21 miles east of the site (United States Fish and Wildlife Service, 2023).

At the site, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Table 1. Closure Criteria Determination			
Site Name: BINDEL 4 FEE 1 BATTERY			
Spill Coordinates: 32.336466, -104.188824			
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater	**<50**	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	1,108	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	49,474	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	705	feet
5	i) Within 500 feet of a spring or a private, domes	2,136	feet
	ii) Within 1000 feet of any fresh water well or spring	**998**	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	20,909	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Medium	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	Reagan Loam	
12	Ecological Classification	Loamy	
13	Geology	Qp	Piedmont alluvial deposits
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	

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

Table 2. Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 50 feet	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

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

5.0 Remedial Actions Taken

An initial site inspection of the release area was completed on March 27, 2023, and characterization was completed between April 7 and May 31, 2023, which identified the area of the release specified in the initial C-141 Report. The impacted area was determined to be approximately 103 feet long and 54 feet wide; the total affected area was 3,209 square feet. The impacted area per closure criteria was determined to be approximately [97 feet long and 73 feet] wide with a total affected area of [4,075] square feet. The DFRs associated with the site inspections are included in Appendix C.

Remediation efforts began on July 26, 2023, and were finalized on September 7, 2023. Vertex personnel supervised the excavation of impacted soils. Field screening was completed on a total of 52 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and silver nitrate titration (chlorides). Field screening results were used to identify areas requiring further remediation. Soils were removed to a maximum depth of 6.5 feet bgs. A reassessment of BH23-01 during excavation to determine the extent of excavation to depths of at least 6 feet exhibited lab results below closure criteria and efforts where focused around BH23-02 and BH23-03. Confirmation laboratory results are summarized in Table 4 and an excavation and confirmation sampling site schematic is presented on Figure 2. Sampling and DFRs documenting various phases of the remediation are presented in Appendix C.

Notification that a liner inspection was scheduled to be completed was provided to the NMOCD on April 4, 2023. Visual observation of the liner was completed on all sides and the base of the containment, around equipment, and of all seams in the liner. As evidenced in the DFR (Appendix C), liner integrity was confirmed. The Liner Inspection Notification email is presented in Appendix D.

Notification that confirmatory samples were being collected was provided to the NMOCD on August 7 and 24, and September 1, 2023 (Appendix D). Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 52 samples were collected for laboratory analysis following NMOCD

soil sampling procedures. Samples were submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Laboratory results are presented in Table 4, and the laboratory data reports are included in Appendix E. All confirmatory samples collected and analyzed were below closure criteria for the site.

6.0 Closure Request

The release area was fully delineated, remediated and backfilled with local soils by September 7, 2023. Confirmatory samples were analyzed by the laboratory and found to be below allowable concentrations as per the NMAC Closure Criteria for Soils Impacted by a release location where depth to ground water is <50 feet bgs. Based on these findings, Devon requests that this release be closed.

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

7.0 References

Google Inc. (2023). *Google Earth Pro (Version 7.3.3)* [Software]. Retrieved from https://earth.google.com

New Mexico Bureau of Geology and Mineral Resources. (2023). *Interactive Geologic Map*. Retrieved from https://maps.nmt.edu/

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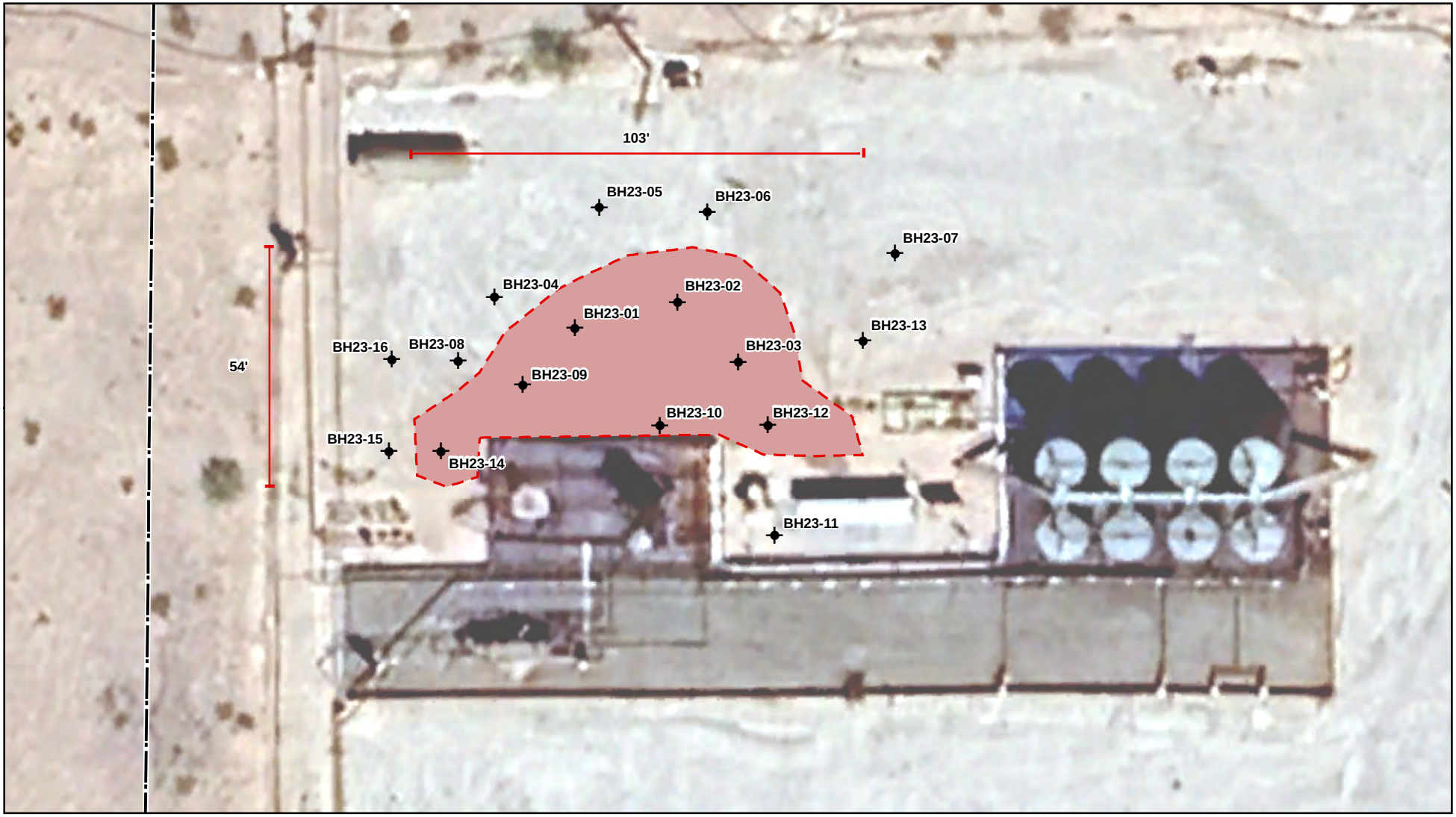
United States Geological Survey. (2023). *National Water Information System: Web Interface*. Retrieved from https://waterdata.usgs.gov/nwis

8.0 Limitations

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

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

FIGURES



Borehole | Approximate Lease Boundary | Release Area (~3,209 sq. ft.)

VERTEX

0 10 20 40 Feet

Map Center:
Lat/Long: 32.337291, -104.189064

NAD 1983 UTM Zone 13N
Date: Jun 09/23

N

Characterization Sampling Site Schematic
Bindel 4 Fee 1 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: Image from Google Earth, 2023; georeferenced by Vertex Professional Services Ltd. (Vertex). Site features from GPS by Vertex, 2023.

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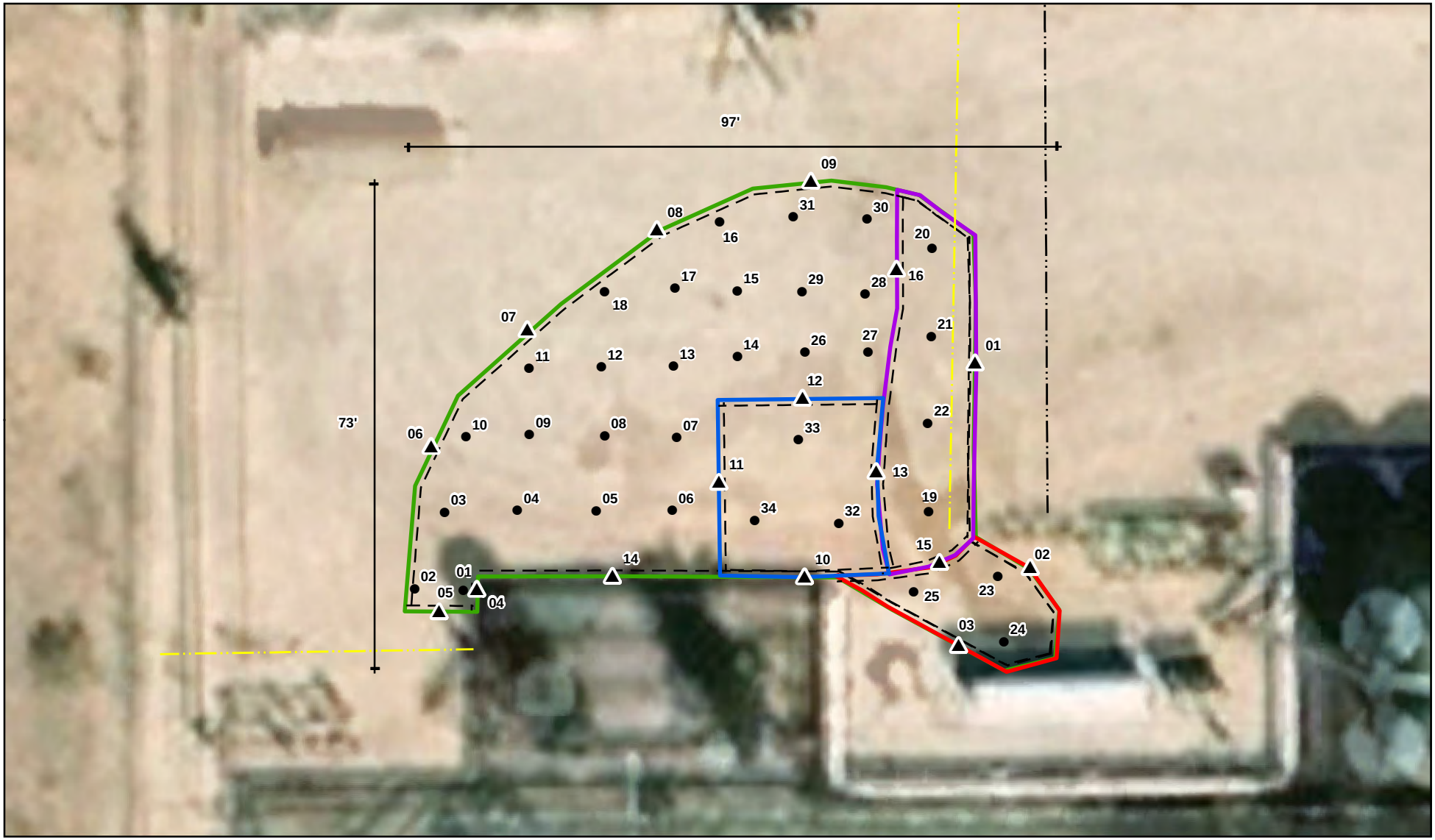
Document Path: \\vtx-s-fs01.corp.internalshared\vps\04 - Geomatics\1-Projects_US PROJECTS\Devon Energy Corporation\2023\23E-01581 - Bindel 4 Fee 1\Figure 1 Characterization Sampling Site Schematic Bindel 4 Fee 1.mxd



● Base Sample (Prefixed by "BES23-")

▲ Wall Sample (Prefixed by "WES23-")

Underground Gas Line

Underground Line, Unmarked

Excavation to 1 ft. bgs (~2,452 sq.ft.)

Excavation to 2 ft. bgs (~327 sq.ft.)

Excavation to 4 ft. bgs (~673 sq.ft.)

Excavation to 6.5 ft. bgs (~623 sq.ft.)

VERTEX

0 5 10 20 ft

Map Center:
Lat/Long: 32.337340, -104.189130

NAD 1983 UTM Zone 13N
Date: Sep 19/23

N

Bindel 4 Fee 1 Battery
Confirmation Sampling Site Schematic

FIGURE:
2

devon

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

Note: Image from Google Earth, 2023; georeferenced by Vertex Professional Services Ltd. (Vertex), 2023. Site features from GPS, Vertex, 2023.

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Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\2023\23E-01581 - Bindel 4 Fee 1 Battery\Figure 2 Confirmation Sampling Site Schematic 23E-01581 #16945.mxd

TABLES

Table 3. Initial Characterization Laboratory Results - Depth to Groundwater <50 feet bgs
Devon Energy Production Company, LP
Bindel 4 Fee 1 Battery
NMOCD Tracking #: nAPP2307924732
Project #: 23E-01581
Lab Reports: 2304492, 2305987, 2306058 and 2308469

Sample Description			Petroleum Hydrocarbons										Inorganic
Sample ID	Depth (ft)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	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)	(mg/kg)	(mg/kg)	(mg/kg)
Criteria	NMOCD - NMAC <50 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	-	100	600
2023 Boreholes													
BH23-01	0	April 7, 2023	2.6	68	12	230	**312.6**	5500	16000	2600	**21500**	**24100**	110
	1	April 7, 2023	2.7	54	9.5	160	**226.2**	4700	8100	1200	**12800**	**14000**	ND
	2	May 31, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110
		August 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	73
	3	August 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	4	May 31, 2023	ND	ND	ND	ND	ND	15	860	240	**875**	**1115**	ND
		August 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6	May 31, 2023	ND	ND	ND	ND	ND	5.8	350	100	**355.8**	**455.8**	ND
	8	May 31, 2023	ND	ND	ND	ND	ND	ND	37	ND	ND	ND	ND
BH23-02	0	April 7, 2023	0.22	13	5.8	94	**113.02**	1400	8800	1500	**10200**	**11700**	**3900**
	1	April 7, 2023	0.20	12	5.5	93	**110.7**	1300	6500	930	**7800**	**8730**	**1600**
	2	May 31, 2023	ND	ND	ND	ND	ND	ND	130	ND	**130**	**130**	**1000**
	4	May 31, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**660**
	6	May 31, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	440
	8	May 31, 2023	ND	ND	ND	ND	ND	ND	70	ND	70	70	460
	9	May 31, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	440
BH23-03	0	April 7, 2023	0.26	14	5.6	100	**119.86**	2500	12000	2200	**14500**	**16700**	**680**
	1	April 7, 2023	0.31	15	3.5	83	**101.81**	1900	9500	1800	**11400**	**13200**	**520**
	2	May 31, 2023	ND	ND	ND	ND	ND	5.7	610	210	**615.7**	**825.7**	110
	4	May 31, 2023	ND	ND	ND	ND	ND	ND	92	ND	92	92	160
	6	May 31, 2023	ND	ND	ND	ND	ND	ND	11	ND	11	11	110
BH23-04	0	April 7, 2023	ND	ND	ND	ND	ND	ND	41	ND	41	41	ND
	1	April 7, 2023	ND	ND	ND	ND	ND	ND	47	ND	47	47	72
BH23-05	0	April 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1	April 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH23-06	0	April 7, 2023	ND	ND	ND	ND	ND	ND	15	ND	15	15	ND
	1	April 7, 2023	ND	ND	ND	ND	ND	ND	14	ND	14	14	ND
BH23-07	0	April 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1	April 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	62
BH23-08	0	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	77
	2	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	250
BH23-09	0	May 16, 2023	ND	ND	ND	ND	ND	ND	170	63	**170**	**233**	430
	2	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150
	4	May 31, 2023	ND	ND	ND	ND	ND	ND	16	ND	16	16	310
	6	May 31, 2023	ND	ND	ND	ND	ND	ND	10	ND	10	10	410
BH23-10	0	May 16, 2023	ND	ND	ND	ND	ND	6.9	2500	680	**2506.9**	**3186.9**	ND
	2	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	380
BH23-11	0	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	61
	1.5	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH23-12	0	May 16, 2023	ND	ND	ND	ND	ND	ND	48	150	48	**198**	410
	2	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	87
BH23-13	0	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH23-14	0	May 16, 2023	ND	ND	ND	ND	ND	ND	140	100	**140**	**240**	180
	2	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
BH23-15	0	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	180
	2	May 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	270
BH23-16	0	May 16, 2023	-	-	-	-	-	-	-	-	-	-	-
	2	May 16, 2023	-	-	-	-	-	-	-	-	-	-	-

NMAC - New Mexico Administrative Code (Title 19, Chapter 15, Part 29; 2018)
ND - Not Detected at the Reporting Limit
- Denotes no standard/not analyzed
Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)
Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria (off-pad)

VERTEX

Table 4. Confirmation Laboratory Results - Depth to Groundwater <50 feet bgs
Devon Energy Production Company, LP
Bindel 4 Fee 1 Battery
NMOCD Tracking #: nAPP2307924732
Project #: 23E-01581
Lab Reports: 2308661, 2308723, 2308791, 2308871, 2308966, 2308A28, 2308G12 and 2309454

Sample Description			Petroleum Hydrocarbons										Inorganic
Sample ID	Depth (ft)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	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)	(mg/kg)	(mg/kg)	(mg/kg)
Criteria	NMOCD - NMAC <50 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	-	100	600
2023 Confirmation													
WES23-01	0 - 4	August 9, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	190
WES23-02	0 - 2	August 10, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	430
WES23-03	0 - 2	August 10, 2023	ND	ND	ND	ND	ND	ND	11	ND	11	11	110
WES23-04	0 - 1	August 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**670**
	0 - 1	August 28, 2023	ND	ND	ND	ND	ND	ND	140	87	140	**227**	**340**
	0 - 1	September 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**120**
WES23-05	0 - 1	August 14, 2023	ND	ND	ND	ND	ND	ND	24	ND	24	24	340
WES23-06	0 - 1	August 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	160
WES23-07	0 - 1	August 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110
WES23-08	0 - 1	August 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
WES23-09	0 - 1	August 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	190
WES23-10	0 - 6.5	August 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WES23-11	0 - 6.5	August 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	540
WES23-12	0 - 6.5	August 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	360
WES23-13	0 - 4	August 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	360
WES23-14	0 - 1	August 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	470
WES23-15	0 - 1	August 15, 2023	ND	ND	ND	ND	ND	ND	18	ND	18	18	ND
WES23-16	0 - 4	August 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	190
BES23-01	1	August 9, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	120
BES23-02	1	August 9, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	96
BES23-03	1	August 9, 2023	ND	ND	ND	ND	ND	ND	12	ND	12	12	92
BES23-04	1	August 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	190
BES23-05	1	August 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	250
BES23-06	1	August 11, 2023	ND	ND	ND	ND	ND	ND	34	ND	34	34	120
BES23-07	1	August 9, 2023	ND	ND	ND	ND	ND	ND	18	ND	18	18	80
BES23-08	1	August 9, 2023	ND	ND	ND	ND	ND	ND	57	ND	57	57	100
BES23-09	1	August 9, 2023	ND	ND	ND	ND	ND	ND	29	ND	29	29	170
BES23-10	1	August 9, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140
BES23-11	1	August 9, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
BES23-12	1	August 9, 2023	ND	ND	ND	ND	ND	ND	18	ND	18	18	130
BES23-13	1	August 9, 2023	ND	ND	ND	ND	ND	ND	30	ND	30	30	72
BES23-14	1	August 9, 2023	ND	ND	ND	ND	ND	ND	15	ND	15	15	84
BES23-15	1	August 9, 2023	ND	ND	ND	ND	ND	ND	15	ND	15	15	85
BES23-16	1	August 9, 2023	ND	ND	ND	ND	ND	ND	57	ND	57	57	63
BES23-17	1	August 9, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	91
BES23-18	1	August 11, 2023	ND	ND	ND	ND	ND	ND	11	ND	11	11	130
BES23-19	4	August 9, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	480
BES23-20	4	August 9, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
BES23-21	4	August 9, 2023	ND	ND	ND	ND	ND	ND	21	ND	21	21	320
BES23-22	4	August 10, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	87
BES23-23	2	August 10, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	320
BES23-24	2	August 10, 2023	ND	ND	ND	ND	ND	ND	29	ND	29	29	65
BES23-25	2	August 10, 2023	ND	ND	ND	ND	ND	ND	45	ND	45	45	ND
BES23-26	1	August 11, 2023	ND	ND	ND	ND	ND	ND	18	ND	18	18	160
BES23-27	1	August 11, 2023	ND	ND	ND	ND	ND	ND	23	ND	23	23	110
BES23-28	1	August 11, 2023	ND	ND	ND	ND	ND	ND	11	ND	11	11	200
BES23-29	1	August 11, 2023	ND	ND	ND	ND	ND	ND	9.3	ND	9.3	9.3	230
BES23-30	1	August 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	340
BES23-31	1	August 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	470
BES23-32	6.5	August 15, 2023	ND	ND	ND	ND	ND	ND	27	ND	27	27	480
BES23-33	6.5	August 15, 2023	ND	ND	ND	ND	ND	ND	51	ND	51	51	150
BES23-34	6.5	August 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	410

NMAC - New Mexico Administrative Code (Title 19, Chapter 15, Part 29; 2018)
ND - Not Detected at the Reporting Limit
- Denotes no standard/not analyzed
Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)
Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria (off-pad)

VERTEX

APPENDIX A - NMOCD C-141 Report

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

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

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

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

- ☐ The source of the release has been stopped.
- ☐ The impacted area has been secured to protect human health and the environment.
- ☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: _____ Title: _____

Signature: Dale Woodall _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 03/22/2023

Incident ID	nAPP2307924732
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	180 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☒ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2307924732
District RP	
Facility ID	
Application ID	

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

Printed Name: Dale Woodall Title: Environmental Professional

Signature: Dale Woodall Date: 10/11/2023

email: Dale.woodall@dvn.com Telephone 575-748-1838

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2307924732
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Dale Woodall Title: Environmental Professional

Signature: Dale Woodall Date: 10/11/2023

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

- [ ] Approved
- [ ] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2307924732
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Dale Woodall Title: Env. Professional

Signature: Dale Woodall Date: 10/11/2023

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

APPENDIX B – Closure Criteria Research Documentation

Table 1. Closure Criteria Determination			
Site Name: BINDEL 4 FEE 1 BATTERY			
Spill Coordinates: 32.336466, -104.188824			
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater	**<50**	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	1,108	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	49,474	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	705	feet
5	i) Within 500 feet of a spring or a private, domest	2,136	feet
	ii) Within 1000 feet of any fresh water well or spring	**998**	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	20,909	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Medium	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	Reagan Loam	
12	Ecological Classification	Loamy	
13	Geology	Qp	Piedmont alluvial deposits
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 00281		C	ED	4	4	2	04	23S	27E	576459	3577846*	211	150		
C 00400		C	ED	4	4	2	04	23S	27E	576459	3577846*	211	145		
C 00546		C	ED	1	3	1	03	23S	27E	576663	3578051*	325		123	
C 03476 POD1		C	ED	2	2	2	04	23S	27E	576488	3578407	414	200		
C 01971		C	ED		1	1	03	23S	27E	576762	3578354*	538	164	145	19
C 01989		C	ED		1	1	03	23S	27E	576762	3578354*	538	168	88	80
C 02146		C	ED		1	1	03	23S	27E	576762	3578354*	538	125	125	0
C 02148		C	ED		1	1	03	23S	27E	576762	3578354*	538	125	70	55
C 02150		C	ED		1	1	03	23S	27E	576762	3578354*	538	125	70	55
C 02154		C	ED		1	1	03	23S	27E	576762	3578354*	538	125	70	55
C 02166		C	ED		1	1	03	23S	27E	576762	3578354*	538	140	75	65
C 01973		C	ED	1	1	1	03	23S	27E	576661	3578453*	539	127	90	37
C 00515		CUB	ED	3	4	4	33	22S	27E	576254	3578650*	635	180	80	100
C 00515 CLW197977	O	CUB	ED	3	4	4	33	22S	27E	576254	3578650*	635	180		
C 00071		CUB	ED	2	1	3	03	23S	27E	576865	3577649*	643	205		
C 01203		C	ED		4	1	03	23S	27E	577168	3577958*	831	100	35	65
C 03290		C	ED	1	3	3	34	22S	27E	576715	3578778	846	127	72	55
C 01700		C	ED		3	3	34	22S	27E	576760	3578756*	847	205	118	87

C_01801		C	ED		3	3	34	22S	27E	576760	3578756*	847	220		
C_03274		C	ED	4	4	3	33	22S	27E	575643	3578641*	932	130	81	49
C_03000 POD2		C	ED	2	3	3	03	23S	27E	576866	3577246	936	150	80	70
C_03000	R	C	ED	2	3	3	03	23S	27E	576866	3577246*	936	52	19	33
C_01172		CUB	ED	3	4	3	34	22S	27E	577064	3578661*	967	220		
C_03043		C	ED	2	3	3	34	22S	27E	576859	3578855*	983	118	68	50
C_00644		CUB	ED	3	2	4	33	22S	27E	576251	3579056*	1039	190		
C_00644 CLW198574	O	CUB	ED	3	2	4	33	22S	27E	576251	3579056*	1039	100		
C_00743		C	ED				03	23S	27E	577370	3577750*	1065	125	60	65
C_00287		CUB	ED	3	1	3	34	22S	27E	576657	3579061*	1088			
C_04480 POD1		C	ED	4	1	4	33	22S	27E	576065	3579083	1098	140	89	51
C_02977		C	ED	1	1	2	03	23S	27E	577470	3578466*	1215	179	125	54
C_02433		C	ED	4	3	3	33	22S	27E	575238	3578636*	1261	96	64	32
C_02324		C	ED		1	2	03	23S	27E	577571	3578367*	1279	125	75	50
C_02412		C	ED	2	3	3	33	22S	27E	575238	3578836*	1370	251	65	186
C_03738 POD1		C	ED	1	1	3	34	22S	27E	576785	3579382	1433	137	68	69
C_04492 POD1		C	ED	2	4	2	05	23S	27E	574903	3578050	1436			
C_00030		CUB	ED	1	2	3	34	22S	27E	577062	3579267*	1441	205	50	155
C_00030 CLW193032	O	CUB	ED	1	2	3	34	22S	27E	577062	3579267*	1441	205		
C_02230		C	ED				33	22S	27E	575742	3579340*	1448	260	90	170
C_02449		C	ED				33	22S	27E	575742	3579340*	1448	300	70	230
C_00215		CUB	ED	4	3	2	33	22S	27E	576044	3579458*	1467	180	150	30
C_03013		C	ED	4	1	3	33	22S	27E	575237	3579043*	1503	118	63	55
C_01670		C	ED	4	4	2	05	23S	27E	574842	3577826*	1509	385		
C_00109 CLW203096	O	CUB	ED	1	3	3	04	23S	27E	575051	3577226*	1513	260		
C_00191		CUB	ED	3	3	2	33	22S	27E	575844	3579458*	1520	200		

C 02696	C	ED	1	3	3	33	22S	27E	575038	3578836*	1535	124	71	53
C 03072	C	ED	3	4	2	03	23S	27E	577873	3577869*	1541	119	72	47
C 02392	C	ED		4	2	33	22S	27E	576350	3579564*	1544	150	48	102
C 03799 POD1	C	ED	1	3	3	04	23S	27E	574981	3577170	1602	200	51	149

Average Depth to Water: **79 feet**

Minimum Depth: **19 feet**

Maximum Depth: **150 feet**

Record Count: 48

UTMNAD83 Radius Search (in meters):

Easting (X): 576339 **Northing (Y):** 3578020 **Radius:** 1610

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

9/13/23 4:35 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 00281	4	4	2	04	23S	27E	576459	3577846*

Driller License: **Driller Company:**

Driller Name: HOWARD HEMLER

Drill Start Date:		**Drill Finish Date:**		**Plug Date:**	
Log File Date:		**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	150 feet	**Depth Water:**	

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

Bindel 4 Fee 1H Release

USGS 322008104105701 well: 0.4 Mile (2,136 ft)
Radius: 0.5 Mile

National Water Information System: Web Interface

USGS Water Resources

Data Category: Site Information GO | Geographic Area: United States GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

USGS 322008104105701 23S.27E.03.13433

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°20'08", Longitude 104°10'57" NAD27
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 205 feet
Land surface altitude: 3,115 feet above NAVD88.
Well completed in "Other aquifers" (N9999OTHER) national aquifer.
Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits" (110AVMB) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1978-01-12	1998-01-07	7
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

---

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms

Subscribe for system changes
News

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=322008104105701

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2023-03-29 16:30:35 EDT
0.27 0.26 caww01

U.S. Fish and Wildlife Service
National Wetlands Inventory

Bindel 4 Fee 1H Irrigation Canal 0.21 Miles

March 29, 2023

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.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Bindel 4 Fee 1H Lake 9.37 Miles

March 29, 2023

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.

Bindel 4 Fee 1H Release

Residence: (705 ft)
Yellow radius: 300 ft

Bindel 4 Fee 1H Release

C 00098 A-S-2 well: 0.19 Mile (998 ft)
Yellw Radius: 1000 ft

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 00098 A-S-2	4	4	2	04	23S	27E	576459	3577846*

Driller License: **Driller Company:**

Driller Name:

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

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

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

Casing Size: **Depth Well:** **Depth Water:**

Meter Number: 477 **Meter Make:** WATER SPEC

Meter Serial Number: 940101 **Meter Multiplier:** 1.0000

Number of Dials: 3 **Meter Type:** Diversion

Unit of Measure: Acre-Feet **Return Flow Percent:**

Usage Multiplier: **Reading Frequency:**

Meter Readings (in Acre-Feet)

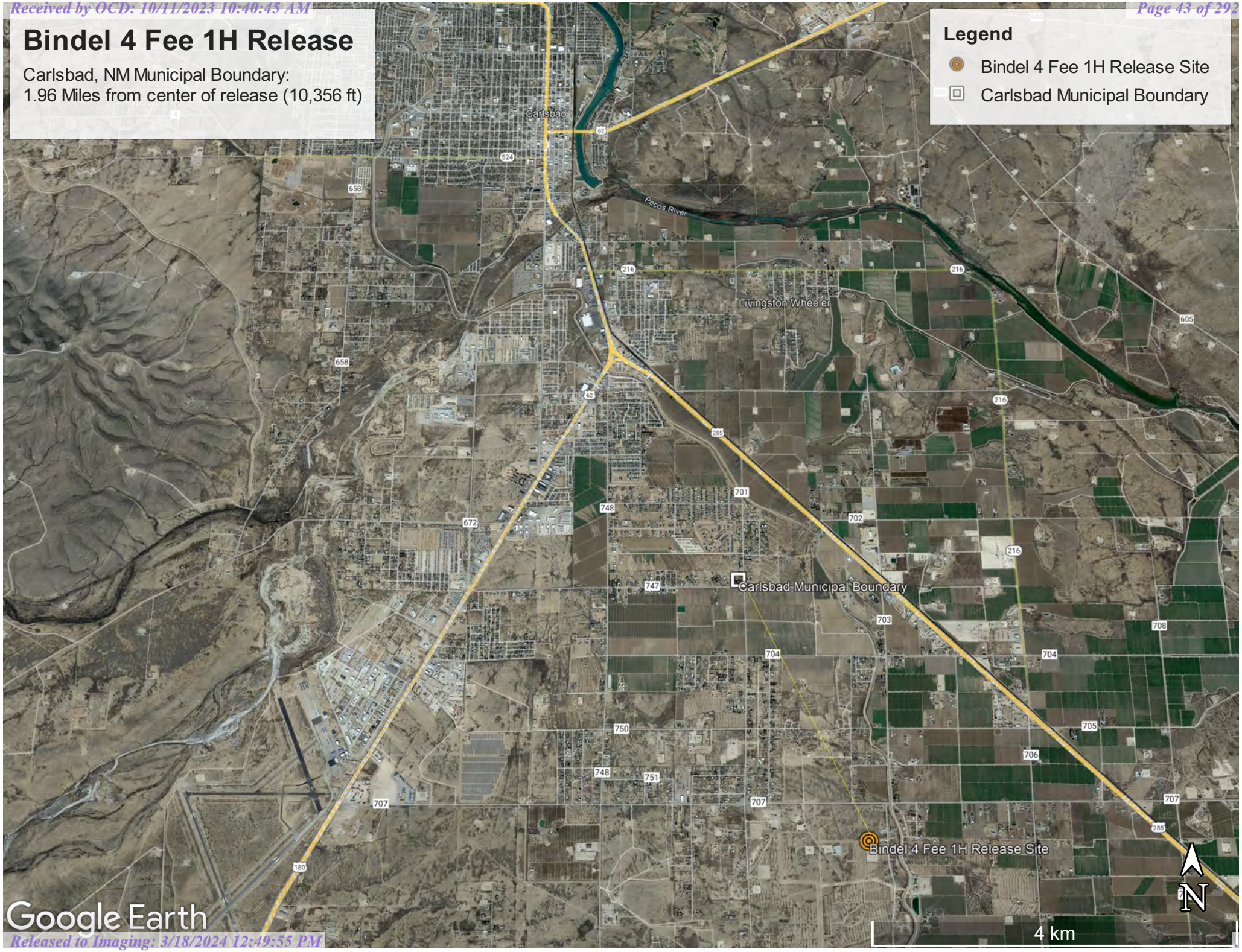
Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
12/30/1998	1999	216	A	ms		0	
07/20/1999	1999	216	A	ms		0	
10/05/1999	1999	216	A	ms		0	
12/27/1999	1999	216	A	ms		0	
04/05/2000	2000	216	A	mb		0	
11/12/2001	2000	216	A	tg		0	
01/02/2003	2002	216	A	MB		0	
05/16/2003	2003	216	A	ab		0	

**YTD Meter Amounts:	Year	Amount
	1999	0
	2000	0
	2002	0
	2003	0

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

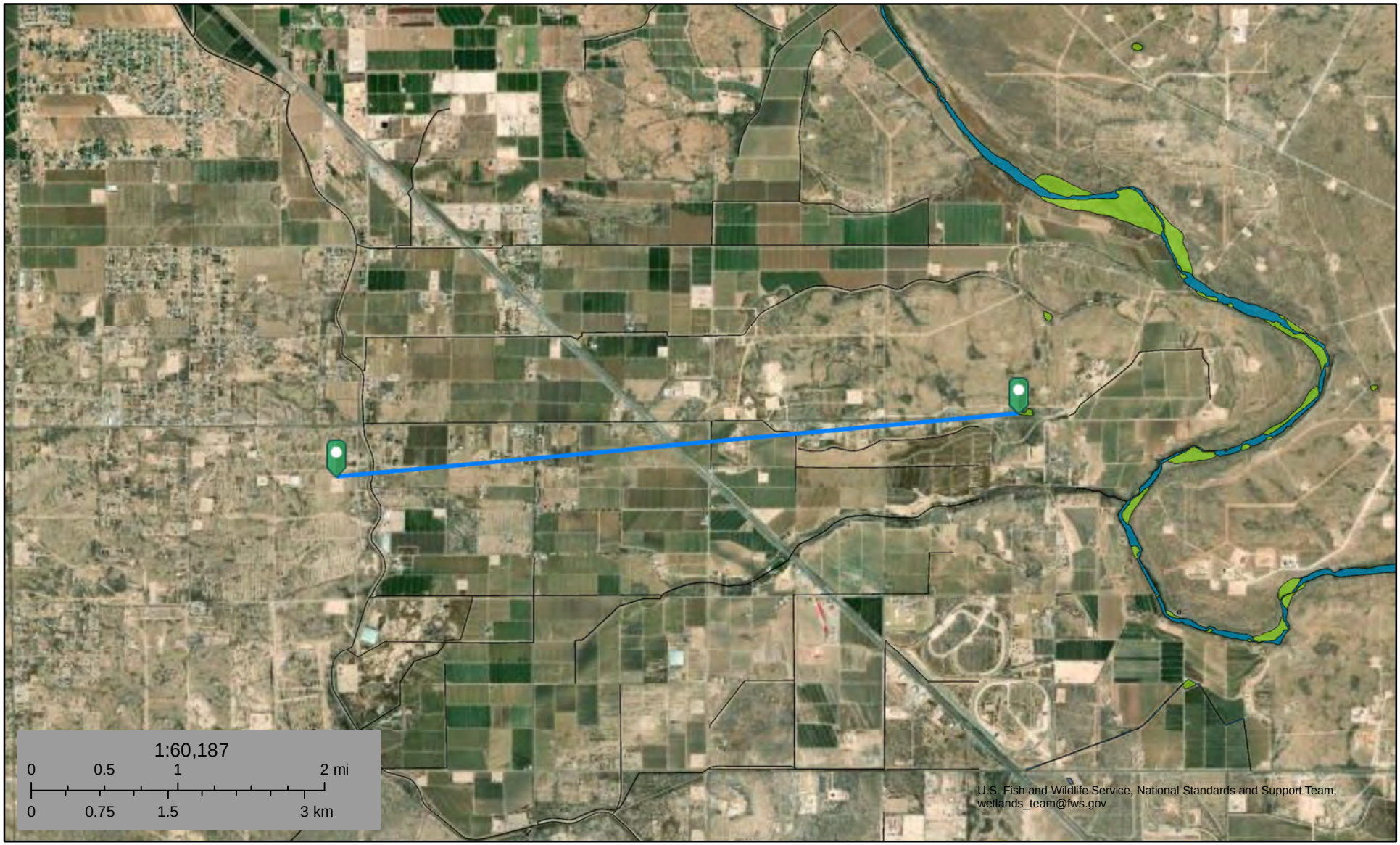
Bindel 4 Fee 1H Release

Carlsbad, NM Municipal Boundary:
1.96 Miles from center of release (10,356 ft)



U.S. Fish and Wildlife Service
National Wetlands Inventory

Bindel 4 Fee 1 Wetland 3.96 Mi



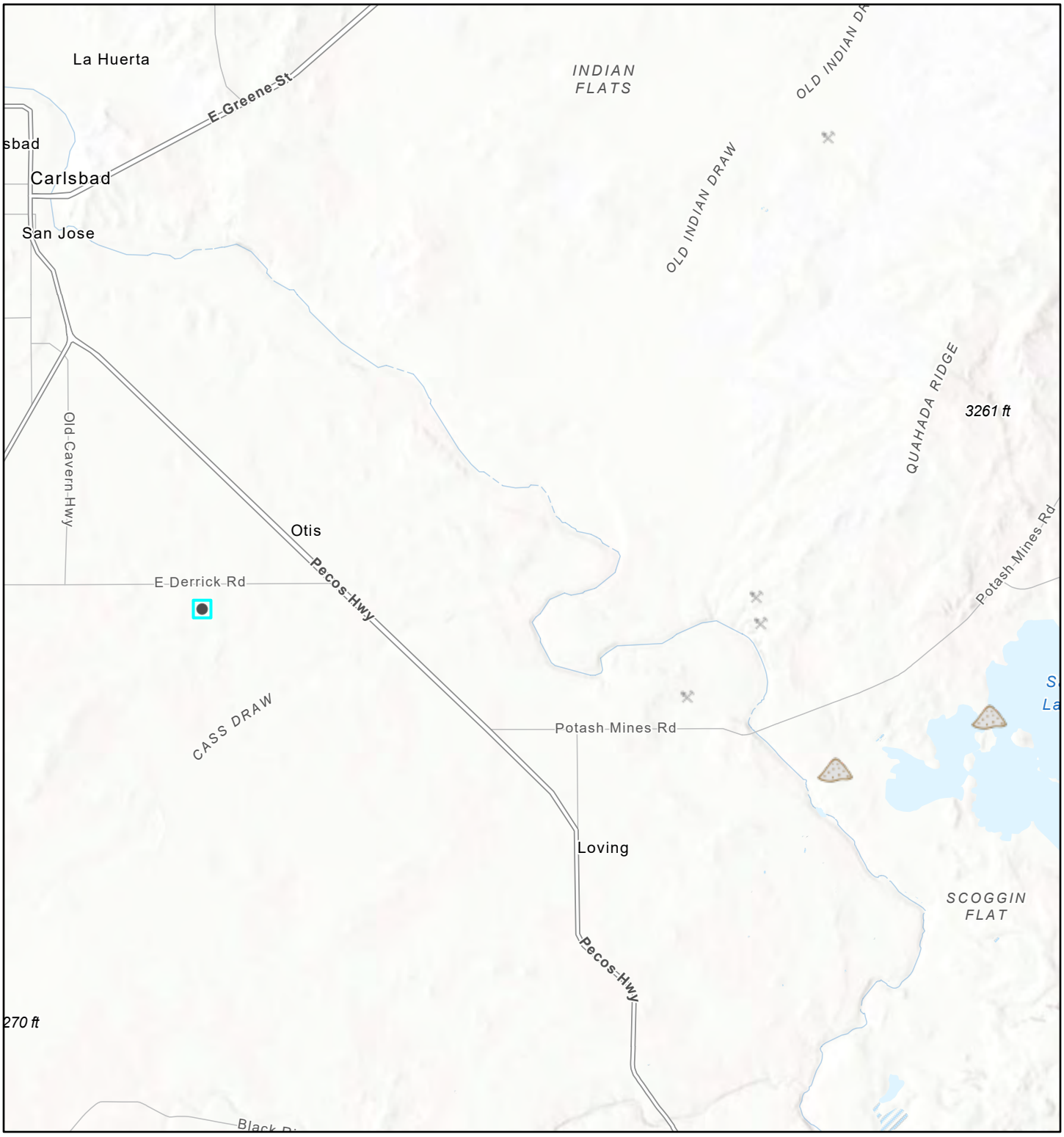
June 20, 2023

Wetlands_Alaska

- 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.

Bindel4 Fee 1H Mines



3/29/2023, 2:20:21 PM

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

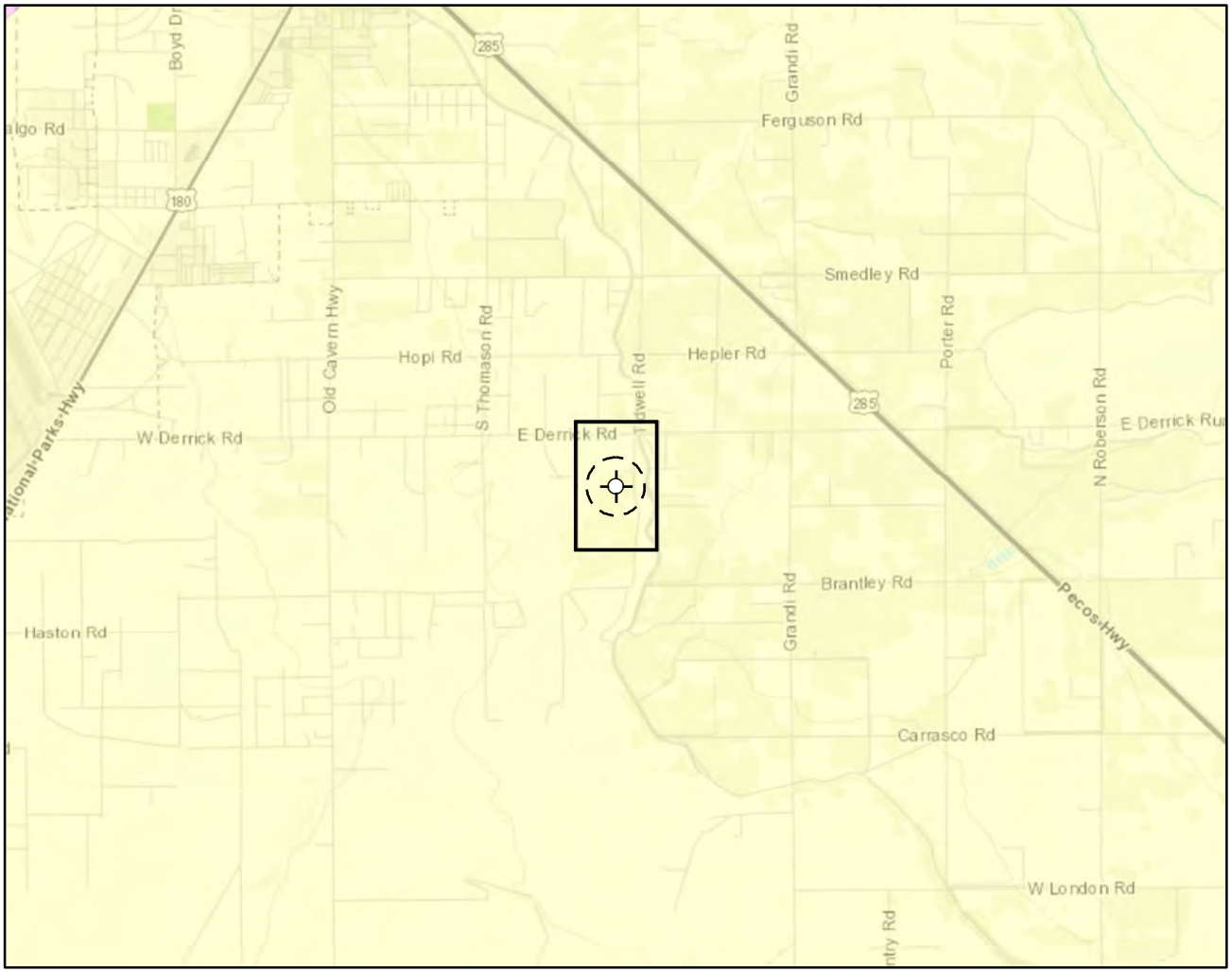
Registered Mines

- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Salt

U.S. BLM, Esri, NASA, NGA, USGS, New Mexico State University, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

EMNRD MMD GIS Coordinator

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



Karst Potential

- Critical
- High
- Medium
- Low

Site Location

Buffer (1000 sq.ft.)

Overview Map

0 0.25 0.5 1 1.5 mi

Detail Map

0 150 300 600 ft.

VERTEX

Map Center:
Lat/Long: 32.336466, -104.188824

NAD 1983 UTM Zone 13N
Date: Mar 31/23

N

Karst Potential Schematic
Bindel 4 Fee1 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 sourced from Rosswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management. (2018). Karst Potential.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\2023\22E-01581 - Bindel 4 Fee 1 Battery\Figure X Karst Potential Schematic(23E-01581).mxd

National Flood Hazard Layer FIRMette

FEMA

104°11'38"W 32°20'26"N

104°11'1"W 32°19'56"N

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

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

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

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

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

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

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

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

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

N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/29/2023 at 3:40 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Eddy Area, New Mexico

March 29, 2023

Preface

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

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

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

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

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

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

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

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

Custom Soil Resource Report
Soil Map

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

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

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

Date(s) aerial images were photographed: Nov 12, 2022—Dec 2, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Rc	Reagan loam, 0 to 1 percent slopes	6.8	98.2%
Uo	Upton gravelly loam, 0 to 9 percent slopes	0.1	1.8%
Totals for Area of Interest		**6.9**	**100.0%**

Map Unit Descriptions

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

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

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

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

onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

Eddy Area, New Mexico

Rc—Reagan loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 1w5l
Elevation: 1,100 to 5,300 feet
Mean annual precipitation: 7 to 15 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 200 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Reagan and similar soils: 97 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reagan

Setting

Landform: Fan remnants, alluvial fans
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 82 inches: loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: B
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Minor Components

Reagan

Percent of map unit: 1 percent

Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Upton
Percent of map unit: 1 percent
Ecological site: R070BC025NM - Shallow
Hydric soil rating: No

Reeves
Percent of map unit: 1 percent
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Uo—Upton gravelly loam, 0 to 9 percent slopes

Map Unit Setting
National map unit symbol: 1w67
Elevation: 1,100 to 4,400 feet
Mean annual precipitation: 7 to 15 inches
Mean annual air temperature: 60 to 70 degrees F
Frost-free period: 200 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Upton and similar soils: 96 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Upton

Setting
Landform: Ridges, fans
Landform position (three-dimensional): Side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile
H1 - 0 to 9 inches: gravelly loam
H2 - 9 to 13 inches: gravelly loam
H3 - 13 to 21 inches: cemented
H4 - 21 to 60 inches: very gravelly loam

Properties and qualities
Slope: 0 to 9 percent
Depth to restrictive feature: 7 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.60 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 75 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R070BC025NM - Shallow
Hydric soil rating: No

Minor Components

Atoka

Percent of map unit: 1 percent
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Atoka

Percent of map unit: 1 percent
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Upton

Percent of map unit: 1 percent
Ecological site: R070BC025NM - Shallow
Hydric soil rating: No

Reagan

Percent of map unit: 1 percent
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

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USDA Natural Resources Conservation Service

Ecological site R070BC007NM
Loamy

Accessed: 03/29/2023

General information

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

Figure 1. Mapped extent

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

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on uplands landforms, mainly on hill slopes, ridges, plains, terraces and some fan remnants. Slopes range from 1 to 5 percent and average about 3 percent. Average annual precipitation is about 8 to 14 inches. Elevations range from 2,842 to 5,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Plain (2) Terrace (3) Fan piedmont
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–5,000 ft
Slope	0–5%
Aspect	E, S, W

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity short duration thunderstorms.

Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.

The average frost-free season is 207 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November.

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 in January through June rapidly drying out the soil during a critical time for cool season plant growth.

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

Table 3. Representative climatic features

Frost-free period (average)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced by wetland or streams.

Soil features

The soils of this site are deep to moderately deep. The moderately deep soils have either a petrocalcic, petrogypsic or gypsum horizon between 30 and 40 inches.

Surface textures are loam, silt loam, very fine sandy loam, or clay loam. Substratum textures are loam, silty clay loam, clay loam, or silt loams. Subsoil textures are silt loam , clay loam silty clay loam, gravelly loam, gravelly clay loam or very gravelly loam. Permeability is moderate to slow and the available water holding capacity is high to moderate. The Atoka, Reeves, Russler, Milner soils may have highr amounts of CaC03, ranging as high as 40 percent in the subsoil. Rock fragments range fro 5 to 50 percent in the subsoil. Reeves, Rusler, Milner, Holloman soils will have 40 to 80 percent gypsum in the underlying material.

Maximum and minimum values listed below represent the characteristic soils for this site.

Characteristic Soils:

Atoka (petrocalcic)
Bigetty
Reagan
Reakor
Reeves (gypsum)
Russler (gypsum)
Largo
Russler (gypsum)
Largo
Berino
Tinney
Midessa
Ratliff
Holloman (gypsum)
Milner (gypsum)

Table 4. Representative soil features

Surface texture	(1) Loam (2) Very fine sandy loam (3) Silt loam
Family particle size	(1) Loamy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderate to slow
Soil depth	30–72 in

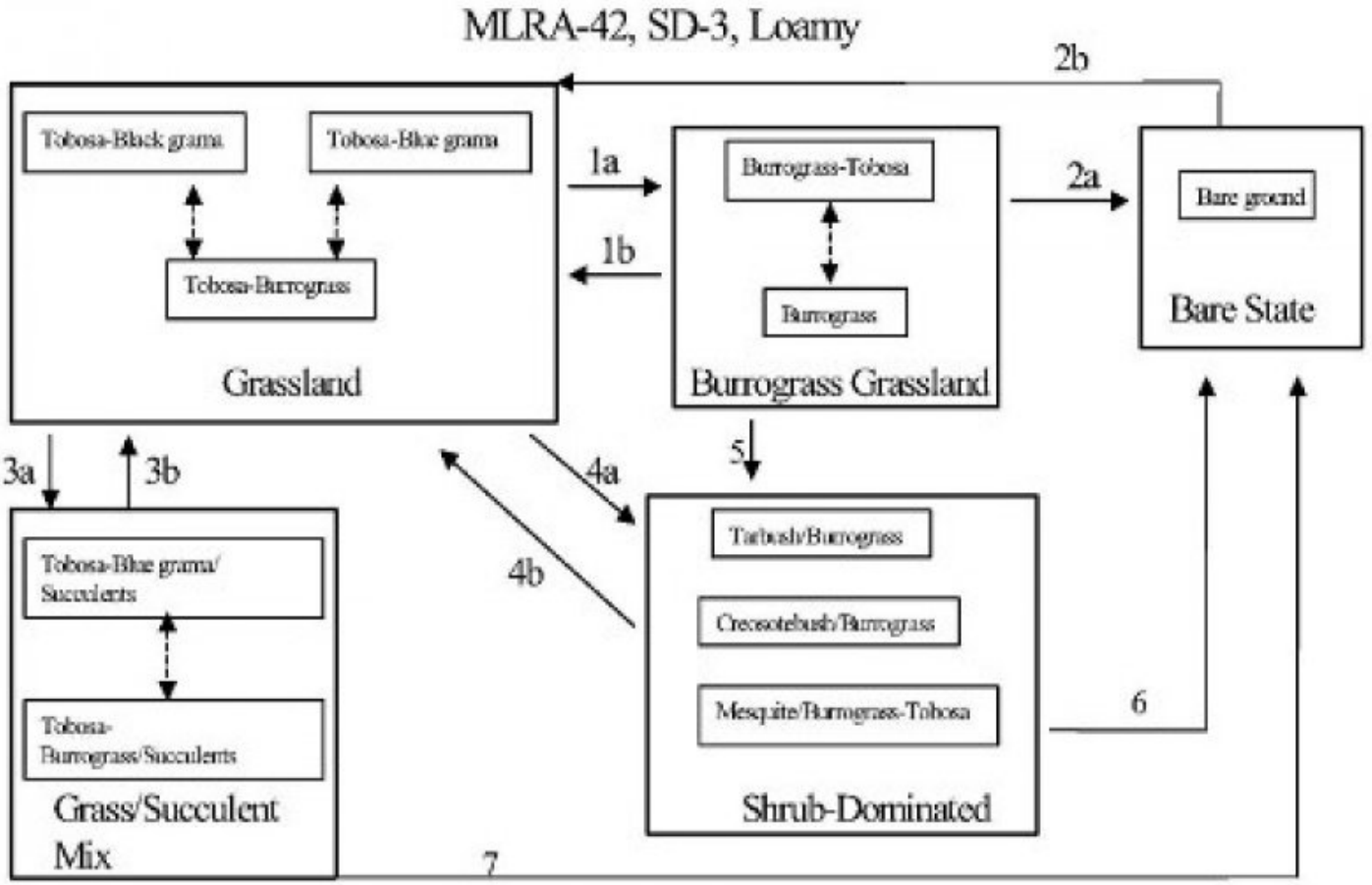
Surface fragment cover <=3"	0–5%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	5–12 in
Calcium carbonate equivalent (0-40in)	0–10%
Electrical conductivity (0-40in)	0–8 mmhos/cm
Sodium adsorption ratio (0-40in)	0–6
Soil reaction (1:1 water) (0-40in)	6.6–8.4
Subsurface fragment volume <=3" (Depth not specified)	0–5%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview: The Loamy site is associated with the Gyp Upland ecological site with which it intergrades. There is a pronounced increase in alkali sacaton along this interface. The loamy site is also associated with the Gravelly and Shallow ecological sites from which it receives run-on water. The Draw site often dissects Loamy sites and is distinguished from the Loamy site by increased production or greater densities of woody species. The historic plant community has a grassland aspect, dominated by grasses with shrubs and half-shrubs sparse and evenly distributed. Tobosa, black grama and blue grama are the dominant species. Retrogression within this state is characterized by a decrease in black and blue grama and an increase in burrograss. Continuous overgrazing and drought can initiate a transition to a Burrograss- Grassland state. Continued reduction in grass cover and resulting infiltration problems may eventually effect a change to a Bare State, with very little or no remaining grass cover. Alternatively, creosotebush, tarbush or mesquite may expand or invade. Transitions back to a Grassland State from a Bare or Shrub-Dominated state are costly and may not be economically feasible. Decreased fire frequency may play a part in the transition to the Grass/Succulent Mix state with increased amounts of cholla and prickly pear.

State and transition model

Plant Communities and Transitional Pathways (diagram)



1a. Soil drying, overgrazing, drought, soil surface sealing. 1b. Restore natural overland flow, increase infiltration, prescribed grazing.

2a. Severe reduction in cover, soil surface sealing, decreased infiltration, erosion. 2b. Restore hydrology, break up physical crust, range seeding, prescribed grazing.

3a. Lack of fire, overgrazing, hail storms or other physical disturbance, drought. 3b. Prescribed fire, brush control, prescribed grazing.

4a. Seed dispersal of shrubs, persistent loss of grass cover, competition by shrubs, lack of fire. 4b. Brush control, range seeding -dependent on amount of grass (seed bank) remaining.

5. Loss of grass cover, seed dispersal of shrubs, competition by shrubs.

6. & 7. Brush control with continued loss of grass cover, soil sealing, erosion.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

State Containing Historic Climax Plant Community Grassland: The historic plant community has a grassland aspect, dominated by grasses with shrubs and half-shrubs sparse and evenly distributed. Black grama, blue grama, and tobosa are the dominant grass species. There are a variety of perennial forbs and their production varies widely by season and year. Globemallow, verbena, groundsels, croton and filaree are forbs commonly found on this site. Fourwing saltbush and winterfat are two of the more palatable shrubs. The Loamy ecological site encompasses a

wide variety of soils, with surface textures ranging from sandy loams to clay loams. Soil depths range from shallow to very deep and can include sub surface features such as calcic, petrocalcic, and gypsic horizons. These variations cause differences in plant community composition and dynamics. Black grama is found at highest densities on coarser textured sandy loams, with blue grama preferring finer textured loam and silt loam, and tobosa favoring lower landscape positions and loam to clay loam surface textures. Burrograss may often be the dominant grass species on silty soils, perhaps in part due to the seedlings ability to auger into and establish on physically crusted soils. Gypsum influenced soils typically have greater amounts of tobosa, burrograss, and ephedra. There is greater representation of sideoats and vine mesquite within the tobosa-blue grama community. Retrogression under continuous heavy grazing results in a decrease of black grama, blue grama, sideoats grama, plains bristlegrass, bush muhly, cane bluestem, vine mesquite, winterfat, and fourwing saltbush. Species such as burrograss, threeawns, sand dropseed, sand muhly, and broom snakeweed increase under continuous heavy grazing or prolonged periods of drought. Under continued retrogression burrograss can completely dominate the site. Creosotebush, tarbush, and mesquite, can also dominate. Cholla and prickly pear can increase on areas that are disturbed or overgrazed. Diagnosis: Tobosa, black grama, and blue grama are the dominant species. Grass cover is uniformly distributed with few large bare areas. Shrubs are sparse and evenly distributed. Slopes range from level to gently sloping and usually display limited evidence of active rills and gully formation if plant cover remains intact. Litter movement associated with overland flow is limited to smaller size class litter and short distances. Other shrubs include: yucca, mesquite, tarbush, cholla and creosote bush. Other forbs include: desert holly, scorpionweed, bladderpod, flax, nama, fleabane, Indianwheat, Indian blanket flower, groundcherry, deerstongue, and rayless goldenrod.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	585	833	1080
Forb	39	55	72
Shrub/Vine	26	37	48
Total	**650**	**925**	**1200**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	15-30%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	25-30%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	40-50%

Figure 5. Plant community growth curve (percent production by month). NM2807, R042XC007NM Loamy HCPC. R042XC007NM Loamy HCPC Warm Season Plant Community..

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	10	10	25	30	15	5	0	0

State 2

Burrograss-Grassland

Community 2.1
Burrograss-Grassland

Burrograss-Grassland: Changes in hydrology resulting in decreased available soil moisture, reduces grass cover and increases bare ground. Burrograss is the dominant grass. Tobosa cover is variable and can range from sizeable areas to small patches occupying only depressions or the lowest and wettest positions within the site. Threeawns, ear muhly, sand muhly, and fluffgrass occur at increased densities compared to the grassland state. Shrub densities may increase especially mesquite, creosotebush or tarbush. Retrogression within this state is characterized by a further decrease in grass cover and increased bare ground. Further deterioration of this site can result in the transition to a bare state or becoming shrub dominated. Diagnosis: Burrograss is the dominant species. Grass cover is no longer uniformly distributed, instead tending to be patchy with large areas of bare ground present. Physical crusts are present in bare areas reducing infiltration and suppressing seedling establishment by any grass species other than burrograss. Transition to Burrograss-Grassland (1a): Transitions from grassland to a burrograss-grassland state may occur due to changes in hydrology. Gullies, roads or obstructions that alter natural water flow patterns may cause this transition. Changes in surface hydrology may also occur due to overgrazing or drought. The reduction in grass cover promotes increased soil physical crusts and reduces infiltration. 5 Key indicators of approach to transition: ? Diversion of overland flow resulting in decreased soil moisture. ? Increase in amount of burrograss cover ? Reduction in grass cover and increase in size and frequency of bare patches. ? Formation of physical crusts—indicating reduced infiltration. ? Evidence of litter movement—indicating loss or redistribution of organic matter. Transition back to Grassland (1b) The natural hydrology of the site must be returned. Culverts, turnouts, or rerouting roads may help re-establish natural overland flow, if roads or trails have altered the hydrology. Erosion control structures or shaping and filling gullies may help regain natural flow patterns and establish vegetation if the flow has been channeled. Breaking up physical crusts by soil disturbance may promote infiltration and seedling emergence. Allow natural revegetation to take place. Prescribed grazing will help ensure proper forage utilization and reduce grass loss due to grazing.

State 3
Bare State

Community 3.1
Bare State

Bare State: Extremely low ground cover, soil degradation and erosion characterize this state. Very little vegetation remains. Burrograss is the dominant grass and cover is extremely patchy. Physical soil crusts are extensive. Erosion and resource depletion increase as site degrades. Diagnosis: Very little cover remains. Erosion is evident by soil sealing, water flow patterns, pedestals or terracettes. Rills and gullies may be present and active. Transition to Bare State (2a): Extended drought, continuous heavy grazing, or other disturbance that severely depletes grass cover can effect this transition. As grass cover decreases, sheet flow and erosion increase, and physical soil crusts form, thereby further reducing infiltration. Key indicators of approach to transition: ? Continued reduction in grass cover. ? Increased soil surface sealing. ? Increased erosion. ? Reduced aggregate stability in bare areas. Transition back to Grassland (2b) Restore the hydrology, see (1a). With the extent of grass loss range seeding may be necessary. Utilizing livestock or mechanical means to break up the physical crusts may increase infiltration and aid seedling establishment. Prescribed grazing will help ensure adequate deferment period following seeding, and proper forage utilization once the grass stand is well established. The degree to which this site is capable of recovery depends on the restoration of hydrology, extent of degradation to soil resources, and adequate rainfall necessary to establish grasses.

State 4
Grass/Succulent Mix

Community 4.1
Grass/Succulent Mix

Grass / Succulent Mix: Increased representations of succulents characterize this site. Increased densities of cholla or pricklypear is recognized as a management concern, but their impact on grass production is unclear. Light to

medium cholla or prickly pear infestation doesn't seem to greatly reduce grass production, however it limits access to palatable grasses and interferes with livestock movement and handling. Tobosa and blue grama are the dominant species on this site. Retrogression within this site is characterized by a decrease in blue grama and an increase in succulents, tobosa and burrograss. Diagnosis: Cholla or prickly pear is found at increased densities. Grass cover is variable ranging from uniformly distributed to patchy with frequent areas of bare ground present. Tobosa or blue grama is the dominant grass species. Transition to Grass/Succulent Mix (3a): If fire was historically a part of desert grassland ecosystem and played a role in suppressing seedlings of shrubs and succulents, then fire suppression may favor the increase of succulents.1 Heavy grazing by livestock or other physical disturbances may help disseminate seed and increase the establishment of succulents. Areas historically overgrazed by sheep are sometimes associated with higher densities of Succulents. Intense hailstorms can spread pricklypear by breaking off joints causing new plants to take root.3 During severe drought perennial grass cover can decline significantly, leaving resources available for use by more drought tolerant succulents. Cholla and pricklypear are both adapted to and favored by drought due to the ability of their shallow, wide spreading root systems to absorb and store water.4 Key indicators of approach to transition: ? Decrease or change in distribution of grass cover. ? Increase in amount of succulent seedlings. ? Increased cover of succulents. Transition back to Grassland (3b) Fire is an effective means of controlling cholla and prickly pear if adequate grass cover remains to carry fire.2 Cholla greater than two feet tall or pricklypear with a large amount of pads (>15-20) are harder to kill. Chemical control is effective in controlling prickly pear and cholla; apply when growth starts in May. Hand grubbing is also effective if cholla or pricklypear is severed 2-4 inches below ground and care is taken not to let broken joints or pads take root. Stacking and burning piles and grubbing during winter or drought help keeps broken joints and pads from rooting. Prescribed grazing will help ensure proper forage utilization and sustain grass cover.

State 5
Shrub Dominated

Community 5.1
Shrub Dominated

Shrub Dominated: Increased shrub cover characterizes this state. Mesquite, creosotebush, and/or tarbush are the dominant shrub species. Burrograss or tobosa is the dominant grass species. Grass cover is decreased, typically patchy with large bare areas present; however, sometimes grass cover can remain relatively high for extended periods when associated with light to moderate infestations of mesquite. Variations in soil characteristics play a part in determining which shrub species increase. Mesquite is well adapted to a wide range of soil types, but increases more often on deep soils low in carbonates, that have a sandy surface overlying finer textured soils. Tarbush prefers finer textured, calcareous soils, usually in lower positions that receive some extra water. Creosotebush is less tolerant of fine textured soils, preferring sandy, calcareous soils that have some gravel. Creosotebush also does well on soils that are shallow over caliche. Retrogression within this state is characterized by a decrease in tobosa, and an increase in burrograss. As the site continues to degrade shrub cover continues to increase and grass cover is severely reduced. Diagnosis: Mesquite, Creosotebush, and/or tarbush are the dominant shrubs. Blue grama and black grama cover is low or absent. Burrograss or tobosa are the dominant grasses. Typically grass cover is patchy with large interconnected bare areas present. Physical soil crusts are present, especially on silt loam surface soils. Transition to Shrub Dominated (4a): Wildlife and livestock consume and disperse mesquite seeds. Flood events may wash creosote or tarbush seeds off adjacent gravelly sites onto the loamy site and supply adequate moisture for germination. Persistent loss of grass cover due to overgrazing or drought can cause large bare patches, providing competition free areas for shrub seedling establishment. As shrub cover increases, competition for soil resources, especially water, becomes a major factor in further reducing grass cover. Reduction of fire, due to either fire suppression policy or loss of adequate fine fuels may increase the probability of shrub encroachment. Increased soil surface physical crusts and associated decreased infiltration, may prevent the establishment of grass seedlings. Transition to Shrub Dominated (5): The dispersal of creosotebush, tarbush or mesquite seed, combined with loss of grass cover and resource competition by shrubs may cause this transition. Key indicators of approach to transition: ? Decreased grass and litter cover. ? Increased bare patch size. ? Increased physical soil crusts. ? Increased amount of mesquite, creosotebush, or tarbush seedlings. ? Increased shrub cover. Transition back to Grassland (4b) Brush control will be necessary to remove shrubs and eliminate competition for resources necessary for grass establishment or reproduction. Seeding may be necessary on those sites where desired grass species are absent or very limited. Pitting and seeding may increase the chances of successful grass establishment. Prescribed grazing will help ensure adequate time is elapsed before grazing seeded area is allowed and proper forage utilization following seeding establishment. Transition to Bare State (6): If grass cover on the shrub-dominated state is

severely limited and shrubs are removed a bare state may result. This transition will depend on amount of grasses or seed remaining, whether site is seeded, or if seeding is successful. Transition to Bare State (7): Removal of succulents and continued overgrazing or drought may cause loss of remaining grasses and erosion. Soil surface physical crusting may also be an important factor in inhibiting grass seedling establishment

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**			278–324	
	tobosagrass	PLMU3	*Pleuraphis mutica*	278–324	–
2	**Warm Season**			9–46	
	burrograss	SCBR2	*Scleropogon brevifolius*	9–46	–
3	**Warm Season**			231–278	
	black grama	BOER4	*Bouteloua eriopoda*	231–278	–
	blue grama	BOGR2	*Bouteloua gracilis*	231–278	–
4	**Warm Season**			28–46	
	sideoats grama	BOCU	*Bouteloua curtipendula*	28–46	–
5	**Warm Season**			46–93	
	bush muhly	MUPO2	*Muhlenbergia porteri*	46–93	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	46–93	–
6	**Warm Season**			9–28	
	Arizona cottontop	DICA8	*Digitaria californica*	9–28	–
7	**Warm Season**			46–93	
	threeawn	ARIST	*Aristida*	46–93	–
	muhly	MUHLE	*Muhlenbergia*	46–93	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	46–93	–
8	**Warm Season**			28–46	
	Graminoid (grass or grass-like)	2GRAM	*Graminoid (grass or grass-like)*	28–46	–
Shrub/Vine					
9	**Shrub**			9–28	
	fourwing saltbush	ATCA2	*Atriplex canescens*	9–28	–
	jointfir	EPHED	*Ephedra*	9–28	–
	winterfat	KRLA2	*Krascheninnikovia lanata*	9–28	–
	cane bluestem	BOBA3	*Bothriochloa barbinodis*	5–24	–
	Arizona cottontop	DICA8	*Digitaria californica*	5–24	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	5–24	–
10	**Shrub**			9–28	
	javelina bush	COER5	*Condalia ericoides*	9–28	–
	broom snakeweed	GUSA2	*Gutierrezia sarothrae*	9–28	–
	Grass, annual	2GA	*Grass, annual*	5–15	–
11	**Shrubs**			9–28	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	9–28	–
Forb					

12	**Forb**			9–46	
	threadleaf ragwort	SEFLF	*Senecio flaccidus var. flaccidus*	9–46	–
	globemallow	SPHAE	*Sphaeralcea*	9–46	–
	verbena	VEPO4	*Verbena polystachya*	9–46	–
	broom snakeweed	GUSA2	*Gutierrezia sarothrae*	5–15	–
	pricklypear	OPUNT	*Opuntia*	5–15	–
13	**Forb**			9–28	
	croton	CROTO	*Croton*	9–28	–
	woolly groundsel	PACA15	*Packera cana*	9–28	–
14	**Forb**			9–28	
	Goodding's tansyaster	MAPIG2	*Machaeranthera pinnatifida ssp. gooddingii var. gooddingii*	9–28	–
	woolly paperflower	PSTA	*Psilostrophe tagetina*	9–28	–
15	**Forb**			9–28	
	redstem stork's bill	ERCI6	*Erodium cicutarium*	9–28	–
	Texas stork's bill	ERTE13	*Erodium texanum*	9–28	–
16	**Forb**			9–28	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	9–28	–

Animal community

This site provides habitats which support a resident animal community that is characterized by pronghorn antelope, black-tailed jackrabbit, black tailed prairie dog, yellow-faced pocket gopher, banner-tailed kangaroo rat, hispid cotton rat, swift fox, burrowing owl, horned lark, mockingbird, meadowlark, mourning dove, scaled quail, Great Plains toad, plains spadefoot toad, prairie rattlesnake and western coachwhip shake.

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
Atoka C
Bigetty B
Ratliff B
Reyab B
Holloman B
Largo B
Holloman B
Bigetty B
Berino B
Reagan B
Reakor B
Reeves B
Russler C

Recreational uses

This site offers limited potential for hiking, horseback riding, nature observation and photography. Game bird, antelope and predator hunting are also limited.

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, during all seasons of the year. Under retrogression, such plants as black grama, blue grama, sideoats grama, bush muhly, plains bristlegrass, Arizona cottontop, fourwing saltbush and winterfat decrease and there is an increase in burrograss, threeawns, sand dropseed, muhlys, broom snakeweed and javilinabush. Under continued retrogression, burrograss can completely dominate the site. Creosotebush, mesquite, and tarbush can also dominate. Grazing management alone will not improve the site in the above situation. This site is well suited 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 3.0 – 4.2
75 – 51 4.1 – 5.5
50 – 26 5.3 – 7.0
25 – 0 7.1 +

Inventory data references

Other 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 Chavez County.

Other references

Literature References:

1. Brooks, M.L., AND D.A. Pyke. 2001. Invasive plants and fire in the deserts of North America. Pages 1–14 in K.E.M. Galley and T.P. Wilson (eds.). Proceedings of the Invasive Species Workshop: the Role of Fire in the Control and Spread of Invasive Species.

2. Bunting, S.C., H.A. Wright, and L.F. Neuenschwander. 1980. Long-term effects of fire on cactus in the Southern Mixed Prairie of Texas. J. Range. Manage. 33: 85-88.

3. Laycock, W.A. 1982. Hail as an ecological factor in the increase of prickly
pear cactus. p. 359-361. In: J.A. Smith and V.W. Hays (eds.) Proc. XIV Int. Grassland Congr. Westview Press, Boulder, Colo.

4. Vallentine, J.F. 1989. Range Developments and Improvements. 3rd Edition. Academic Press. San Diego, California.

5. U.S. Department of Agriculture, Natural Resources Conservation Service. 2001. Soil Quality Information Sheet. Rangeland Soil Quality—Physical and Biological Soil Crusts. Rangeland Sheet 6, [Online]. Available: http://www.statlab.iastate.edu/survey/SQI/range.html

Contributors

David Trujillo
Don Sylvester

Rangeland health reference sheet

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

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

Indicators

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

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

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

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

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

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

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

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

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

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial**

distribution on infiltration and runoff:

---

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

---

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

    Dominant:

    Sub-dominant:

    Other:

    Additional:

---

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

---

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

---

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

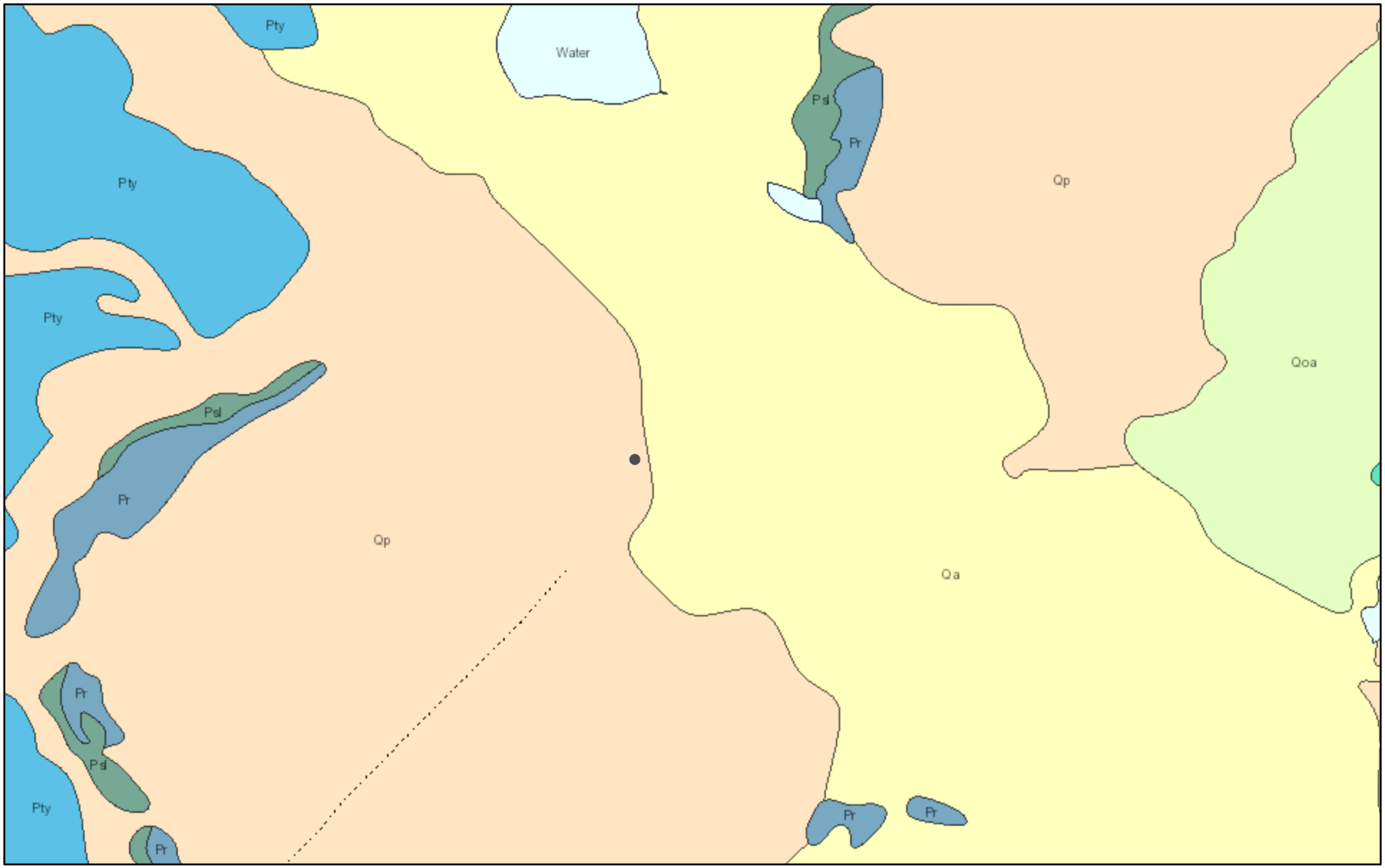
---

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

---

17. **Perennial plant reproductive capability:**

Bindel 4 Fee 1H Qp



3/29/2023, 1:47:39 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, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System,

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 Structures Dataset, and National Transportation Dataset; USGS Global

APPENDIX C – Daily Field and Sampling Reports

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	3/27/2023
Site Location Name:	Bindel 4 Fee Battery	Report Run Date:	3/27/2023 10:12 PM
Client Contact Name:	Dale Woodall	API #:	30-015-45042
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/27/2023 3:05 PM
Departed Site	3/27/2023 4:15 PM

Daily Site Visit Report

Site Sketch

Site Sketch

Daily Site Visit Report

Field Notes

15:46 Arrived on site and filled out and signed safety documents, collected equipment and materials for job.

15:56 Flagged, white lined and collected coordinates of the corners of the 811 One Call area. (See photos for coordinates).

16:06 The area of release shows shows sign of moisture from overspray on pad soil which can still be observed. Documentation in photos was collected to aid in characterization.

16:09 Completed daily field report and close out for safety documents.

Next Steps & Recommendations

1 811 One Call

2 Site Characterization

Daily Site Visit Report

Site Photos

Viewing Direction: West

White flags for 811 NE corner (32.33753228,-104.18887091)

Viewing Direction: South

White flags for 811 NE corner (32.33753228,-104.18887091) looking towards SE corner (32.33721235,-104.18886849)

Viewing Direction: Southeast

White flags for 811 NW corner (32.33752362,-104.18939589)

Viewing Direction: South

White flags for 811 SW corner (32.33722762,-104.18938960)

Daily Site Visit Report

Viewing Direction: Northeast

White flags for 811 SW corner (32.33722762,-104.18938960)

Viewing Direction: Southeast

Area of release. Sign of moisture from overspray on pad soil can still be observed.

Viewing Direction: South

Area of release. Sign of moisture from overspray on pad soil can still be observed.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Stephanie McCartyM

Signature:

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	
Site Location Name:	Bindel 4 Fee Battery	Report Run Date:	4/7/2023 11:27 PM
Client Contact Name:	Dale Woodall	API #:	30-015-45042
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

10:02 Arrived on site and filled out safety paperwork.

10:26 Inspected liner which appears free of any tears or abrasions, and is mostly clean.

14:15 Gathered samples 1 through 3 at depths of surface and 1'. All samples tested dirty for hydrocarbons.

16:18 Gathered samples 4-7 at depths of surface and one foot. Samples tested clean for hydrocarbons. Samples tested clean for chlorides except for sample 7.

17:14 Jarred samples to send to lab

17:18 Filled out soil sample report

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: East	**Viewing Direction**: North
	
Liner photo	Liner inspection
Viewing Direction: East	**Viewing Direction**: West
	
Liner	Liner

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: South
	
Liner	Placard
Viewing Direction: Southwest	**Viewing Direction**: Southwest
	
Area of staining	Sample area

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Zachery Englebert

Signature:

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	8/16/2023
Site Location Name:	Bindel 4 Fee Battery	Report Run Date:	8/16/2023 6:33 PM
Client Contact Name:	Dale Woodall	API #:	30-015-45042
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	8/16/2023 10:29 AM
Departed Site	8/16/2023 1:00 PM

Field Notes

12:22 Arrived on site and filled out JSA

11:51 Today's focus is to complete conformation sampling

Samples to be collected are
WES23-10 at 0-1' depth
And
WES23-11 at 0-6.5' depth

12:22 At 11:00 samples were collected and field screened for Chlorides and TPH

WES23-10 is clean on Chlorides and TPH

WES23-11 was recollected and field screened for TPH and Chlorides

WES23-11 is clean on Chlorides and TPH

Daily Site Visit Report

12:22 All samples are jarred and sent to lab

12:23 There was no Standard Safety crew on site today.

12:32 At 1:30 all was for the day was completed on site.

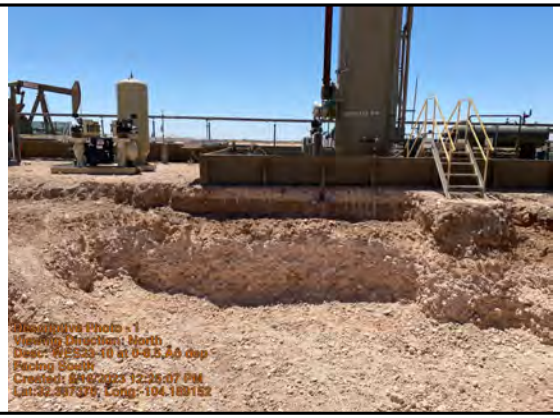
Next Steps & Recommendations

1 Backfill

2 Closure

Daily Site Visit Report

Site Photos

Viewing Direction: North	**Viewing Direction**: Southwest
	
WES23-10 at 0-6.5’ depth Facing South	WES23-11 at 0-1’ depth Facing Southwest

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: East
	
Overview of the East side of the site Facing East	Overview of the West side of the site Facing West
Viewing Direction: Southeast	**Viewing Direction**: South
	
Overview of the Southeast side of the site Facing Southeast	East edge of the site

Daily Site Visit Report

Viewing Direction: South

West edge of the site

Facing South

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Jacob Reta

Signature:

APPENDIX D – Notifications

Gmail

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Liner Inspection Two day notice

2 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Tue, Apr 4, 2023 at 9:21 AM
To: "Enviro, OCD, EMNRD" <OCD.Enviro@emnrd.nm.gov>, "Enviro, OCD, EMNRD" <OCD.Enviro@state.nm.us>

All,

Please accept this email as Two Day notification that Vertex Resource Services has scheduled a liner inspection to be conducted for the following release:

Bindel 4 Fee 1, 30-015-45042

nAPP2307924732, DOR: 3/18/2023,

This work will be completed on behalf of Devon Energy Corporation

On Friday, April 7, 2023 at approximately 8:00 a.m., Stephanie will be on site to conduct the liner inspection. She can be reached at .575-263-3295. If you need directions to the site, please do not hesitate to contact her. If you have any questions or concerns regarding this notification, please give me a call at 575-263-3295.

Thank you,

Kent Stallings P.G.
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

P 575.725.5001
C 346.814.1413
F

Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov> Tue, Apr 4, 2023 at 4:07 PM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Kent,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist

Environmental Bureau

EMNRD - Oil Conservation Division

1220 South St. Francis Drive | Santa Fe, NM 87505

(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov

http:// **www.emnrd.nm.gov**

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Tuesday, April 4, 2023 9:21 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Liner Inspection Two day notice

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

All,

Please accept this email as Two Day notification that Vertex Resource Services has scheduled a liner inspection to be conducted for the following release:

Bindel 4 Fee 1, 30-015-45042

nAPP2307924732, DOR: 3/18/2023,

This work will be completed on behalf of Devon Energy Corporation

On Friday, April 7, 2023 at approximately 8:00 a.m., Stephanie will be on site to conduct the liner inspection. She can be reached at .575-263-3295. If you need directions to the site, please do not hesitate to contact her. If you have any questions or concerns regarding this notification, please give me a call at 575-263-3295.

Thank you,

Kent Stallings P.G.
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

P 575.725.5001
C 346.814.1413
F

Gmail

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Confirmation sampling notice

6 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Mon, Aug 7, 2023 at 7:55 AM
To: shelly.wells@emnrd.nm.gov, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>, "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>

All,
Please accept this email as notification that Vertex Resource Services has scheduled a sampling event to be conducted at the following release.

NAPP2307924732 BINDEL 4 FEE #001H @ 30-015-45042

On Wednesday, August 9, 2023, at approximately 8:00 a.m., Vertex will be on-site to conduct confirmation sampling. The sampling will continue through Friday, August 18, 2023. If you have any questions regarding this notification, please call me at 575-988-1472.

Thank you,

Kent Stallings P.G.
Senior Geologist

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

P 575.725.5001 ext 706
C 346.814.1413
F

Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov> Mon, Aug 7, 2023 at 8:41 AM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>

Hi Kent,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced

Administrative Permitting Program

EMNRD-Oil Conservation Division

1220 S. St. Francis Drive|Santa Fe, NM 87505

(505)469-7520|Shelly.Wells@emnrd.nm.gov

http://www.emnrd.state.nm.us/OCD/

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Monday, August 7, 2023 7:56 AM
To: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: [EXTERNAL] Confirmation sampling notice

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

[Quoted text hidden]

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Thu, Aug 24, 2023 at 9:08 AM
To: "Wells, Shelly, EMNRD" <Shelly.Wells@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>

Please accept this email as notification that Vertex Resource Services has scheduled a sampling event to be conducted at the following release.

NAPP2307924732 BINDEL 4 FEE #001H @ 30-015-45042

On Monday, August 28, 2023, at approximately 8:00 a.m., Vertex will be on-site to conduct a final confirmation sampling. If you have any questions regarding this notification, please call me at 575-988-1472.

Thank you,

Kent Stallings P.G.
Senior Geologist

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

P 575.725.5001 ext 706
C 346.814.1413
F
[Quoted text hidden]

Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov> Thu, Aug 24, 2023 at 9:16 AM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>

Good morning Kent,

The OCD has received your notification. Notification requirements are **two full business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced

Environmental Bureau

[Quoted text hidden]

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Fri, Sep 1, 2023 at 10:39 AM
To: "Wells, Shelly, EMNRD" <Shelly.Wells@emnrd.nm.gov>, "Enviro, OCD, EMNRD" <OCD.Enviro@emnrd.nm.gov>
Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>, KStallings@vertex.ca, smccarty@vertex.ca

Please accept this email as notification that Vertex Resource Services has scheduled a sampling event to be conducted at the following release.

NAPP2307924732 BINDEL 4 FEE #001H @ 30-015-45042

On Thursday, September 7, 2023, at approximately 8:00 a.m., Vertex will be on-site to conduct a final confirmation sampling. If you have any questions regarding this notification, please call at 575-988-1472.

V/R,

Steph McCarty
Environmental Technician
Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

C 575.263.3295

www.vertex.ca
Connect with LinkedIn

[Quoted text hidden]

Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov> Fri, Sep 1, 2023 at 10:58 AM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>

Hi Steph,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced

Environmental Bureau

[Quoted text hidden]

APPENDIX E – Laboratory Data Reports and Chain of Custody Forms

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 20, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1 Battery OrderNo.: 2304492

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 14 sample(s) on 4/12/2023 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 **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-01 0'
Project: Bindel 4 Fee 1 Battery
Collection Date: 4/7/2023 10:00:00 AM
Lab ID: 2304492-001 **Matrix:** SOIL
Received Date: 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	16000	240		mg/Kg	25	4/17/2023 5:57:38 PM
Motor Oil Range Organics (MRO)	2600	1200		mg/Kg	25	4/17/2023 5:57:38 PM
Surr: DNOP	0	69-147	S	%Rec	25	4/17/2023 5:57:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	5500	250		mg/Kg	50	4/17/2023 4:14:00 PM
Surr: BFB	243	37.7-212	S	%Rec	50	4/17/2023 4:14:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	2.6	0.12		mg/Kg	5	4/15/2023 5:11:00 AM
Toluene	68	2.5		mg/Kg	50	4/17/2023 4:14:00 PM
Ethylbenzene	12	0.25		mg/Kg	5	4/15/2023 5:11:00 AM
Xylenes, Total	230	4.9		mg/Kg	50	4/17/2023 4:14:00 PM
Surr: 4-Bromofluorobenzene	166	70-130	S	%Rec	5	4/15/2023 5:11:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	110	60		mg/Kg	20	4/17/2023 4:06:28 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-01 1'
Project: Bindel 4 Fee 1 Battery
Collection Date: 4/7/2023 10:15:00 AM
Lab ID: 2304492-002 **Matrix:** SOIL
Received Date: 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	8100	96		mg/Kg	10	4/18/2023 1:21:51 PM
Motor Oil Range Organics (MRO)	1200	480		mg/Kg	10	4/18/2023 1:21:51 PM
Surr: DNOP	0	69-147	S	%Rec	10	4/18/2023 1:21:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	4700	240		mg/Kg	50	4/17/2023 4:35:00 PM
Surr: BFB	241	37.7-212	S	%Rec	50	4/17/2023 4:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	2.7	0.12		mg/Kg	5	4/15/2023 5:32:00 AM
Toluene	54	2.4		mg/Kg	50	4/17/2023 4:35:00 PM
Ethylbenzene	9.5	0.24		mg/Kg	5	4/15/2023 5:32:00 AM
Xylenes, Total	160	4.9		mg/Kg	50	4/17/2023 4:35:00 PM
Surr: 4-Bromofluorobenzene	156	70-130	S	%Rec	5	4/15/2023 5:32:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	4/17/2023 4:18:53 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-02 0'
Project: Bindel 4 Fee 1 Battery
Collection Date: 4/7/2023 10:30:00 AM
Lab ID: 2304492-003 **Matrix:** SOIL
Received Date: 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	8800	98		mg/Kg	10	4/18/2023 2:02:58 PM
Motor Oil Range Organics (MRO)	1500	490		mg/Kg	10	4/18/2023 2:02:58 PM
Surr: DNOP	0	69-147	S	%Rec	10	4/18/2023 2:02:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	1400	24		mg/Kg	5	4/15/2023 5:54:00 AM
Surr: BFB	367	37.7-212	S	%Rec	5	4/15/2023 5:54:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	0.22	0.12		mg/Kg	5	4/15/2023 5:54:00 AM
Toluene	13	0.24		mg/Kg	5	4/15/2023 5:54:00 AM
Ethylbenzene	5.8	0.24		mg/Kg	5	4/15/2023 5:54:00 AM
Xylenes, Total	94	4.9		mg/Kg	50	4/17/2023 4:57:00 PM
Surr: 4-Bromofluorobenzene	148	70-130	S	%Rec	5	4/15/2023 5:54:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	3900	150		mg/Kg	50	4/18/2023 9:51:36 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-02 1'
Project: Bindel 4 Fee 1 Battery **Collection Date:** 4/7/2023 10:45:00 AM
Lab ID: 2304492-004 **Matrix:** SOIL **Received Date:** 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	6500	100		mg/Kg	10	4/17/2023 4:06:42 PM
Motor Oil Range Organics (MRO)	930	500		mg/Kg	10	4/17/2023 4:06:42 PM
Surr: DNOP	0	69-147	S	%Rec	10	4/17/2023 4:06:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	1300	24		mg/Kg	5	4/15/2023 6:16:00 AM
Surr: BFB	352	37.7-212	S	%Rec	5	4/15/2023 6:16:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	0.20	0.12		mg/Kg	5	4/15/2023 6:16:00 AM
Toluene	12	0.24		mg/Kg	5	4/15/2023 6:16:00 AM
Ethylbenzene	5.5	0.24		mg/Kg	5	4/15/2023 6:16:00 AM
Xylenes, Total	93	4.8		mg/Kg	50	4/17/2023 5:18:00 PM
Surr: 4-Bromofluorobenzene	146	70-130	S	%Rec	5	4/15/2023 6:16:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	1600	60		mg/Kg	20	4/17/2023 5:33:20 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.		

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-03 0'
Project: Bindel 4 Fee 1 Battery
Collection Date: 4/7/2023 11:00:00 AM
Lab ID: 2304492-005 **Matrix:** SOIL
Received Date: 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	12000	240		mg/Kg	25	4/17/2023 6:39:21 PM
Motor Oil Range Organics (MRO)	2200	1200		mg/Kg	25	4/17/2023 6:39:21 PM
Surr: DNOP	0	69-147	S	%Rec	25	4/17/2023 6:39:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	2500	240		mg/Kg	50	4/17/2023 5:40:00 PM
Surr: BFB	214	37.7-212	S	%Rec	50	4/17/2023 5:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	0.26	0.12		mg/Kg	5	4/15/2023 6:37:00 AM
Toluene	14	0.24		mg/Kg	5	4/15/2023 6:37:00 AM
Ethylbenzene	5.6	0.24		mg/Kg	5	4/15/2023 6:37:00 AM
Xylenes, Total	100	4.9		mg/Kg	50	4/17/2023 5:40:00 PM
Surr: 4-Bromofluorobenzene	145	70-130	S	%Rec	5	4/15/2023 6:37:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	680	60		mg/Kg	20	4/17/2023 5:45:45 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 **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-03 1'
Project: Bindel 4 Fee 1 Battery
Collection Date: 4/7/2023 11:15:00 AM
Lab ID: 2304492-006 **Matrix:** SOIL
Received Date: 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	9500	97		mg/Kg	10	4/18/2023 2:44:05 PM
Motor Oil Range Organics (MRO)	1800	480		mg/Kg	10	4/18/2023 2:44:05 PM
Surr: DNOP	0	69-147	S	%Rec	10	4/18/2023 2:44:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	1900	46		mg/Kg	10	4/17/2023 6:01:00 PM
Surr: BFB	314	37.7-212	S	%Rec	10	4/17/2023 6:01:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	0.31	0.023		mg/Kg	1	4/15/2023 6:59:00 AM
Toluene	15	0.46		mg/Kg	10	4/17/2023 6:01:00 PM
Ethylbenzene	3.5	0.046		mg/Kg	1	4/15/2023 6:59:00 AM
Xylenes, Total	83	0.93		mg/Kg	10	4/17/2023 6:01:00 PM
Surr: 4-Bromofluorobenzene	216	70-130	S	%Rec	1	4/15/2023 6:59:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	520	60		mg/Kg	20	4/17/2023 5:58:10 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-04 0'
Project: Bindel 4 Fee 1 Battery **Collection Date:** 4/7/2023 11:30:00 AM
Lab ID: 2304492-007 **Matrix:** SOIL **Received Date:** 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	41	9.6		mg/Kg	1	4/17/2023 9:27:31 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/17/2023 9:27:31 AM
Surr: DNOP	95.5	69-147		%Rec	1	4/17/2023 9:27:31 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/17/2023 3:52:00 PM
Surr: BFB	89.0	37.7-212		%Rec	1	4/17/2023 3:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	4/17/2023 3:52:00 PM
Toluene	ND	0.049		mg/Kg	1	4/17/2023 3:52:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/17/2023 3:52:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/17/2023 3:52:00 PM
Surr: 4-Bromofluorobenzene	86.2	70-130		%Rec	1	4/17/2023 3:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	4/17/2023 6:10:35 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-04 1'
Project: Bindel 4 Fee 1 Battery **Collection Date:** 4/7/2023 11:45:00 AM
Lab ID: 2304492-008 **Matrix:** SOIL **Received Date:** 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	47	9.4		mg/Kg	1	4/17/2023 9:38:00 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/17/2023 9:38:00 AM
Surr: DNOP	94.5	69-147		%Rec	1	4/17/2023 9:38:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/15/2023 7:42:00 AM
Surr: BFB	108	37.7-212		%Rec	1	4/15/2023 7:42:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	4/15/2023 7:42:00 AM
Toluene	ND	0.049		mg/Kg	1	4/15/2023 7:42:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/15/2023 7:42:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/15/2023 7:42:00 AM
Surr: 4-Bromofluorobenzene	88.7	70-130		%Rec	1	4/15/2023 7:42:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	72	60		mg/Kg	20	4/17/2023 6:22:59 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-05 0'
Project: Bindel 4 Fee 1 Battery **Collection Date:** 4/7/2023 1:00:00 PM
Lab ID: 2304492-009 **Matrix:** SOIL **Received Date:** 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	4/17/2023 7:43:30 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	4/17/2023 7:43:30 PM
Surr: DNOP	113	69-147		%Rec	1	4/17/2023 7:43:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/17/2023 1:07:25 PM
Surr: BFB	88.3	37.7-212		%Rec	1	4/17/2023 1:07:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/17/2023 1:07:25 PM
Toluene	ND	0.048		mg/Kg	1	4/17/2023 1:07:25 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/17/2023 1:07:25 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/17/2023 1:07:25 PM
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	4/17/2023 1:07:25 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	4/17/2023 3:35:59 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-05 1'
Project: Bindel 4 Fee 1 Battery **Collection Date:** 4/7/2023 1:15:00 PM
Lab ID: 2304492-010 **Matrix:** SOIL **Received Date:** 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	4/17/2023 8:27:19 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	4/17/2023 8:27:19 PM
Surr: DNOP	74.6	69-147		%Rec	1	4/17/2023 8:27:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/17/2023 2:17:27 PM
Surr: BFB	77.0	37.7-212		%Rec	1	4/17/2023 2:17:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/17/2023 2:17:27 PM
Toluene	ND	0.049		mg/Kg	1	4/17/2023 2:17:27 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/17/2023 2:17:27 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/17/2023 2:17:27 PM
Surr: 4-Bromofluorobenzene	90.6	70-130		%Rec	1	4/17/2023 2:17:27 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	4/17/2023 3:48:24 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-06 0'
Project: Bindel 4 Fee 1 Battery **Collection Date:** 4/7/2023 1:30:00 PM
Lab ID: 2304492-011 **Matrix:** SOIL **Received Date:** 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	15	9.3		mg/Kg	1	4/17/2023 8:38:18 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/17/2023 8:38:18 PM
Surr: DNOP	75.7	69-147		%Rec	1	4/17/2023 8:38:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/17/2023 3:27:33 PM
Surr: BFB	91.7	37.7-212		%Rec	1	4/17/2023 3:27:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	4/17/2023 3:27:33 PM
Toluene	ND	0.047		mg/Kg	1	4/17/2023 3:27:33 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/17/2023 3:27:33 PM
Xylenes, Total	ND	0.094		mg/Kg	1	4/17/2023 3:27:33 PM
Surr: 4-Bromofluorobenzene	95.0	70-130		%Rec	1	4/17/2023 3:27:33 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	4/17/2023 4:00:49 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-06 1'
Project: Bindel 4 Fee 1 Battery **Collection Date:** 4/7/2023 1:45:00 PM
Lab ID: 2304492-012 **Matrix:** SOIL **Received Date:** 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	14	9.4		mg/Kg	1	4/17/2023 9:00:03 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/17/2023 9:00:03 PM
Surr: DNOP	100	69-147		%Rec	1	4/17/2023 9:00:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/17/2023 3:51:02 PM
Surr: BFB	101	37.7-212		%Rec	1	4/17/2023 3:51:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/17/2023 3:51:02 PM
Toluene	ND	0.048		mg/Kg	1	4/17/2023 3:51:02 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/17/2023 3:51:02 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/17/2023 3:51:02 PM
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	4/17/2023 3:51:02 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	4/17/2023 4:38:02 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 **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-07 0'
Project: Bindel 4 Fee 1 Battery **Collection Date:** 4/7/2023 2:00:00 PM
Lab ID: 2304492-013 **Matrix:** SOIL **Received Date:** 4/12/2023 8:42:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	4/17/2023 9:10:58 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	4/17/2023 9:10:58 PM
Surr: DNOP	77.3	69-147		%Rec	1	4/17/2023 9:10:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/17/2023 4:14:25 PM
Surr: BFB	103	37.7-212		%Rec	1	4/17/2023 4:14:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/17/2023 4:14:25 PM
Toluene	ND	0.048		mg/Kg	1	4/17/2023 4:14:25 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/17/2023 4:14:25 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/17/2023 4:14:25 PM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	4/17/2023 4:14:25 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	4/17/2023 5:15:15 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2304492**
Date Reported: **4/20/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-07 1'
Project: Bindel 4 Fee 1 Battery **Collection Date:** 4/7/2023 2:15:00 PM
Lab ID: 2304492-014 **Matrix:** SOIL **Received Date:** 4/12/2023 8:42:00 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	4/17/2023 9:21:51 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/17/2023 9:21:51 PM
Surr: DNOP	82.4	69-147		%Rec	1	4/17/2023 9:21:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/17/2023 4:37:51 PM
Surr: BFB	93.1	37.7-212		%Rec	1	4/17/2023 4:37:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/17/2023 4:37:51 PM
Toluene	ND	0.048		mg/Kg	1	4/17/2023 4:37:51 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/17/2023 4:37:51 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/17/2023 4:37:51 PM
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	4/17/2023 4:37:51 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	62	60		mg/Kg	20	4/17/2023 5:27:40 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#: **2304492**

20-Apr-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 Battery

Sample ID: **MB-74353**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **74353**	RunNo: **96079**							
Prep Date: **4/17/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479713**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-74353**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **74353**	RunNo: **96079**							
Prep Date: **4/17/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479714**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.1	90	110			

Sample ID: **MB-74367**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **74367**	RunNo: **96081**							
Prep Date: **4/17/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479906**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-74367**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **74367**	RunNo: **96081**							
Prep Date: **4/17/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479907**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304492**

20-Apr-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 Battery

Sample ID: **MB-74323**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **74323**	RunNo: **96062**
Prep Date: **4/14/2023**	Analysis Date: **4/14/2023**	SeqNo: **3478497** 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		89.1	69	147			

Sample ID: **LCS-74323**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **74323**	RunNo: **96062**
Prep Date: **4/14/2023**	Analysis Date: **4/14/2023**	SeqNo: **3478501** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	81.0	61.9	130			
Surr: DNOP	4.6		5.000		91.2	69	147			

Sample ID: **MB-74347**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **74347**	RunNo: **96078**
Prep Date: **4/17/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479110** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.4		10.00		93.5	69	147			

Sample ID: **LCS-74347**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **74347**	RunNo: **96078**
Prep Date: **4/17/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479111** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		91.6	69	147			

Sample ID: **2304492-008AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-04 1'**	Batch ID: **74323**	RunNo: **96078**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479115** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	87	9.6	47.89	47.26	83.3	54.2	135			
Surr: DNOP	4.6		4.789		95.7	69	147			

Sample ID: **2304492-008AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-04 1'**	Batch ID: **74323**	RunNo: **96078**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479116** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	80	8.6	42.84	47.26	76.9	54.2	135	8.30	29.2	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304492**

20-Apr-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 Battery

Sample ID: **2304492-008AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH23-04 1'**	Batch ID: **74323**	RunNo: **96078**							
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479116**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		4.284		96.0	69	147	0	0	

Sample ID: **MB-74336**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **74336**	RunNo: **96078**							
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479504**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		119	69	147			

Sample ID: **LCS-74336**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **74336**	RunNo: **96078**							
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479507**	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	101	61.9	130			
Surr: DNOP	6.1		5.000		122	69	147			

Sample ID: **2304492-009AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH23-05 0'**	Batch ID: **74336**	RunNo: **96078**							
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479521**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	8.7	43.37	7.864	74.0	54.2	135			
Surr: DNOP	3.7		4.337		86.2	69	147			

Sample ID: **2304492-009AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **BH23-05 0'**	Batch ID: **74336**	RunNo: **96078**							
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479522**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.0	44.88	7.864	75.5	54.2	135	4.41	29.2	
Surr: DNOP	3.5		4.488		77.1	69	147	0	0	

Sample ID: **LCS-74375**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **74375**	RunNo: **96131**							
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3481381**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304492**

20-Apr-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 Battery

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

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

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

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		86.6	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304492**

20-Apr-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 Battery

Sample ID: **lcs-74316**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **74316**	RunNo: **96058**
Prep Date: **4/13/2023**	Analysis Date: **4/14/2023**	SeqNo: **3478184** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.1	70	130			
Surr: BFB	1900		1000		193	37.7	212			

Sample ID: **mb-74316**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **74316**	RunNo: **96058**
Prep Date: **4/13/2023**	Analysis Date: **4/14/2023**	SeqNo: **3478185** 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	37.7	212			

Sample ID: **lcs-74331**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **74331**	RunNo: **96073**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479019** 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	94.4	70	130			
Surr: BFB	5200		1000		517	37.7	212			S

Sample ID: **mb-74331**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **74331**	RunNo: **96073**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479020** 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	970		1000		97.3	37.7	212			

Sample ID: **2304492-009ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-05 0'**	Batch ID: **74331**	RunNo: **96073**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479022** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.8	23.90	0	85.6	70	130			
Surr: BFB	4900		956.0		512	37.7	212			S

Sample ID: **2304492-009amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-05 0'**	Batch ID: **74331**	RunNo: **96073**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479256** Units: **mg/Kg**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304492**

20-Apr-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 Battery

Sample ID: **2304492-009amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-05 0'**	Batch ID: **74331**	RunNo: **96073**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479256** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	23.97	0	87.2	70	130	2.14	20	
Surr: BFB	5100		958.8		531	37.7	212	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation 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#: **2304492**

20-Apr-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 Battery

Sample ID: **lcs-74316**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **74316**	RunNo: **96058**
Prep Date: **4/13/2023**	Analysis Date: **4/14/2023**	SeqNo: **3478356** 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	89.6	80	120			
Toluene	0.89	0.050	1.000	0	89.2	80	120			
Ethylbenzene	0.87	0.050	1.000	0	86.5	80	120			
Xylenes, Total	2.6	0.10	3.000	0	85.6	80	120			
Surr: 4-Bromofluorobenzene	0.86		1.000		86.3	70	130			

Sample ID: **mb-74316**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **74316**	RunNo: **96058**
Prep Date: **4/13/2023**	Analysis Date: **4/14/2023**	SeqNo: **3478357** 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	0.85		1.000		84.8	70	130			

Sample ID: **LCS-74331**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **74331**	RunNo: **96073**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479024** 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	85.3	80	120			
Toluene	0.86	0.050	1.000	0	85.9	80	120			
Ethylbenzene	0.87	0.050	1.000	0	87.0	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.7	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.2	70	130			

Sample ID: **mb-74331**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **74331**	RunNo: **96073**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479025** 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	0.96		1.000		96.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304492**

20-Apr-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 Battery

Sample ID: **2304492-010ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-05 1'**	Batch ID: **74331**	RunNo: **96073**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479262** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.024	0.9718	0	84.2	68.8	120			
Toluene	0.85	0.049	0.9718	0.01769	85.8	73.6	124			
Ethylbenzene	0.87	0.049	0.9718	0	89.7	72.7	129			
Xylenes, Total	2.6	0.097	2.915	0	90.9	75.7	126			
Surr: 4-Bromofluorobenzene	0.95		0.9718		97.9	70	130			

Sample ID: **2304492-010amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-05 1'**	Batch ID: **74331**	RunNo: **96073**
Prep Date: **4/14/2023**	Analysis Date: **4/17/2023**	SeqNo: **3479263** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.024	0.9718	0	83.7	68.8	120	0.655	20	
Toluene	0.85	0.049	0.9718	0.01769	85.4	73.6	124	0.457	20	
Ethylbenzene	0.87	0.049	0.9718	0	89.6	72.7	129	0.179	20	
Xylenes, Total	2.6	0.097	2.915	0	90.0	75.7	126	0.947	20	
Surr: 4-Bromofluorobenzene	0.94		0.9718		96.6	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2304492

RcptNo: 1

Received By: Tracy Casarrubias 4/12/2023 8:42:00 AM

Completed By: Tracy Casarrubias 4/12/2023 9:37:09 AM

Reviewed By: KPG 4-12-23

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: JN 4/12/23

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 numbe and Email are missing on COC - TMC 4/12/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.2	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Vertex (Devon)

Mailing Address: on file

Phone #:

email or Fax#:

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

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

Turn-Around Time:
☑ Standard ☐ Rush 5 Days

Project Name: Bindel 4 Fee 1 Battery

Project #: 23E-01581

Project Manager: Kent Stallings

Sampler: Zach Englebert

On Ice: ☑ Yes ☐ No yogi

# of Coolers: 1

Cooler Temp(including CF): 5.5-0.3=5.2 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2304492	(BTEX) MTBE / TMB's (8021)	(TPH) 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	(Cl), F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4-7-23	10:00	soil	BH23-01 0'	1 jar	ice	001	X	X					X			
	10:15		BH23-01 1'			002										
	10:30		BH23-02 0'			003										
	10:45		BH23-02 1'			004										
	11:00		BH23-03 0'			005										
	11:15		BH23-03 1'			006										
	11:30		BH23-04 0'			007										
	11:45		BH23-04 1'			008										
	13:00		BH23-05 0'			009										
	13:15		BH23-05 1'			010										
	13:30		BH23-06 0'			011										
	13:45		BH23-06 1'			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4-7-23	18:00	Zach Englebert			4/11/23	1830
4/11/23	1900			courier	4/12/23	8:42

Remarks:
Direct Bill to Devon
BH23-07 0' = 013
BH23-27 1' = 014
per client. jm 4/12/23.

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

May 31, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1 OrderNo.: 2305987

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 16 sample(s) on 5/18/2023 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 **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-08 0'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 12:40:00 PM
Lab ID: 2305987-001 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 5:30:36 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/23/2023 5:30:36 PM
Surr: DNOP	78.3	69-147		%Rec	1	5/23/2023 5:30:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/24/2023 10:55:01 AM
Surr: BFB	85.3	15-244		%Rec	1	5/24/2023 10:55:01 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	5/24/2023 10:55:01 AM
Toluene	ND	0.049		mg/Kg	1	5/24/2023 10:55:01 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/24/2023 10:55:01 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/24/2023 10:55:01 AM
Surr: 4-Bromofluorobenzene	95.1	39.1-146		%Rec	1	5/24/2023 10:55:01 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	77	60		mg/Kg	20	5/23/2023 3:24:31 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 **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-08 2'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 1:00:00 PM
Lab ID: 2305987-002 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 5:41:20 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/23/2023 5:41:20 PM
Surr: DNOP	101	69-147		%Rec	1	5/23/2023 5:41:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/24/2023 11:18:23 AM
Surr: BFB	88.7	15-244		%Rec	1	5/24/2023 11:18:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	5/24/2023 11:18:23 AM
Toluene	ND	0.048		mg/Kg	1	5/24/2023 11:18:23 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/24/2023 11:18:23 AM
Xylenes, Total	ND	0.096		mg/Kg	1	5/24/2023 11:18:23 AM
Surr: 4-Bromofluorobenzene	96.6	39.1-146		%Rec	1	5/24/2023 11:18:23 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	250	60		mg/Kg	20	5/23/2023 4:01:32 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 **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-09 0'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 11:55:00 AM
Lab ID: 2305987-003 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	170	8.7		mg/Kg	1	5/23/2023 5:52:09 PM
Motor Oil Range Organics (MRO)	63	43		mg/Kg	1	5/23/2023 5:52:09 PM
Surr: DNOP	80.8	69-147		%Rec	1	5/23/2023 5:52:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/24/2023 11:41:51 AM
Surr: BFB	79.9	15-244		%Rec	1	5/24/2023 11:41:51 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	5/24/2023 11:41:51 AM
Toluene	ND	0.049		mg/Kg	1	5/24/2023 11:41:51 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/24/2023 11:41:51 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/24/2023 11:41:51 AM
Surr: 4-Bromofluorobenzene	93.6	39.1-146		%Rec	1	5/24/2023 11:41:51 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	430	59		mg/Kg	20	5/23/2023 4:13:52 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-09 2'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 12:00:00 PM
Lab ID: 2305987-004 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 6:02:59 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/23/2023 6:02:59 PM
Surr: DNOP	86.6	69-147		%Rec	1	5/23/2023 6:02:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/24/2023 12:52:09 PM
Surr: BFB	88.4	15-244		%Rec	1	5/24/2023 12:52:09 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	5/24/2023 12:52:09 PM
Toluene	ND	0.048		mg/Kg	1	5/24/2023 12:52:09 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/24/2023 12:52:09 PM
Xylenes, Total	ND	0.096		mg/Kg	1	5/24/2023 12:52:09 PM
Surr: 4-Bromofluorobenzene	95.6	39.1-146		%Rec	1	5/24/2023 12:52:09 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	150	60		mg/Kg	20	5/23/2023 4:26:12 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 **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-10 0'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 11:30:00 AM
Lab ID: 2305987-005 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	2500	45		mg/Kg	5	5/24/2023 11:39:04 AM
Motor Oil Range Organics (MRO)	680	230		mg/Kg	5	5/24/2023 11:39:04 AM
Surr: DNOP	105	69-147		%Rec	5	5/24/2023 11:39:04 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	6.9	4.9		mg/Kg	1	5/24/2023 12:05:15 PM
Surr: BFB	272	15-244	S	%Rec	1	5/24/2023 12:05:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	5/24/2023 12:05:15 PM
Toluene	ND	0.049		mg/Kg	1	5/24/2023 12:05:15 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/24/2023 12:05:15 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/24/2023 12:05:15 PM
Surr: 4-Bromofluorobenzene	94.6	39.1-146		%Rec	1	5/24/2023 12:05:15 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	5/23/2023 5:03:16 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-10 2'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 11:48:00 AM
Lab ID: 2305987-006 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 6:35:39 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/23/2023 6:35:39 PM
Surr: DNOP	102	69-147		%Rec	1	5/23/2023 6:35:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/24/2023 12:28:41 PM
Surr: BFB	90.3	15-244		%Rec	1	5/24/2023 12:28:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	5/24/2023 12:28:41 PM
Toluene	ND	0.048		mg/Kg	1	5/24/2023 12:28:41 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/24/2023 12:28:41 PM
Xylenes, Total	ND	0.095		mg/Kg	1	5/24/2023 12:28:41 PM
Surr: 4-Bromofluorobenzene	95.8	39.1-146		%Rec	1	5/24/2023 12:28:41 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	380	60		mg/Kg	20	5/23/2023 10:48:54 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 **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-11 0'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 10:15:00 AM
Lab ID: 2305987-007 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 6:46:33 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/23/2023 6:46:33 PM
Surr: DNOP	81.0	69-147		%Rec	1	5/23/2023 6:46:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/24/2023 10:27:00 PM
Surr: BFB	86.2	15-244		%Rec	1	5/24/2023 10:27:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	5/24/2023 10:27:00 PM
Toluene	ND	0.049		mg/Kg	1	5/24/2023 10:27:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/24/2023 10:27:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/24/2023 10:27:00 PM
Surr: 4-Bromofluorobenzene	83.6	39.1-146		%Rec	1	5/24/2023 10:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	61	60		mg/Kg	20	5/23/2023 11:25:56 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-11 1.5'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 10:30:00 AM
Lab ID: 2305987-008 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 6:57:25 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/23/2023 6:57:25 PM
Surr: DNOP	75.1	69-147		%Rec	1	5/23/2023 6:57:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/24/2023 11:32:00 PM
Surr: BFB	87.7	15-244		%Rec	1	5/24/2023 11:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	5/24/2023 11:32:00 PM
Toluene	ND	0.049		mg/Kg	1	5/24/2023 11:32:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/24/2023 11:32:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/24/2023 11:32:00 PM
Surr: 4-Bromofluorobenzene	84.5	39.1-146		%Rec	1	5/24/2023 11:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	5/23/2023 11:38:17 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-12 0'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 9:50:00 AM
Lab ID: 2305987-009 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	48	9.7		mg/Kg	1	5/25/2023 5:41:01 PM
Motor Oil Range Organics (MRO)	150	49		mg/Kg	1	5/25/2023 5:41:01 PM
Surr: DNOP	93.0	69-147		%Rec	1	5/25/2023 5:41:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/25/2023 12:37:00 AM
Surr: BFB	88.1	15-244		%Rec	1	5/25/2023 12:37:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	5/25/2023 12:37:00 AM
Toluene	ND	0.049		mg/Kg	1	5/25/2023 12:37:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/25/2023 12:37:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/25/2023 12:37:00 AM
Surr: 4-Bromofluorobenzene	82.9	39.1-146		%Rec	1	5/25/2023 12:37:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	410	61		mg/Kg	20	5/23/2023 11:50:38 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-12 2'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 10:00:00 AM
Lab ID: 2305987-010 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 7:19:14 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/23/2023 7:19:14 PM
Surr: DNOP	87.1	69-147		%Rec	1	5/23/2023 7:19:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/25/2023 12:58:00 AM
Surr: BFB	91.4	15-244		%Rec	1	5/25/2023 12:58:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	5/25/2023 12:58:00 AM
Toluene	ND	0.047		mg/Kg	1	5/25/2023 12:58:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/25/2023 12:58:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	5/25/2023 12:58:00 AM
Surr: 4-Bromofluorobenzene	86.1	39.1-146		%Rec	1	5/25/2023 12:58:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	87	60		mg/Kg	20	5/24/2023 12:02:58 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 **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-13 0'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 9:25:00 AM
Lab ID: 2305987-011 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	5/23/2023 7:30:05 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	5/23/2023 7:30:05 PM
Surr: DNOP	83.7	69-147		%Rec	1	5/23/2023 7:30:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/25/2023 1:20:00 AM
Surr: BFB	86.9	15-244		%Rec	1	5/25/2023 1:20:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	5/25/2023 1:20:00 AM
Toluene	ND	0.046		mg/Kg	1	5/25/2023 1:20:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	5/25/2023 1:20:00 AM
Xylenes, Total	ND	0.092		mg/Kg	1	5/25/2023 1:20:00 AM
Surr: 4-Bromofluorobenzene	84.3	39.1-146		%Rec	1	5/25/2023 1:20:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	5/24/2023 12:15:19 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 **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-13 2'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 9:40:00 AM
Lab ID: 2305987-012 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 7:40:56 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/23/2023 7:40:56 PM
Surr: DNOP	78.7	69-147		%Rec	1	5/23/2023 7:40:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/25/2023 1:42:00 AM
Surr: BFB	85.4	15-244		%Rec	1	5/25/2023 1:42:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	5/25/2023 1:42:00 AM
Toluene	ND	0.047		mg/Kg	1	5/25/2023 1:42:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/25/2023 1:42:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	5/25/2023 1:42:00 AM
Surr: 4-Bromofluorobenzene	83.5	39.1-146		%Rec	1	5/25/2023 1:42:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	5/24/2023 12:27:40 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 **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-14 0'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 12:10:00 PM
Lab ID: 2305987-013 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	140	9.9		mg/Kg	1	5/25/2023 5:51:58 PM
Motor Oil Range Organics (MRO)	100	50		mg/Kg	1	5/25/2023 5:51:58 PM
Surr: DNOP	92.0	69-147		%Rec	1	5/25/2023 5:51:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/25/2023 2:03:00 AM
Surr: BFB	87.6	15-244		%Rec	1	5/25/2023 2:03:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	5/25/2023 2:03:00 AM
Toluene	ND	0.048		mg/Kg	1	5/25/2023 2:03:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/25/2023 2:03:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	5/25/2023 2:03:00 AM
Surr: 4-Bromofluorobenzene	82.9	39.1-146		%Rec	1	5/25/2023 2:03:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	180	60		mg/Kg	20	5/24/2023 12:40:00 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-14 2'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 12:20:00 PM
Lab ID: 2305987-014 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 8:02:34 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/23/2023 8:02:34 PM
Surr: DNOP	92.1	69-147		%Rec	1	5/23/2023 8:02:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/25/2023 2:25:00 AM
Surr: BFB	87.3	15-244		%Rec	1	5/25/2023 2:25:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	5/25/2023 2:25:00 AM
Toluene	ND	0.048		mg/Kg	1	5/25/2023 2:25:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/25/2023 2:25:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	5/25/2023 2:25:00 AM
Surr: 4-Bromofluorobenzene	83.1	39.1-146		%Rec	1	5/25/2023 2:25:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	100	61		mg/Kg	20	5/24/2023 12:52:21 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 **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-15 0'
Project: Bindel 4 Fee 1
Collection Date: 5/16/2023 2:20:00 PM
Lab ID: 2305987-015 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	5/23/2023 8:24:09 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	5/23/2023 8:24:09 PM
Surr: DNOP	91.5	69-147		%Rec	1	5/23/2023 8:24:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/25/2023 2:46:00 AM
Surr: BFB	89.2	15-244		%Rec	1	5/25/2023 2:46:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	5/25/2023 2:46:00 AM
Toluene	ND	0.048		mg/Kg	1	5/25/2023 2:46:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/25/2023 2:46:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/25/2023 2:46:00 AM
Surr: 4-Bromofluorobenzene	84.9	39.1-146		%Rec	1	5/25/2023 2:46:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	180	61		mg/Kg	20	5/24/2023 1:04:41 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2305987**
Date Reported: **5/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-15 2'
Project: Bindel 4 Fee 1 **Collection Date:** 5/16/2023 2:25:00 PM
Lab ID: 2305987-016 **Matrix:** SOIL **Received Date:** 5/18/2023 7:30:00 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	5/23/2023 8:34:56 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	5/23/2023 8:34:56 PM
Surr: DNOP	115	69-147		%Rec	1	5/23/2023 8:34:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/25/2023 3:08:00 AM
Surr: BFB	92.0	15-244		%Rec	1	5/25/2023 3:08:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	5/25/2023 3:08:00 AM
Toluene	ND	0.046		mg/Kg	1	5/25/2023 3:08:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	5/25/2023 3:08:00 AM
Xylenes, Total	ND	0.091		mg/Kg	1	5/25/2023 3:08:00 AM
Surr: 4-Bromofluorobenzene	88.0	39.1-146		%Rec	1	5/25/2023 3:08:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	270	60		mg/Kg	20	5/24/2023 12:41:51 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.		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2305987**
31-May-23

Client: Vertex Resources Services, Inc.
Project: Bindel 4 Fee 1

Sample ID: **MB-75123** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **75123** RunNo: **96982**
Prep Date: **5/23/2023** Analysis Date: **5/23/2023** SeqNo: **3518858** Units: **mg/Kg**

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

Sample ID: **LCS-75123** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **75123** RunNo: **96982**
Prep Date: **5/23/2023** Analysis Date: **5/23/2023** SeqNo: **3518859** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID: **MB-75136** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **75136** RunNo: **96982**
Prep Date: **5/23/2023** Analysis Date: **5/23/2023** SeqNo: **3518888** Units: **mg/Kg**

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

Sample ID: **LCS-75136** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **75136** RunNo: **96982**
Prep Date: **5/23/2023** Analysis Date: **5/23/2023** SeqNo: **3518889** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.6	90	110			

Sample ID: **MB-75144** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **75144** RunNo: **96996**
Prep Date: **5/24/2023** Analysis Date: **5/24/2023** SeqNo: **3520026** Units: **mg/Kg**

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

Sample ID: **LCS-75144** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **75144** RunNo: **96996**
Prep Date: **5/24/2023** Analysis Date: **5/24/2023** SeqNo: **3520028** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	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#: **2305987**
31-May-23

Client: Vertex Resources Services, Inc.
Project: Bindel 4 Fee 1

Sample ID: **LCS-75104** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **75104** RunNo: **96945**
Prep Date: **5/22/2023** Analysis Date: **5/23/2023** SeqNo: **3518231** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.4	61.9	130			
Surr: DNOP	4.8		5.000		95.1	69	147			

Sample ID: **LCS-75110** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **75110** RunNo: **96945**
Prep Date: **5/22/2023** Analysis Date: **5/23/2023** SeqNo: **3518232** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.8	61.9	130			
Surr: DNOP	5.0		5.000		101	69	147			

Sample ID: **MB-75104** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **75104** RunNo: **96945**
Prep Date: **5/22/2023** Analysis Date: **5/23/2023** SeqNo: **3518235** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		125	69	147			

Sample ID: **MB-75110** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **75110** RunNo: **96945**
Prep Date: **5/22/2023** Analysis Date: **5/23/2023** SeqNo: **3518236** 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	8.1		10.00		80.8	69	147			

Sample ID: **LCS-75177** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **75177** RunNo: **97035**
Prep Date: **5/25/2023** Analysis Date: **5/25/2023** SeqNo: **3521100** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.0	61.9	130			
Surr: DNOP	4.4		5.000		87.2	69	147			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2305987**
31-May-23

Client: Vertex Resources Services, Inc.
Project: Bindel 4 Fee 1

Sample ID: **MB-75177** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **75177** RunNo: **97035**
Prep Date: **5/25/2023** Analysis Date: **5/25/2023** SeqNo: **3521102** 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	9.4		10.00		94.1	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2305987**

31-May-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1

Sample ID: **lcs-75096** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **75096** RunNo: **96952**
Prep Date: **5/22/2023** Analysis Date: **5/24/2023** SeqNo: **3518258** 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	90.1	70	130			
Surr: BFB	5000		1000		504	15	244			S

Sample ID: **mb-75096** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **75096** RunNo: **96952**
Prep Date: **5/22/2023** Analysis Date: **5/24/2023** SeqNo: **3518259** 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	870		1000		87.3	15	244			

Sample ID: **mb-75105** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **75105** RunNo: **96984**
Prep Date: **5/22/2023** Analysis Date: **5/24/2023** SeqNo: **3519769** 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	850		1000		84.6	15	244			

Sample ID: **lcs-75105** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **75105** RunNo: **96984**
Prep Date: **5/22/2023** Analysis Date: **5/24/2023** SeqNo: **3519770** 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	88.6	70	130			
Surr: BFB	1900		1000		191	15	244			

Sample ID: **2305987-007ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-11 0'** Batch ID: **75105** RunNo: **96984**
Prep Date: **5/22/2023** Analysis Date: **5/24/2023** SeqNo: **3519772** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.9	24.37	0	87.9	70	130			
Surr: BFB	1900		974.7		193	15	244			

Sample ID: **2305987-007amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-11 0'** Batch ID: **75105** RunNo: **96984**
Prep Date: **5/22/2023** Analysis Date: **5/24/2023** SeqNo: **3519773** Units: **mg/Kg**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2305987**
31-May-23

Client: Vertex Resources Services, Inc.
Project: Bindel 4 Fee 1

Sample ID: **2305987-007amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-11 0'** Batch ID: **75105** RunNo: **96984**
Prep Date: **5/22/2023** Analysis Date: **5/24/2023** SeqNo: **3519773** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	24.15	0	86.4	70	130	2.57	20	
Surr: BFB	1900		966.2		194	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2305987**
31-May-23

Client: Vertex Resources Services, Inc.
Project: Bindel 4 Fee 1

Sample ID: **LCS-75096**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **75096**	RunNo: **96952**
Prep Date: **5/22/2023**	Analysis Date: **5/24/2023**	SeqNo: **3518273** 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	84.5	70	130			
Toluene	0.86	0.050	1.000	0	86.1	70	130			
Ethylbenzene	0.87	0.050	1.000	0	87.2	70	130			
Xylenes, Total	2.6	0.10	3.000	0	87.2	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.8	39.1	146			

Sample ID: **mb-75096**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **75096**	RunNo: **96952**
Prep Date: **5/22/2023**	Analysis Date: **5/24/2023**	SeqNo: **3518274** 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		97.1	39.1	146			

Sample ID: **mb-75105**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **75105**	RunNo: **96984**
Prep Date: **5/22/2023**	Analysis Date: **5/24/2023**	SeqNo: **3519793** 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	0.84		1.000		84.2	39.1	146			

Sample ID: **lcs-75105**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **75105**	RunNo: **96984**
Prep Date: **5/22/2023**	Analysis Date: **5/24/2023**	SeqNo: **3519794** 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	0.84	0.050	1.000	0	84.5	70	130			
Ethylbenzene	0.83	0.050	1.000	0	82.5	70	130			
Xylenes, Total	2.5	0.10	3.000	0	82.2	70	130			
Surr: 4-Bromofluorobenzene	0.86		1.000		86.2	39.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2305987**

31-May-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1

Sample ID: **2305987-008ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-11 1.5'** Batch ID: **75105** RunNo: **96984**

Prep Date: **5/22/2023** Analysis Date: **5/24/2023** SeqNo: **3519796** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.024	0.9699	0	83.7	70	130			
Toluene	0.82	0.048	0.9699	0	84.6	70	130			
Ethylbenzene	0.81	0.048	0.9699	0	83.0	70	130			
Xylenes, Total	2.4	0.097	2.910	0	82.2	70	130			
Surr: 4-Bromofluorobenzene	0.82		0.9699		84.5	39.1	146			

Sample ID: **2305987-008amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-11 1.5'** Batch ID: **75105** RunNo: **96984**

Prep Date: **5/22/2023** Analysis Date: **5/25/2023** SeqNo: **3519797** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9718	0	92.1	70	130	9.73	20	
Toluene	0.90	0.049	0.9718	0	93.0	70	130	9.64	20	
Ethylbenzene	0.89	0.049	0.9718	0	91.4	70	130	9.84	20	
Xylenes, Total	2.6	0.097	2.915	0	90.6	70	130	9.93	20	
Surr: 4-Bromofluorobenzene	0.84		0.9718		86.4	39.1	146	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2305987

RcptNo: 1

Received By: Juan Rojas 5/18/2023 7:30:00 AM

Completed By: Tracy Casarrubias 5/18/2023 11:19:32 AM

Reviewed By: CMC 5/18/23

Chain of Custody

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

Log In

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

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

Adjusted?

Checked by: MD 5/18/23

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

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

Chain-of-Custody Record

Client: Devon / Vertex

Mailing Address: On file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☒ Rush 5 Day

Project Name: Bindel 4 Fee 1

Project #: 23E-01581

Project Manager: Kent Stallings

Sampler: SM

On Ice: ☐ Yes ☐ No

# of Coolers: 1 Misty

Cooler Temp(including CF): 2.0+0.1=2.1 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2305982	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)
5/16/23	12:40	Soil	BH23-08 0'	4 oz jar	ice	001	✓	✓					✓			
	13:00		BH23-08 2'			002										
	11:55		BH23-09 0'			003										
	12:00		BH23-09 2'			004										
	11:30		BH23-10 0'			005										
	11:48		BH23-10 2'			006										
	10:15		BH23-11 0'			007										
	10:30		BH23-11 1.5'			008										
	9:50		BH23-12 0'			009										
	10:00		BH23-12 2'			010										
	9:25		BH23-13 0'			011										
	9:40		BH23-13 2'			012										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
5/16/23	1630	Stephen McGuire			5/17/23	1030
5/17/23	1900			courier	5/18/23	7:30

Remarks: Direct bill to: Devon w/o:21139358

C.C. smccarty@vertex.ca pg. 1 of 2

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 / Vertex

Mailing Address: On file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☒ Rush 5 days

Project Name: Bindel 4 Fee 1

Project #: 23E-01581

Project Manager: Kent Stallings

Sampler: SM

On Ice: ☐ Yes ☐ No

# of Coolers: 1 (Melt)

Cooler Temp(including CF): 2.0+0.1=2.1 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2305907	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
5/16/23	12:10	Soil	BH23-14 0'	4oz jar	ice	013	✓	✓					✓			
	12:20		BH23-14 2'			014										
	14:20		BH23-15 0'			015										
	14:25		BH23-15 2'			016										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5/16/23	1630	Stephen McCarty				
5/17/23	1900				5/17/23	1030
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5/17/23	1900			Courier	5/18/23	7:30

Remarks: Direct bill to: Devon W/O: 21139358

c.c. smccarty@vertex.ca pg 2 of 2

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

June 15, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1 OrderNo.: 2306058

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 14 sample(s) on 6/2/2023 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-001 **Matrix:** SOIL

Client Sample ID: BH23-01 2'
Collection Date: 5/31/2023 12:30:00 PM
Received Date: 6/2/2023 7:25:00 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	6/7/2023 10:20:42 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/7/2023 10:20:42 PM
Surr: DNOP	90.7	69-147		%Rec	1	6/7/2023 10:20:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 8:02:00 AM
Surr: BFB	99.7	15-244		%Rec	1	6/10/2023 8:02:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	6/10/2023 8:02:00 AM
Toluene	ND	0.049		mg/Kg	1	6/10/2023 8:02:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 8:02:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	6/10/2023 8:02:00 AM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	6/10/2023 8:02:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	110	60		mg/Kg	20	6/9/2023 9:50:19 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-002 **Matrix:** SOIL

Client Sample ID: BH23-01 4'
Collection Date: 5/31/2023 12:35:00 PM
Received Date: 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	860	20		mg/Kg	2	6/8/2023 1:23:23 PM
Motor Oil Range Organics (MRO)	240	98		mg/Kg	2	6/8/2023 1:23:23 PM
Surr: DNOP	91.1	69-147		%Rec	2	6/8/2023 1:23:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	15	4.9		mg/Kg	1	6/10/2023 8:24:00 AM
Surr: BFB	238	15-244		%Rec	1	6/10/2023 8:24:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	6/10/2023 8:24:00 AM
Toluene	ND	0.049		mg/Kg	1	6/10/2023 8:24:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 8:24:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	6/10/2023 8:24:00 AM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	6/10/2023 8:24:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	6/9/2023 10:02:39 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-003 **Matrix:** SOIL

Client Sample ID: BH23-01 6'
Collection Date: 5/31/2023 12:40:00 PM
Received Date: 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	350	9.6		mg/Kg	1	6/7/2023 10:42:26 PM
Motor Oil Range Organics (MRO)	100	48		mg/Kg	1	6/7/2023 10:42:26 PM
Surr: DNOP	85.4	69-147		%Rec	1	6/7/2023 10:42:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	5.8	4.8		mg/Kg	1	6/10/2023 8:45:00 AM
Surr: BFB	155	15-244		%Rec	1	6/10/2023 8:45:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 8:45:00 AM
Toluene	ND	0.048		mg/Kg	1	6/10/2023 8:45:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	6/10/2023 8:45:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	6/10/2023 8:45:00 AM
Surr: 4-Bromofluorobenzene	102	39.1-146		%Rec	1	6/10/2023 8:45:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	6/9/2023 10:15:00 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-01 8'
Project: Bindel 4 Fee 1
Collection Date: 5/31/2023 2:25:00 PM
Lab ID: 2306058-004 **Matrix:** SOIL **Received Date:** 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	37	9.3		mg/Kg	1	6/7/2023 10:53:23 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/7/2023 10:53:23 PM
Surr: DNOP	91.0	69-147		%Rec	1	6/7/2023 10:53:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 9:07:00 AM
Surr: BFB	100	15-244		%Rec	1	6/10/2023 9:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 9:07:00 AM
Toluene	ND	0.049		mg/Kg	1	6/10/2023 9:07:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 9:07:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	6/10/2023 9:07:00 AM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	6/10/2023 9:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	6/9/2023 10:27:21 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-005 **Matrix:** SOIL

Client Sample ID: BH23-02 2'
Collection Date: 5/31/2023 12:15:00 PM
Received Date: 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	130	9.2		mg/Kg	1	6/7/2023 11:04:19 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/7/2023 11:04:19 PM
Surr: DNOP	79.5	69-147		%Rec	1	6/7/2023 11:04:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 9:29:00 AM
Surr: BFB	143	15-244		%Rec	1	6/10/2023 9:29:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 9:29:00 AM
Toluene	ND	0.049		mg/Kg	1	6/10/2023 9:29:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 9:29:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	6/10/2023 9:29:00 AM
Surr: 4-Bromofluorobenzene	100	39.1-146		%Rec	1	6/10/2023 9:29:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	1000	61		mg/Kg	20	6/9/2023 10:39:43 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-006 **Matrix:** SOIL

Client Sample ID: BH23-02 4'
Collection Date: 5/31/2023 12:20:00 PM
Received Date: 6/2/2023 7:25:00 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	6/7/2023 11:15:14 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/7/2023 11:15:14 PM
Surr: DNOP	92.0	69-147		%Rec	1	6/7/2023 11:15:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 9:50:00 AM
Surr: BFB	101	15-244		%Rec	1	6/10/2023 9:50:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 9:50:00 AM
Toluene	ND	0.049		mg/Kg	1	6/10/2023 9:50:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 9:50:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	6/10/2023 9:50:00 AM
Surr: 4-Bromofluorobenzene	95.1	39.1-146		%Rec	1	6/10/2023 9:50:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	660	60		mg/Kg	20	6/9/2023 10:52:04 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-007 **Matrix:** SOIL

Client Sample ID: BH23-02 6'
Collection Date: 5/31/2023 12:25:00 PM
Received Date: 6/2/2023 7:25:00 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	6/7/2023 11:26:08 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/7/2023 11:26:08 PM
Surr: DNOP	85.2	69-147		%Rec	1	6/7/2023 11:26:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/10/2023 10:12:00 AM
Surr: BFB	98.5	15-244		%Rec	1	6/10/2023 10:12:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	6/10/2023 10:12:00 AM
Toluene	ND	0.050		mg/Kg	1	6/10/2023 10:12:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/10/2023 10:12:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/10/2023 10:12:00 AM
Surr: 4-Bromofluorobenzene	93.9	39.1-146		%Rec	1	6/10/2023 10:12:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	440	60		mg/Kg	20	6/9/2023 11:04:25 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-008 **Matrix:** SOIL

Client Sample ID: BH23-02 8'
Collection Date: 5/31/2023 2:30:00 PM
Received Date: 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	70	9.6		mg/Kg	1	6/7/2023 11:37:00 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/7/2023 11:37:00 PM
Surr: DNOP	82.6	69-147		%Rec	1	6/7/2023 11:37:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/10/2023 10:34:00 AM
Surr: BFB	96.7	15-244		%Rec	1	6/10/2023 10:34:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	6/10/2023 10:34:00 AM
Toluene	ND	0.050		mg/Kg	1	6/10/2023 10:34:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/10/2023 10:34:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	6/10/2023 10:34:00 AM
Surr: 4-Bromofluorobenzene	92.0	39.1-146		%Rec	1	6/10/2023 10:34:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	460	60		mg/Kg	20	6/9/2023 11:16:45 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-009 **Matrix:** SOIL

Client Sample ID: BH23-02 9'
Collection Date: 5/31/2023 3:06:00 PM
Received Date: 6/2/2023 7:25:00 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	6/8/2023 2:08:35 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/8/2023 2:08:35 PM
Surr: DNOP	89.4	69-147		%Rec	1	6/8/2023 2:08:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/10/2023 10:55:00 AM
Surr: BFB	102	15-244		%Rec	1	6/10/2023 10:55:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 10:55:00 AM
Toluene	ND	0.048		mg/Kg	1	6/10/2023 10:55:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	6/10/2023 10:55:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	6/10/2023 10:55:00 AM
Surr: 4-Bromofluorobenzene	95.3	39.1-146		%Rec	1	6/10/2023 10:55:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	440	60		mg/Kg	20	6/9/2023 11:53:48 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-010 **Matrix:** SOIL

Client Sample ID: BH23-03 2'
Collection Date: 5/31/2023 12:00:00 PM
Received Date: 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	610	9.7		mg/Kg	1	6/8/2023 12:09:36 AM
Motor Oil Range Organics (MRO)	210	48		mg/Kg	1	6/8/2023 12:09:36 AM
Surr: DNOP	87.6	69-147		%Rec	1	6/8/2023 12:09:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	5.7	5.0		mg/Kg	1	6/10/2023 11:17:00 AM
Surr: BFB	162	15-244		%Rec	1	6/10/2023 11:17:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	6/10/2023 11:17:00 AM
Toluene	ND	0.050		mg/Kg	1	6/10/2023 11:17:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/10/2023 11:17:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	6/10/2023 11:17:00 AM
Surr: 4-Bromofluorobenzene	103	39.1-146		%Rec	1	6/10/2023 11:17:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	110	61		mg/Kg	20	6/9/2023 12:06:09 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-011 **Matrix:** SOIL

Client Sample ID: BH23-03 4'
Collection Date: 5/31/2023 12:05:00 PM
Received Date: 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	92	9.6		mg/Kg	1	6/8/2023 12:20:27 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/8/2023 12:20:27 AM
Surr: DNOP	79.5	69-147		%Rec	1	6/8/2023 12:20:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 12:01:00 PM
Surr: BFB	115	15-244		%Rec	1	6/10/2023 12:01:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 12:01:00 PM
Toluene	ND	0.049		mg/Kg	1	6/10/2023 12:01:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 12:01:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	6/10/2023 12:01:00 PM
Surr: 4-Bromofluorobenzene	95.6	39.1-146		%Rec	1	6/10/2023 12:01:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	160	60		mg/Kg	20	6/9/2023 12:18:30 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-012 **Matrix:** SOIL

Client Sample ID: BH23-03 6'
Collection Date: 5/31/2023 12:10:00 PM
Received Date: 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	11	9.6		mg/Kg	1	6/8/2023 12:31:19 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/8/2023 12:31:19 AM
Surr: DNOP	91.8	69-147		%Rec	1	6/8/2023 12:31:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/10/2023 12:22:00 PM
Surr: BFB	103	15-244		%Rec	1	6/10/2023 12:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 12:22:00 PM
Toluene	ND	0.048		mg/Kg	1	6/10/2023 12:22:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	6/10/2023 12:22:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	6/10/2023 12:22:00 PM
Surr: 4-Bromofluorobenzene	94.0	39.1-146		%Rec	1	6/10/2023 12:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	110	60		mg/Kg	20	6/9/2023 12:30:50 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 **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-013 **Matrix:** SOIL

Client Sample ID: BH23-09 4'
Collection Date: 5/31/2023 12:45:00 PM
Received Date: 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	16	9.2		mg/Kg	1	6/8/2023 12:42:11 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/8/2023 12:42:11 AM
Surr: DNOP	79.5	69-147		%Rec	1	6/8/2023 12:42:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 12:44:00 PM
Surr: BFB	102	15-244		%Rec	1	6/10/2023 12:44:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	6/10/2023 12:44:00 PM
Toluene	ND	0.049		mg/Kg	1	6/10/2023 12:44:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 12:44:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	6/10/2023 12:44:00 PM
Surr: 4-Bromofluorobenzene	93.6	39.1-146		%Rec	1	6/10/2023 12:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	310	60		mg/Kg	20	6/9/2023 12:43:10 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2306058**
Date Reported: **6/15/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2306058-014 **Matrix:** SOIL

Client Sample ID: BH23-09 6'
Collection Date: 5/31/2023 2:15:00 PM
Received Date: 6/2/2023 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	10	9.6		mg/Kg	1	6/8/2023 12:53:05 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/8/2023 12:53:05 AM
Surr: DNOP	96.7	69-147		%Rec	1	6/8/2023 12:53:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 1:06:00 PM
Surr: BFB	99.1	15-244		%Rec	1	6/10/2023 1:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	6/10/2023 1:06:00 PM
Toluene	ND	0.049		mg/Kg	1	6/10/2023 1:06:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 1:06:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	6/10/2023 1:06:00 PM
Surr: 4-Bromofluorobenzene	93.7	39.1-146		%Rec	1	6/10/2023 1:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	410	60		mg/Kg	20	6/9/2023 12:55:31 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.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306058**

15-Jun-23

Client: Devon Energy

Project: Bindel 4 Fee 1

Sample ID: **MB-75485**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **75485**	RunNo: **97340**
Prep Date: **6/9/2023**	Analysis Date: **6/9/2023**	SeqNo: **3536299** Units: **mg/Kg**

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

Sample ID: **LCS-75485**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **75485**	RunNo: **97340**
Prep Date: **6/9/2023**	Analysis Date: **6/9/2023**	SeqNo: **3536300** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306058**

15-Jun-23

Client: Devon Energy
Project: Bindel 4 Fee 1

Sample ID: **LCS-75370**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **75370**	RunNo: **97270**
Prep Date: **6/6/2023**	Analysis Date: **6/7/2023**	SeqNo: **3533132** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	61.9	130			
Surr: DNOP	5.4		5.000		108	69	147			

Sample ID: **MB-75370**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **75370**	RunNo: **97270**
Prep Date: **6/6/2023**	Analysis Date: **6/7/2023**	SeqNo: **3533136** 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		109	69	147			

Sample ID: **LCS-75460**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **75460**	RunNo: **97297**
Prep Date: **6/8/2023**	Analysis Date: **6/8/2023**	SeqNo: **3535111** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	10	50.00	0	71.4	61.9	130			
Surr: DNOP	4.0		5.000		79.4	69	147			

Sample ID: **MB-75460**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **75460**	RunNo: **97297**
Prep Date: **6/8/2023**	Analysis Date: **6/8/2023**	SeqNo: **3535122** 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	8.7		10.00		87.1	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306058**

15-Jun-23

Client: Devon Energy

Project: Bindel 4 Fee 1

Sample ID: **lcs-75364**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **75364**	RunNo: **97349**
Prep Date: **6/5/2023**	Analysis Date: **6/10/2023**	SeqNo: **3537188** 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	91.7	70	130			
Surr: BFB	2100		1000		206	15	244			

Sample ID: **mb-75364**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **75364**	RunNo: **97349**
Prep Date: **6/5/2023**	Analysis Date: **6/10/2023**	SeqNo: **3537189** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		96.1	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#: **2306058**

15-Jun-23

Client: Devon Energy

Project: Bindel 4 Fee 1

Sample ID: **lcs-75364**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **75364**	RunNo: **97289**
Prep Date: **6/5/2023**	Analysis Date: **6/8/2023**	SeqNo: **3534107** 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	83.8	70	130			
Toluene	0.83	0.050	1.000	0	83.0	70	130			
Ethylbenzene	0.81	0.050	1.000	0	80.7	70	130			
Xylenes, Total	2.4	0.10	3.000	0	79.6	70	130			
Surr: 4-Bromofluorobenzene	0.82		1.000		81.5	39.1	146			

Sample ID: **mb-75364**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **75364**	RunNo: **97289**
Prep Date: **6/5/2023**	Analysis Date: **6/8/2023**	SeqNo: **3534108** 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	0.82		1.000		81.7	39.1	146			

Qualifiers:

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

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: 2306058 | RcptNo: 1

Received By: Tracy Casarrubias 6/2/2023 7:25:00 AM
Completed By: Tracy Casarrubias 6/2/2023 7:28:28 AM
Reviewed By: TM 6-2-23

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: ____ (<2 or >12 unless noted)
Adjusted?
Checked by: YN 6/2/23

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 are missing on COC-TMC 6/2/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.5	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Devon / Vertex

Mailing Address: On File

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☑ Rush 5 Day

Project Name: Bindel 14 Fee 1

Project #: 23E-01581

Project Manager: Kent Stallings

Sampler: SM

On Ice: ☑ Yes ☐ No 4 qi

# of Coolers: 1

Cooler Temp(including CF): 4.6 - 0.1 = 4.5 (°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. 2306058	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)
5/31/23	12:30	Soil	BH23-01 2'	4oz jar	Ice	001	✓	✓					✓			
	12:35		BH23-01 4'			002										
	12:40		BH23-01 6'			003										
	14:25		BH23-01 8'			004										
	12:15		BH23-02 2'			005										
	12:20		BH23-02 4'			006										
	12:25		BH23-02 6'			007										
	14:30		BH23-02 8'			008										
	15:06		BH23-02 9'			009										
	12:00		BH23-03 2'			010										
	12:05		BH23-03 4'			011										
	12:10		BH23-03 6'			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5/31/23	18:00				6/1/23	800
6/1/23	1900			Courier	6/2/23	7:25

Remarks: Direct bill to: Devon W/O #: 21142553

c.c. KStallings@vertex.ca

Pg 1 of 2

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 / Vertex

Mailing Address: On file

Phone #:

email or Fax#:

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

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

Turn-Around Time:
☑ Standard ☑ Rush 5 Day

Project Name: Bindel 4 Fee 1

Project #: 23E-01581

Project Manager: Kent Stallings

Sampler: SM

On Ice: ☑ Yes ☐ No 4oqi

# of Coolers: 1

Cooler Temp(including CF): 4.6 - 0.1 = 4.5 (°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. 2306058	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)
5/31/23	12:45	Soil	BH23-09 4'	4oz jar	Ice	013	✓	✓					✓			
	14:15		BH23-09 6'			014	✓	✓					✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5/31/23	18:00	[signature]	[signature]		6/1/23	800
6/1/23	1900	[signature]	[signature]	courier	6/2/23	7:25

Remarks: Direct bill to: Devon w/o # 211 42553

pg 2 of 2

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 14, 2023

Kent Stallings

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (575) 748-0176
FAX:

RE: Bindel 4 Fee 1H OrderNo.: 2308469

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/9/2023 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 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 **2308469**
Date Reported: **8/14/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1H
Lab ID: 2308469-001 **Matrix:** SOIL

Client Sample ID: BH23-01 2'
Collection Date: 8/7/2023 9:15:00 AM
Received Date: 8/9/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/10/2023 8:19:53 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/10/2023 8:19:53 AM
Surr: DNOP	138	69-147		%Rec	1	8/10/2023 8:19:53 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2023 2:53:44 PM
Surr: BFB	98.0	15-244		%Rec	1	8/10/2023 2:53:44 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/10/2023 2:53:44 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2023 2:53:44 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2023 2:53:44 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/10/2023 2:53:44 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/10/2023 2:53:44 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	73	60		mg/Kg	20	8/10/2023 12:24:31 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 **2308469**
Date Reported: **8/14/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1H
Lab ID: 2308469-002 **Matrix:** SOIL

Client Sample ID: BH23-01 3'
Collection Date: 8/7/2023 9:20:00 AM
Received Date: 8/9/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/10/2023 9:33:57 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/10/2023 9:33:57 AM
Surr: DNOP	103	69-147		%Rec	1	8/10/2023 9:33:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/10/2023 3:17:22 PM
Surr: BFB	96.0	15-244		%Rec	1	8/10/2023 3:17:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	8/10/2023 3:17:22 PM
Toluene	ND	0.046		mg/Kg	1	8/10/2023 3:17:22 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/10/2023 3:17:22 PM
Xylenes, Total	ND	0.093		mg/Kg	1	8/10/2023 3:17:22 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/10/2023 3:17:22 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	8/10/2023 12:36:56 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308469**
Date Reported: **8/14/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-01 4'
Project: Bindel 4 Fee 1H
Collection Date: 8/7/2023 9:25:00 AM
Lab ID: 2308469-003 **Matrix:** SOIL **Received Date:** 8/9/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **mb**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/10/2023 9:44:28 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/10/2023 9:44:28 AM
Surr: DNOP	107	69-147		%Rec	1	8/10/2023 9:44:28 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2023 3:41:00 PM
Surr: BFB	97.9	15-244		%Rec	1	8/10/2023 3:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	8/10/2023 3:41:00 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2023 3:41:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2023 3:41:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/10/2023 3:41:00 PM
Surr: 4-Bromofluorobenzene	110	39.1-146		%Rec	1	8/10/2023 3:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	8/10/2023 12:49:20 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.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308469**

14-Aug-23

Client: Devon Energy

Project: Bindel 4 Fee 1H

Sample ID: **MB-76785**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **76785**	RunNo: **98880**
Prep Date: **8/10/2023**	Analysis Date: **8/10/2023**	SeqNo: **3603269** Units: **mg/Kg**

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

Sample ID: **LCS-76785**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **76785**	RunNo: **98880**
Prep Date: **8/10/2023**	Analysis Date: **8/10/2023**	SeqNo: **3603270** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308469**

14-Aug-23

Client: Devon Energy
Project: Bindel 4 Fee 1H

Sample ID: **LCS-76761**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76761**	RunNo: **98859**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3601553** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.5	61.9	130			
Surr: DNOP	4.5		5.000		90.4	69	147			

Sample ID: **MB-76761**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76761**	RunNo: **98859**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3601556** Units: **mg/Kg**

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

Sample ID: **LCS-76771**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76771**	RunNo: **98859**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3602161** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		101	69	147			

Sample ID: **MB-76771**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76771**	RunNo: **98859**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3602162** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		122	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308469**

14-Aug-23

Client: Devon Energy
Project: Bindel 4 Fee 1H

Sample ID: **lcs-76755**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **76755**	RunNo: **98876**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3602648** 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	91.8	70	130			
Surr: BFB	2000		1000		197	15	244			

Sample ID: **mb-76755**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **76755**	RunNo: **98876**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3602649** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		98.3	15	244			

Sample ID: **2308469-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-01 2'**	Batch ID: **76755**	RunNo: **98876**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3603375** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.41	0	89.8	70	130			
Surr: BFB	2000		976.6		204	15	244			

Sample ID: **2308469-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-01 2'**	Batch ID: **76755**	RunNo: **98876**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3603376** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.44	0	89.6	70	130	0.125	20	
Surr: BFB	2000		977.5		200	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308469**

14-Aug-23

Client: Devon Energy

Project: Bindel 4 Fee 1H

Sample ID: **LCS-76755**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **76755**	RunNo: **98876**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3602650** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.4	70	130			
Toluene	0.98	0.050	1.000	0	97.8	70	130			
Ethylbenzene	1.0	0.050	1.000	0	100	70	130			
Xylenes, Total	3.0	0.10	3.000	0	100	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	39.1	146			

Sample ID: **mb-76755**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **76755**	RunNo: **98876**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3602651** 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	1.1		1.000		111	39.1	146			

Sample ID: **2308469-002ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-01 3'**	Batch ID: **76755**	RunNo: **98876**
Prep Date: **8/9/2023**	Analysis Date: **8/10/2023**	SeqNo: **3603380** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.023	0.9294	0	108	70	130			
Toluene	1.0	0.046	0.9294	0	110	70	130			
Ethylbenzene	1.0	0.046	0.9294	0	113	70	130			
Xylenes, Total	3.2	0.093	2.788	0	114	70	130			
Surr: 4-Bromofluorobenzene	1.0		0.9294		109	39.1	146			

Sample ID: **2308469-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-01 3'**	Batch ID: **76755**	RunNo: **98876**
Prep Date: **8/9/2023**	Analysis Date: **8/11/2023**	SeqNo: **3603381** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.023	0.9268	0	105	70	130	3.08	20	
Toluene	0.99	0.046	0.9268	0	107	70	130	3.26	20	
Ethylbenzene	1.0	0.046	0.9268	0	108	70	130	4.76	20	
Xylenes, Total	3.0	0.093	2.780	0	108	70	130	5.26	20	
Surr: 4-Bromofluorobenzene	0.99		0.9268		107	39.1	146	0	0	

Qualifiers:

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

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: 2308469 | RcptNo: 1

Received By: Juan Rojas 8/9/2023 7:35:00 AM

Completed By: Juan Rojas 8/9/2023 8:13:10 AM

Reviewed By: JR 8/9/23

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? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

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

Adjusted? _____

Checked by: SCM 08/09/23

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

Client missing phone number, mailing address, and email address on COC. JR 8/9/23

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.2	Good	No	Morty		

Chain-of-Custody Record

Client: Devon (Vertex)

Mailing Address: on file

Phone #:

email or Fax#:

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

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

Turn-Around Time:
☐ Standard ☒ Rush 48 Hr

Project Name: Bindel 4 Fee 1H

Project #: 23E-01581

Project Manager: K. Stallings

Sampler: J. Reta

On Ice: ☒ Yes ☐ No

# of Coolers: 1 MORTY

Cooler Temp(including CF): 2.2-0=2.2 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308469	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)
08/07/23	9:15	Soil	BH23-01 2'	4 oz Jar	Ice	-001										
	9:20		BH23-01 3'			-002										
	9:25		BH23-01 4'			-003										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
08/07/23	18:07	J. Reta				
8/8/23	1900		SCM	Fed Ex	08/09/23	0735

Remarks: Direct Bill to Devon
cc: J. Reta & S. McCarty

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

August 17, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1 OrderNo.: 2308661

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 18 sample(s) on 8/11/2023 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-01 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 9:00:00 AM
Lab ID: 2308661-001 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 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	8/15/2023 12:56:22 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/15/2023 12:56:22 PM
Surr: DNOP	98.1	69-147		%Rec	1	8/15/2023 12:56:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/14/2023 8:33:00 PM
Surr: BFB	99.6	15-244		%Rec	1	8/14/2023 8:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	8/14/2023 8:33:00 PM
Toluene	ND	0.049		mg/Kg	1	8/14/2023 8:33:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/14/2023 8:33:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/14/2023 8:33:00 PM
Surr: 4-Bromofluorobenzene	93.5	39.1-146		%Rec	1	8/14/2023 8:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	120	60		mg/Kg	20	8/14/2023 12:35:45 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-02 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 9:05:00 AM
Lab ID: 2308661-002 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 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	8/15/2023 1:14:51 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/15/2023 1:14:51 PM
Surr: DNOP	77.2	69-147		%Rec	1	8/15/2023 1:14:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/14/2023 9:38:00 PM
Surr: BFB	96.6	15-244		%Rec	1	8/14/2023 9:38:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	8/14/2023 9:38:00 PM
Toluene	ND	0.050		mg/Kg	1	8/14/2023 9:38:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/14/2023 9:38:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/14/2023 9:38:00 PM
Surr: 4-Bromofluorobenzene	91.0	39.1-146		%Rec	1	8/14/2023 9:38:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	96	60		mg/Kg	20	8/14/2023 1:37:28 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-03 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 9:10:00 AM
Lab ID: 2308661-003 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	12	9.5		mg/Kg	1	8/15/2023 1:33:16 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/15/2023 1:33:16 PM
Surr: DNOP	81.3	69-147		%Rec	1	8/15/2023 1:33:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/14/2023 10:43:00 PM
Surr: BFB	102	15-244		%Rec	1	8/14/2023 10:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/14/2023 10:43:00 PM
Toluene	ND	0.048		mg/Kg	1	8/14/2023 10:43:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/14/2023 10:43:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/14/2023 10:43:00 PM
Surr: 4-Bromofluorobenzene	93.5	39.1-146		%Rec	1	8/14/2023 10:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	92	60		mg/Kg	20	8/14/2023 2:14:31 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BES23-07 1'
Project: Bindel 4 Fee 1 **Collection Date:** 8/9/2023 9:15:00 AM
Lab ID: 2308661-004 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	18	9.8		mg/Kg	1	8/15/2023 1:51:48 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 1:51:48 PM
Surr: DNOP	82.1	69-147		%Rec	1	8/15/2023 1:51:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/14/2023 11:05:00 PM
Surr: BFB	101	15-244		%Rec	1	8/14/2023 11:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	8/14/2023 11:05:00 PM
Toluene	ND	0.049		mg/Kg	1	8/14/2023 11:05:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/14/2023 11:05:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/14/2023 11:05:00 PM
Surr: 4-Bromofluorobenzene	90.7	39.1-146		%Rec	1	8/14/2023 11:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	80	60		mg/Kg	20	8/14/2023 2:26:51 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-08 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 9:20:00 AM
Lab ID: 2308661-005 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	57	9.8		mg/Kg	1	8/15/2023 2:10:24 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 2:10:24 PM
Surr: DNOP	77.8	69-147		%Rec	1	8/15/2023 2:10:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/14/2023 11:27:00 PM
Surr: BFB	97.1	15-244		%Rec	1	8/14/2023 11:27:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/14/2023 11:27:00 PM
Toluene	ND	0.048		mg/Kg	1	8/14/2023 11:27:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/14/2023 11:27:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/14/2023 11:27:00 PM
Surr: 4-Bromofluorobenzene	92.0	39.1-146		%Rec	1	8/14/2023 11:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	100	60		mg/Kg	20	8/14/2023 2:39:11 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-09 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 9:25:00 AM
Lab ID: 2308661-006 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	29	9.9		mg/Kg	1	8/15/2023 2:28:55 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/15/2023 2:28:55 PM
Surr: DNOP	88.8	69-147		%Rec	1	8/15/2023 2:28:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/14/2023 11:49:00 PM
Surr: BFB	101	15-244		%Rec	1	8/14/2023 11:49:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/14/2023 11:49:00 PM
Toluene	ND	0.049		mg/Kg	1	8/14/2023 11:49:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/14/2023 11:49:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/14/2023 11:49:00 PM
Surr: 4-Bromofluorobenzene	92.8	39.1-146		%Rec	1	8/14/2023 11:49:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	170	60		mg/Kg	20	8/14/2023 2:51:32 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-10 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 9:30:00 AM
Lab ID: 2308661-007 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 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	8/15/2023 2:47:47 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/15/2023 2:47:47 PM
Surr: DNOP	82.3	69-147		%Rec	1	8/15/2023 2:47:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2023 12:10:00 AM
Surr: BFB	97.6	15-244		%Rec	1	8/15/2023 12:10:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 12:10:00 AM
Toluene	ND	0.049		mg/Kg	1	8/15/2023 12:10:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2023 12:10:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/15/2023 12:10:00 AM
Surr: 4-Bromofluorobenzene	92.0	39.1-146		%Rec	1	8/15/2023 12:10:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	140	61		mg/Kg	20	8/14/2023 3:03:53 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.		

Analytical Report
Lab Order **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-11 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 9:35:00 AM
Lab ID: 2308661-008 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 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	8/15/2023 1:24:47 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/15/2023 1:24:47 PM
Surr: DNOP	87.8	69-147		%Rec	1	8/15/2023 1:24:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/15/2023 12:32:00 AM
Surr: BFB	98.8	15-244		%Rec	1	8/15/2023 12:32:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	8/15/2023 12:32:00 AM
Toluene	ND	0.050		mg/Kg	1	8/15/2023 12:32:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/15/2023 12:32:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/15/2023 12:32:00 AM
Surr: 4-Bromofluorobenzene	91.6	39.1-146		%Rec	1	8/15/2023 12:32:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	130	60		mg/Kg	20	8/14/2023 3:40:55 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-12 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 10:30:00 AM
Lab ID: 2308661-009 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	18	9.4		mg/Kg	1	8/15/2023 1:35:26 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/15/2023 1:35:26 PM
Surr: DNOP	109	69-147		%Rec	1	8/15/2023 1:35:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/15/2023 12:54:00 AM
Surr: BFB	103	15-244		%Rec	1	8/15/2023 12:54:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 12:54:00 AM
Toluene	ND	0.047		mg/Kg	1	8/15/2023 12:54:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/15/2023 12:54:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/15/2023 12:54:00 AM
Surr: 4-Bromofluorobenzene	93.1	39.1-146		%Rec	1	8/15/2023 12:54:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	130	60		mg/Kg	20	8/14/2023 3:53:17 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-13 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 10:35:00 AM
Lab ID: 2308661-010 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	30	9.7		mg/Kg	1	8/15/2023 1:46:08 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 1:46:08 PM
Surr: DNOP	80.5	69-147		%Rec	1	8/15/2023 1:46:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2023 1:15:00 AM
Surr: BFB	99.7	15-244		%Rec	1	8/15/2023 1:15:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	8/15/2023 1:15:00 AM
Toluene	ND	0.049		mg/Kg	1	8/15/2023 1:15:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2023 1:15:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/15/2023 1:15:00 AM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	8/15/2023 1:15:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	72	60		mg/Kg	20	8/14/2023 4:05:37 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.		

Analytical Report
Lab Order **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-14 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 10:40:00 AM
Lab ID: 2308661-011 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	15	8.9		mg/Kg	1	8/15/2023 1:56:49 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/15/2023 1:56:49 PM
Surr: DNOP	87.4	69-147		%Rec	1	8/15/2023 1:56:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2023 1:59:00 AM
Surr: BFB	97.6	15-244		%Rec	1	8/15/2023 1:59:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 1:59:00 AM
Toluene	ND	0.049		mg/Kg	1	8/15/2023 1:59:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2023 1:59:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/15/2023 1:59:00 AM
Surr: 4-Bromofluorobenzene	94.0	39.1-146		%Rec	1	8/15/2023 1:59:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	84	60		mg/Kg	20	8/14/2023 4:17:58 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-15 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 10:45:00 AM
Lab ID: 2308661-012 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	15	9.4		mg/Kg	1	8/15/2023 2:07:31 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/15/2023 2:07:31 PM
Surr: DNOP	82.5	69-147		%Rec	1	8/15/2023 2:07:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/15/2023 2:20:00 AM
Surr: BFB	101	15-244		%Rec	1	8/15/2023 2:20:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 2:20:00 AM
Toluene	ND	0.047		mg/Kg	1	8/15/2023 2:20:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/15/2023 2:20:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/15/2023 2:20:00 AM
Surr: 4-Bromofluorobenzene	92.5	39.1-146		%Rec	1	8/15/2023 2:20:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	85	60		mg/Kg	20	8/14/2023 4:30:19 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-16 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 10:50:00 AM
Lab ID: 2308661-013 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	57	9.7		mg/Kg	1	8/15/2023 2:18:14 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 2:18:14 PM
Surr: DNOP	108	69-147		%Rec	1	8/15/2023 2:18:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/15/2023 2:42:00 AM
Surr: BFB	97.8	15-244		%Rec	1	8/15/2023 2:42:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	8/15/2023 2:42:00 AM
Toluene	ND	0.050		mg/Kg	1	8/15/2023 2:42:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/15/2023 2:42:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/15/2023 2:42:00 AM
Surr: 4-Bromofluorobenzene	91.8	39.1-146		%Rec	1	8/15/2023 2:42:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	63	60		mg/Kg	20	8/14/2023 4:42:39 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-17 1'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 10:55:00 AM
Lab ID: 2308661-014 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 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	8/15/2023 3:07:42 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/15/2023 3:07:42 PM
Surr: DNOP	89.3	69-147		%Rec	1	8/15/2023 3:07:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/15/2023 3:04:00 AM
Surr: BFB	102	15-244		%Rec	1	8/15/2023 3:04:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 3:04:00 AM
Toluene	ND	0.048		mg/Kg	1	8/15/2023 3:04:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/15/2023 3:04:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/15/2023 3:04:00 AM
Surr: 4-Bromofluorobenzene	94.8	39.1-146		%Rec	1	8/15/2023 3:04:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	91	60		mg/Kg	20	8/14/2023 4:55:00 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-19 4'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 11:00:00 AM
Lab ID: 2308661-015 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 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	8/15/2023 3:18:28 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 3:18:28 PM
Surr: DNOP	98.2	69-147		%Rec	1	8/15/2023 3:18:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2023 3:26:00 AM
Surr: BFB	102	15-244		%Rec	1	8/15/2023 3:26:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 3:26:00 AM
Toluene	ND	0.049		mg/Kg	1	8/15/2023 3:26:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2023 3:26:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/15/2023 3:26:00 AM
Surr: 4-Bromofluorobenzene	95.6	39.1-146		%Rec	1	8/15/2023 3:26:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	480	61		mg/Kg	20	8/14/2023 5:32:03 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-20 4'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 11:05:00 AM
Lab ID: 2308661-016 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 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	8/15/2023 3:29:14 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/15/2023 3:29:14 PM
Surr: DNOP	131	69-147		%Rec	1	8/15/2023 3:29:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/15/2023 3:47:00 AM
Surr: BFB	103	15-244		%Rec	1	8/15/2023 3:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 3:47:00 AM
Toluene	ND	0.048		mg/Kg	1	8/15/2023 3:47:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/15/2023 3:47:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/15/2023 3:47:00 AM
Surr: 4-Bromofluorobenzene	92.1	39.1-146		%Rec	1	8/15/2023 3:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	130	60		mg/Kg	20	8/14/2023 6:33:45 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BES23-21 4'
Project: Bindel 4 Fee 1 **Collection Date:** 8/9/2023 2:00:00 PM
Lab ID: 2308661-017 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	21	8.8		mg/Kg	1	8/15/2023 3:40:02 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/15/2023 3:40:02 PM
Surr: DNOP	98.3	69-147		%Rec	1	8/15/2023 3:40:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/15/2023 4:09:00 AM
Surr: BFB	100	15-244		%Rec	1	8/15/2023 4:09:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 4:09:00 AM
Toluene	ND	0.048		mg/Kg	1	8/15/2023 4:09:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/15/2023 4:09:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/15/2023 4:09:00 AM
Surr: 4-Bromofluorobenzene	95.4	39.1-146		%Rec	1	8/15/2023 4:09:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	320	60		mg/Kg	20	8/14/2023 6:46:06 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 **2308661**
Date Reported: **8/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-01 0-4'
Project: Bindel 4 Fee 1
Collection Date: 8/9/2023 2:05:00 PM
Lab ID: 2308661-018 **Matrix:** SOIL **Received Date:** 8/11/2023 7:20:00 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	8/15/2023 3:50:58 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 3:50:58 PM
Surr: DNOP	97.6	69-147		%Rec	1	8/15/2023 3:50:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/15/2023 4:31:00 AM
Surr: BFB	103	15-244		%Rec	1	8/15/2023 4:31:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 4:31:00 AM
Toluene	ND	0.048		mg/Kg	1	8/15/2023 4:31:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/15/2023 4:31:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	8/15/2023 4:31:00 AM
Surr: 4-Bromofluorobenzene	94.8	39.1-146		%Rec	1	8/15/2023 4:31:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	190	61		mg/Kg	20	8/14/2023 6:58:26 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.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308661**

17-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1

Sample ID: **MB-76838** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **76838** RunNo: **98937**
Prep Date: **8/14/2023** Analysis Date: **8/14/2023** SeqNo: **3605971** Units: **mg/Kg**

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

Sample ID: **LCS-76838** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **76838** RunNo: **98937**
Prep Date: **8/14/2023** Analysis Date: **8/14/2023** SeqNo: **3605972** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Sample ID: **MB-76850** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **76850** RunNo: **98937**
Prep Date: **8/14/2023** Analysis Date: **8/14/2023** SeqNo: **3606004** Units: **mg/Kg**

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

Sample ID: **LCS-76850** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **76850** RunNo: **98937**
Prep Date: **8/14/2023** Analysis Date: **8/14/2023** SeqNo: **3606005** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308661**

17-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1

Sample ID: **LCS-76828**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76828**	RunNo: **98982**
Prep Date: **8/14/2023**	Analysis Date: **8/15/2023**	SeqNo: **3607200** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	61.9	130			
Surr: DNOP	5.1		5.000		101	69	147			

Sample ID: **MB-76828**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76828**	RunNo: **98986**
Prep Date: **8/14/2023**	Analysis Date: **8/15/2023**	SeqNo: **3608569** 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	9.3		10.00		93.3	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308661**

17-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1

Sample ID: **lcs-76822**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **76822**	RunNo: **98936**
Prep Date: **8/11/2023**	Analysis Date: **8/14/2023**	SeqNo: **3605738** 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	99.2	70	130			
Surr: BFB	2200		1000		217	15	244			

Sample ID: **mb-76822**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **76822**	RunNo: **98936**
Prep Date: **8/11/2023**	Analysis Date: **8/14/2023**	SeqNo: **3605739** 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		105	15	244			

Sample ID: **2308661-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BES23-01 1'**	Batch ID: **76822**	RunNo: **98936**
Prep Date: **8/11/2023**	Analysis Date: **8/14/2023**	SeqNo: **3605741** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.41	0	91.5	70	130			
Surr: BFB	2100		976.6		216	15	244			

Sample ID: **2308661-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BES23-01 1'**	Batch ID: **76822**	RunNo: **98936**
Prep Date: **8/11/2023**	Analysis Date: **8/14/2023**	SeqNo: **3605742** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.9	24.56	0	85.1	70	130	6.71	20	
Surr: BFB	2100		982.3		211	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308661**

17-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1

Sample ID: **lcs-76822** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **76822** RunNo: **98936**

Prep Date: **8/11/2023** Analysis Date: **8/14/2023** SeqNo: **3605767** 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	0.85	0.050	1.000	0	85.2	70	130			
Ethylbenzene	0.87	0.050	1.000	0	87.2	70	130			
Xylenes, Total	2.6	0.10	3.000	0	87.1	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		94.6	39.1	146			

Sample ID: **mb-76822** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **76822** RunNo: **98936**

Prep Date: **8/11/2023** Analysis Date: **8/14/2023** SeqNo: **3605768** 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		92.9	39.1	146			

Sample ID: **2308661-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BES23-02 1'** Batch ID: **76822** RunNo: **98936**

Prep Date: **8/11/2023** Analysis Date: **8/14/2023** SeqNo: **3605771** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	0.9881	0	88.2	70	130			
Toluene	0.90	0.049	0.9881	0.01299	90.2	70	130			
Ethylbenzene	0.93	0.049	0.9881	0	93.7	70	130			
Xylenes, Total	2.8	0.099	2.964	0	93.3	70	130			
Surr: 4-Bromofluorobenzene	0.92		0.9881		93.1	39.1	146			

Sample ID: **2308661-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BES23-02 1'** Batch ID: **76822** RunNo: **98936**

Prep Date: **8/11/2023** Analysis Date: **8/14/2023** SeqNo: **3605772** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	0.9940	0	81.9	70	130	6.91	20	
Toluene	0.84	0.050	0.9940	0.01299	83.1	70	130	7.45	20	
Ethylbenzene	0.86	0.050	0.9940	0	86.6	70	130	7.29	20	
Xylenes, Total	2.6	0.099	2.982	0	86.4	70	130	7.09	20	
Surr: 4-Bromofluorobenzene	0.93		0.9940		93.7	39.1	146	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2308661

RcptNo: 1

Received By: Tracy Casarrubias 8/11/2023 7:20:00 AM

Completed By: Tracy Casarrubias 8/11/2023 8:03:45 AM

Reviewed By: TMD 8/11/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: SCM 08/11/23

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 8/11/23

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes	Morty		

Chain-of-Custody Record

Client: ~~Devon Energy (EOG)~~

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 48hr

Project Name: Bindel 4 Fee 1

Project #: 23E-01581

Project Manager: K Stallings

Sampler: J. Reta

On Ice: ☒ Yes ☐ No marty

# of Coolers: 1

Cooler Temp(including CF): 1.9 -0.2 = 1.7 (°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. 23086661	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)
8/9/23	9:00	Soil	BES23-01 1'	4oz jar	ice	001	✓	✓					✓			
	9:05		BES23-02 1'			002										
	9:10		BES23-03 1'			003										
	9:15		BES23-07 1'			004										
	9:20		BES23-08 1'			005										
	9:25		BES23-09 1'			006										
	9:30		BES23-10 1'			007										
	9:35		BES23-11 1'			008										
	10:30		BES23-12 1'			009										
	10:35		BES23-13 1'			010										
	10:40		BES23-14 1'			011										
↓	10:45	↓	BES23-15 1'	↓	↓	012	↓	↓					↓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/9/23	19:28	Jacob Reta			8/10/23	
8/10/23	1900			courier	8/11/23	7:20

Remarks:

direct bill to Devon

cc: J. Reta & S. McCarty

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: [redacted]

Vertex [redacted] (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 48 Hr

Project Name: Bindel 4 Fee 1H Battery

Project #: 23E-01581

Project Manager: K. Stallings

Sampler: J. Reta

On Ice: ☒ Yes ☐ No marty

# of Coolers: 1

Cooler Temp(including CF): 1.9 - 0.2 = 1.7 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 23086661
08/4/23	10:50	Soil	BES23-16 1'	4oz Jar	Ice	013
	10:55		BES23-17 1'			014
	11:00		BES23-19 4'			015
	11:05		BES23-20 4'			016
	14:00		BES23-21 4'			017
	14:05		WES23-01 0-4'			018

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	Relinquished by:	Received by:	Via:	Date	Time
08/9/23	19:28	Jacob Reta	[signature]		8/10/23	845
8/10/23	1900	[signature]	[signature]	courier	8/11/23	7:20

Remarks: Direct Bill to Devon

cc: J. Reta & S. McCarty

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 18, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1H Battery OrderNo.: 2308723

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/12/2023 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 **2308723**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-22 4'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/10/2023 9:00:00 AM
Lab ID: 2308723-001 **Matrix:** SOIL **Received Date:** 8/12/2023 7:45:00 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	8/16/2023 1:31:52 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/16/2023 1:31:52 AM
Surr: DNOP	106	69-147		%Rec	1	8/16/2023 1:31:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/15/2023 10:09:00 PM
Surr: BFB	105	15-244		%Rec	1	8/15/2023 10:09:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 10:09:00 PM
Toluene	ND	0.048		mg/Kg	1	8/15/2023 10:09:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/15/2023 10:09:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/15/2023 10:09:00 PM
Surr: 4-Bromofluorobenzene	94.9	39.1-146		%Rec	1	8/15/2023 10:09:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	87	60		mg/Kg	20	8/15/2023 2:13:33 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308723**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-23 2'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/10/2023 10:20:00 AM
Lab ID: 2308723-002 **Matrix:** SOIL
Received Date: 8/12/2023 7:45:00 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	8/16/2023 1:50:51 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/16/2023 1:50:51 AM
Surr: DNOP	108	69-147		%Rec	1	8/16/2023 1:50:51 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2023 10:31:00 PM
Surr: BFB	102	15-244		%Rec	1	8/15/2023 10:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 10:31:00 PM
Toluene	ND	0.049		mg/Kg	1	8/15/2023 10:31:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2023 10:31:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/15/2023 10:31:00 PM
Surr: 4-Bromofluorobenzene	93.7	39.1-146		%Rec	1	8/15/2023 10:31:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	320	60		mg/Kg	20	8/15/2023 2:25:58 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308723**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-24 2'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/10/2023 10:25:00 AM
Lab ID: 2308723-003 **Matrix:** SOIL **Received Date:** 8/12/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	29	9.5		mg/Kg	1	8/16/2023 2:09:49 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/16/2023 2:09:49 AM
Surr: DNOP	91.3	69-147		%Rec	1	8/16/2023 2:09:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/15/2023 10:53:00 PM
Surr: BFB	100	15-244		%Rec	1	8/15/2023 10:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 10:53:00 PM
Toluene	ND	0.048		mg/Kg	1	8/15/2023 10:53:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/15/2023 10:53:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/15/2023 10:53:00 PM
Surr: 4-Bromofluorobenzene	93.8	39.1-146		%Rec	1	8/15/2023 10:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	65	60		mg/Kg	20	8/15/2023 2:38:22 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308723**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-25 2'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/10/2023 10:30:00 AM
Lab ID: 2308723-004 **Matrix:** SOIL **Received Date:** 8/12/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	45	9.1		mg/Kg	1	8/16/2023 2:28:37 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/16/2023 2:28:37 AM
Surr: DNOP	100	69-147		%Rec	1	8/16/2023 2:28:37 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/15/2023 11:14:00 PM
Surr: BFB	101	15-244		%Rec	1	8/15/2023 11:14:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/15/2023 11:14:00 PM
Toluene	ND	0.048		mg/Kg	1	8/15/2023 11:14:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/15/2023 11:14:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/15/2023 11:14:00 PM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	8/15/2023 11:14:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	8/15/2023 3:15:36 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 **2308723**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-02 0-2'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/10/2023 11:45:00 AM
Lab ID: 2308723-005 **Matrix:** SOIL
Received Date: 8/12/2023 7:45:00 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	8/15/2023 5:17:18 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/15/2023 5:17:18 PM
Surr: DNOP	90.7	69-147		%Rec	1	8/15/2023 5:17:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/16/2023 10:42:00 AM
Surr: BFB	102	15-244		%Rec	1	8/16/2023 10:42:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	8/16/2023 10:42:00 AM
Toluene	ND	0.050		mg/Kg	1	8/16/2023 10:42:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/16/2023 10:42:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/16/2023 10:42:00 AM
Surr: 4-Bromofluorobenzene	94.2	39.1-146		%Rec	1	8/16/2023 10:42:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	430	60		mg/Kg	20	8/16/2023 11:59:24 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 **2308723**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-03 0-2'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/10/2023 11:50:00 AM
Lab ID: 2308723-006 **Matrix:** SOIL
Received Date: 8/12/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	11	9.2		mg/Kg	1	8/15/2023 5:49:53 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/15/2023 5:49:53 PM
Surr: DNOP	97.0	69-147		%Rec	1	8/15/2023 5:49:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/16/2023 11:04:00 AM
Surr: BFB	101	15-244		%Rec	1	8/16/2023 11:04:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/16/2023 11:04:00 AM
Toluene	ND	0.049		mg/Kg	1	8/16/2023 11:04:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/16/2023 11:04:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/16/2023 11:04:00 AM
Surr: 4-Bromofluorobenzene	93.1	39.1-146		%Rec	1	8/16/2023 11:04:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	110	60		mg/Kg	20	8/16/2023 1:01:28 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308723**

18-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1H Battery

Sample ID: **MB-76863**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **76863**	RunNo: **98981**							
Prep Date: **8/15/2023**	Analysis Date: **8/15/2023**	SeqNo: **3608089**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-76863**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **76863**	RunNo: **98981**							
Prep Date: **8/15/2023**	Analysis Date: **8/15/2023**	SeqNo: **3608090**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.9	90	110			

Sample ID: **MB-76901**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **76901**	RunNo: **99040**							
Prep Date: **8/16/2023**	Analysis Date: **8/16/2023**	SeqNo: **3610084**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-76901**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **76901**	RunNo: **99040**							
Prep Date: **8/16/2023**	Analysis Date: **8/16/2023**	SeqNo: **3610085**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308723**

18-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1H Battery

Sample ID: **MB-76849**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76849**	RunNo: **98982**
Prep Date: **8/14/2023**	Analysis Date: **8/15/2023**	SeqNo: **3607201** 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		102	69	147			

Sample ID: **LCS-76849**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76849**	RunNo: **98982**
Prep Date: **8/14/2023**	Analysis Date: **8/15/2023**	SeqNo: **3607202** 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	111	61.9	130			
Surr: DNOP	4.6		5.000		92.9	69	147			

Sample ID: **2308723-005AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WES23-02 0-2'**	Batch ID: **76874**	RunNo: **98980**
Prep Date: **8/15/2023**	Analysis Date: **8/15/2023**	SeqNo: **3608171** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	49.85	0	102	54.2	135			
Surr: DNOP	5.0		4.985		101	69	147			

Sample ID: **2308723-005AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **WES23-02 0-2'**	Batch ID: **76874**	RunNo: **98980**
Prep Date: **8/15/2023**	Analysis Date: **8/15/2023**	SeqNo: **3608172** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.1	45.75	0	97.8	54.2	135	12.6	29.2	
Surr: DNOP	4.3		4.575		93.2	69	147	0	0	

Sample ID: **LCS-76874**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76874**	RunNo: **98980**
Prep Date: **8/15/2023**	Analysis Date: **8/15/2023**	SeqNo: **3608188** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.5	61.9	130			
Surr: DNOP	4.3		5.000		85.8	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308723**

18-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1H Battery

Sample ID: **MB-76874**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76874**	RunNo: **98980**
Prep Date: **8/15/2023**	Analysis Date: **8/15/2023**	SeqNo: **3608189** 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	8.6		10.00		86.4	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308723**

18-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1H Battery

Sample ID: **lcs-76846**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **76846**	RunNo: **98965**
Prep Date: **8/14/2023**	Analysis Date: **8/15/2023**	SeqNo: **3607724** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.4	70	130			
Surr: BFB	2300		1000		226	15	244			

Sample ID: **mb-76846**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **76846**	RunNo: **98965**
Prep Date: **8/14/2023**	Analysis Date: **8/15/2023**	SeqNo: **3607725** 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		105	15	244			

Sample ID: **lcs-76869**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **76869**	RunNo: **99010**
Prep Date: **8/15/2023**	Analysis Date: **8/16/2023**	SeqNo: **3608357** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.6	70	130			
Surr: BFB	2100		1000		208	15	244			

Sample ID: **mb-76869**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **76869**	RunNo: **99010**
Prep Date: **8/15/2023**	Analysis Date: **8/16/2023**	SeqNo: **3608358** 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			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308723**

18-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1H Battery

Sample ID: **lcs-76846**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **76846**	RunNo: **98965**
Prep Date: **8/14/2023**	Analysis Date: **8/15/2023**	SeqNo: **3607748** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.025	1.000	0	78.7	70	130			
Toluene	0.79	0.050	1.000	0	79.1	70	130			
Ethylbenzene	0.81	0.050	1.000	0	81.3	70	130			
Xylenes, Total	2.4	0.10	3.000	0	81.2	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.2	39.1	146			

Sample ID: **mb-76846**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **76846**	RunNo: **98965**
Prep Date: **8/14/2023**	Analysis Date: **8/15/2023**	SeqNo: **3607749** 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	0.96		1.000		95.6	39.1	146			

Sample ID: **lcs-76869**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **76869**	RunNo: **99010**
Prep Date: **8/15/2023**	Analysis Date: **8/16/2023**	SeqNo: **3608361** 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	0.88	0.050	1.000	0	88.1	70	130			
Ethylbenzene	0.90	0.050	1.000	0	90.4	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.5	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.7	39.1	146			

Sample ID: **mb-76869**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **76869**	RunNo: **99010**
Prep Date: **8/15/2023**	Analysis Date: **8/16/2023**	SeqNo: **3608362** 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	0.96		1.000		96.1	39.1	146			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2308723

RcptNo: 1

Received By: Juan Rojas 8/12/2023 7:45:00 AM

Completed By: Juan Rojas 8/12/2023 8:30:30 AM

Reviewed By: JR 8/12/23

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: JR 8/12/23 JR 8/12/23

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

Client missing mailing address,phone number and email address on COC. JR 8/12/23.

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	No	Morty		

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 48 hr

Project Name: Bindel 4 Fee 1H Battery

Project #: ~~2308723~~ 23E-01581

Project Manager: K. Stallings

Sampler: J. Reta

On Ice: ☑ Yes ☐ No

# of Coolers: 1 Muddy

Cooler Temp(Including CF): 0-3+0.1=0.4 (°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. 2308723	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)
08/10/23	09:00	Soil	BES23-22 4'	4oz Jar	Ice	-001										
	10:20		BES23-23 2'			-002										
	10:25		BES23-24 2'			-003										
	10:30		BES23-25 2'			-004										
	11:45		WES23-02 0-2'			-005										
	11:50		WES23-03 0-2'			-006										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
08/10/23	18:16	J. Reta			8/11/23	700
8/11/23	1900			Courier	8/12/23	7:45

Remarks: Direct Bill to Devon
cc: J. Reta & S. McCurty

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

August 18, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1H Battery OrderNo.: 2308791

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/15/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-04 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 9:00:00 AM
Lab ID: 2308791-001 **Matrix:** SOIL
Received Date: 8/15/2023 7:20:00 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	8/15/2023 7:04:23 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 7:04:23 PM
Surr: DNOP	90.6	69-147		%Rec	1	8/15/2023 7:04:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/16/2023 11:26:00 AM
Surr: BFB	104	15-244		%Rec	1	8/16/2023 11:26:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/16/2023 11:26:00 AM
Toluene	ND	0.049		mg/Kg	1	8/16/2023 11:26:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/16/2023 11:26:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/16/2023 11:26:00 AM
Surr: 4-Bromofluorobenzene	95.2	39.1-146		%Rec	1	8/16/2023 11:26:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	190	60		mg/Kg	20	8/16/2023 2:28:20 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.

Analytical Report
Lab Order **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-05 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 9:05:00 AM
Lab ID: 2308791-002 **Matrix:** SOIL **Received Date:** 8/15/2023 7:20:00 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	8/15/2023 7:15:30 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 7:15:30 PM
Surr: DNOP	89.8	69-147		%Rec	1	8/15/2023 7:15:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2023 12:31:00 PM
Surr: BFB	99.9	15-244		%Rec	1	8/16/2023 12:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/16/2023 12:31:00 PM
Toluene	ND	0.047		mg/Kg	1	8/16/2023 12:31:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2023 12:31:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/16/2023 12:31:00 PM
Surr: 4-Bromofluorobenzene	93.3	39.1-146		%Rec	1	8/16/2023 12:31:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	250	60		mg/Kg	20	8/16/2023 2:40:44 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-06 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 9:10:00 AM
Lab ID: 2308791-003 **Matrix:** SOIL **Received Date:** 8/15/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	34	9.9		mg/Kg	1	8/15/2023 7:26:32 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 7:26:32 PM
Surr: DNOP	87.1	69-147		%Rec	1	8/15/2023 7:26:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/16/2023 1:37:00 PM
Surr: BFB	99.6	15-244		%Rec	1	8/16/2023 1:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/16/2023 1:37:00 PM
Toluene	ND	0.048		mg/Kg	1	8/16/2023 1:37:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/16/2023 1:37:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/16/2023 1:37:00 PM
Surr: 4-Bromofluorobenzene	91.2	39.1-146		%Rec	1	8/16/2023 1:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	120	60		mg/Kg	20	8/16/2023 2:53:08 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 **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-18 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 9:15:00 AM
Lab ID: 2308791-004 **Matrix:** SOIL **Received Date:** 8/15/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	8/15/2023 7:37:33 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/15/2023 7:37:33 PM
Surr: DNOP	108	69-147		%Rec	1	8/15/2023 7:37:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/16/2023 1:58:00 PM
Surr: BFB	104	15-244		%Rec	1	8/16/2023 1:58:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/16/2023 1:58:00 PM
Toluene	ND	0.048		mg/Kg	1	8/16/2023 1:58:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/16/2023 1:58:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/16/2023 1:58:00 PM
Surr: 4-Bromofluorobenzene	94.9	39.1-146		%Rec	1	8/16/2023 1:58:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	130	60		mg/Kg	20	8/16/2023 3:30:22 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-26 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 10:00:00 AM
Lab ID: 2308791-005 **Matrix:** SOIL
Received Date: 8/15/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	18	9.8		mg/Kg	1	8/15/2023 7:48:30 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 7:48:30 PM
Surr: DNOP	95.2	69-147		%Rec	1	8/15/2023 7:48:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2023 2:20:00 PM
Surr: BFB	106	15-244		%Rec	1	8/16/2023 2:20:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/16/2023 2:20:00 PM
Toluene	ND	0.047		mg/Kg	1	8/16/2023 2:20:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2023 2:20:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/16/2023 2:20:00 PM
Surr: 4-Bromofluorobenzene	95.2	39.1-146		%Rec	1	8/16/2023 2:20:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	160	60		mg/Kg	20	8/16/2023 3:42:46 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 **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-27 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 10:05:00 AM
Lab ID: 2308791-006 **Matrix:** SOIL
Received Date: 8/15/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	23	9.8		mg/Kg	1	8/15/2023 7:59:29 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 7:59:29 PM
Surr: DNOP	91.1	69-147		%Rec	1	8/15/2023 7:59:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2023 2:42:00 PM
Surr: BFB	102	15-244		%Rec	1	8/16/2023 2:42:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/16/2023 2:42:00 PM
Toluene	ND	0.047		mg/Kg	1	8/16/2023 2:42:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2023 2:42:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/16/2023 2:42:00 PM
Surr: 4-Bromofluorobenzene	96.3	39.1-146		%Rec	1	8/16/2023 2:42:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	110	60		mg/Kg	20	8/16/2023 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.		

Analytical Report
Lab Order **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-28 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 10:10:00 AM
Lab ID: 2308791-007 **Matrix:** SOIL **Received Date:** 8/15/2023 7:20:00 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	8/15/2023 8:10:27 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/15/2023 8:10:27 PM
Surr: DNOP	97.6	69-147		%Rec	1	8/15/2023 8:10:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/16/2023 3:04:00 PM
Surr: BFB	103	15-244		%Rec	1	8/16/2023 3:04:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/16/2023 3:04:00 PM
Toluene	ND	0.048		mg/Kg	1	8/16/2023 3:04:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/16/2023 3:04:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/16/2023 3:04:00 PM
Surr: 4-Bromofluorobenzene	95.9	39.1-146		%Rec	1	8/16/2023 3:04:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	200	60		mg/Kg	20	8/16/2023 4:07:34 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 **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-29 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 10:15:00 AM
Lab ID: 2308791-008 **Matrix:** SOIL **Received Date:** 8/15/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	9.3	9.2		mg/Kg	1	8/15/2023 8:21:22 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/15/2023 8:21:22 PM
Surr: DNOP	93.2	69-147		%Rec	1	8/15/2023 8:21:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2023 3:26:00 PM
Surr: BFB	107	15-244		%Rec	1	8/16/2023 3:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/16/2023 3:26:00 PM
Toluene	ND	0.047		mg/Kg	1	8/16/2023 3:26:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2023 3:26:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/16/2023 3:26:00 PM
Surr: 4-Bromofluorobenzene	95.9	39.1-146		%Rec	1	8/16/2023 3:26:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	230	60		mg/Kg	20	8/16/2023 4:19:59 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 **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-30 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 10:20:00 AM
Lab ID: 2308791-009 **Matrix:** SOIL **Received Date:** 8/15/2023 7:20:00 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	8/15/2023 8:32:19 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 8:32:19 PM
Surr: DNOP	93.8	69-147		%Rec	1	8/15/2023 8:32:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2023 4:10:00 PM
Surr: BFB	103	15-244		%Rec	1	8/16/2023 4:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/16/2023 4:10:00 PM
Toluene	ND	0.047		mg/Kg	1	8/16/2023 4:10:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2023 4:10:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	8/16/2023 4:10:00 PM
Surr: 4-Bromofluorobenzene	95.0	39.1-146		%Rec	1	8/16/2023 4:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	340	60		mg/Kg	20	8/16/2023 4:32:23 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.		

Analytical Report
Lab Order **2308791**
Date Reported: **8/18/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-31 1'
Project: Bindel 4 Fee 1H Battery
Collection Date: 8/11/2023 10:25:00 AM
Lab ID: 2308791-010 **Matrix:** SOIL **Received Date:** 8/15/2023 7:20:00 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	8/15/2023 8:43:10 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2023 8:43:10 PM
Surr: DNOP	114	69-147		%Rec	1	8/15/2023 8:43:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2023 4:31:00 PM
Surr: BFB	98.1	15-244		%Rec	1	8/16/2023 4:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/16/2023 4:31:00 PM
Toluene	ND	0.047		mg/Kg	1	8/16/2023 4:31:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2023 4:31:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/16/2023 4:31:00 PM
Surr: 4-Bromofluorobenzene	91.5	39.1-146		%Rec	1	8/16/2023 4:31:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	470	60		mg/Kg	20	8/16/2023 4:44:47 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308791**

18-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1H Battery

Sample ID: **MB-76901**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **76901**	RunNo: **99040**
Prep Date: **8/16/2023**	Analysis Date: **8/16/2023**	SeqNo: **3610084** Units: **mg/Kg**

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

Sample ID: **LCS-76901**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **76901**	RunNo: **99040**
Prep Date: **8/16/2023**	Analysis Date: **8/16/2023**	SeqNo: **3610085** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308791**

18-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1H Battery

Sample ID: **LCS-76874** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **76874** RunNo: **98980**

Prep Date: **8/15/2023** Analysis Date: **8/15/2023** SeqNo: **3608188** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.5	61.9	130			
Surr: DNOP	4.3		5.000		85.8	69	147			

Sample ID: **MB-76874** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **76874** RunNo: **98980**

Prep Date: **8/15/2023** Analysis Date: **8/15/2023** SeqNo: **3608189** 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	8.6		10.00		86.4	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308791**

18-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1H Battery

Sample ID: **lcs-76869**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **76869**	RunNo: **99010**
Prep Date: **8/15/2023**	Analysis Date: **8/16/2023**	SeqNo: **3608357** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.6	70	130			
Surr: BFB	2100		1000		208	15	244			

Sample ID: **mb-76869**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **76869**	RunNo: **99010**
Prep Date: **8/15/2023**	Analysis Date: **8/16/2023**	SeqNo: **3608358** 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: **2308791-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BES23-04 1'**	Batch ID: **76869**	RunNo: **99010**
Prep Date: **8/15/2023**	Analysis Date: **8/16/2023**	SeqNo: **3609016** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.8	24.18	0	107	70	130			
Surr: BFB	2300		967.1		239	15	244			

Sample ID: **2308791-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BES23-04 1'**	Batch ID: **76869**	RunNo: **99010**
Prep Date: **8/15/2023**	Analysis Date: **8/16/2023**	SeqNo: **3609017** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.9	24.46	0	108	70	130	1.73	20	
Surr: BFB	2300		978.5		231	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308791**

18-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1H Battery

Sample ID: **lcs-76869** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **76869** RunNo: **99010**

Prep Date: **8/15/2023** Analysis Date: **8/16/2023** SeqNo: **3608361** 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	0.88	0.050	1.000	0	88.1	70	130			
Ethylbenzene	0.90	0.050	1.000	0	90.4	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.5	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.7	39.1	146			

Sample ID: **mb-76869** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **76869** RunNo: **99010**

Prep Date: **8/15/2023** Analysis Date: **8/16/2023** SeqNo: **3608362** 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	0.96		1.000		96.1	39.1	146			

Sample ID: **2308791-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BES23-05 1'** Batch ID: **76869** RunNo: **99010**

Prep Date: **8/15/2023** Analysis Date: **8/16/2023** SeqNo: **3609084** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.023	0.9398	0	97.5	70	130			
Toluene	0.93	0.047	0.9398	0	98.7	70	130			
Ethylbenzene	0.95	0.047	0.9398	0	102	70	130			
Xylenes, Total	2.9	0.094	2.820	0	102	70	130			
Surr: 4-Bromofluorobenzene	0.91		0.9398		96.5	39.1	146			

Sample ID: **2308791-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BES23-05 1'** Batch ID: **76869** RunNo: **99010**

Prep Date: **8/15/2023** Analysis Date: **8/16/2023** SeqNo: **3609085** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.024	0.9425	0	97.0	70	130	0.183	20	
Toluene	0.93	0.047	0.9425	0	98.9	70	130	0.447	20	
Ethylbenzene	0.97	0.047	0.9425	0	102	70	130	1.10	20	
Xylenes, Total	2.9	0.094	2.828	0	103	70	130	1.54	20	
Surr: 4-Bromofluorobenzene	0.91		0.9425		96.7	39.1	146	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2308791

RcptNo: 1

Received By: Steve McQuiston 8/15/2023 7:20:00 AM

Completed By: Juan Rojas 8/15/2023 9:30:26 AM

Reviewed By: SCM 08/15/23

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: JR 8/15/23

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

Client missing mailing address, phone number and email address on COC. JR 8/15/23

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	No	Morty		

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 48 Hr

Project Name: Bindel 4 Fee 1H Battery

Project #: 23E-01581

Project Manager: K. Stallings

Sampler: J. Reta

On Ice: ☒ Yes ☐ No

# of Coolers: 1 Metal

Cooler Temp(including CF): 4.6 -0.2 = 4.4 4.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308791 SCM 08/15/23	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)
08/11/23	9:00	Soil	BES23-04 1'	4oz Jar	Ice	-001										
	9:05		BES23-05 1'			-002										
	9:10		BES23-06 1'			-003										
	9:15		BES23-18 1'			-004										
	10:00		BES23-26 1'			-005										
	10:05		BES23-27 1'			-006										
	10:10		BES23-28 1'			-007										
	10:15		BES23-29 1'			-008										
	10:20		BES23-30 1'			-009										
	10:25		BES23-31 1'			-010										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
08/14/23	14:02	J. Reta			8/14/23	1100
8/14/23	1910		SCM	COURIER	8/15/23	0720

Remarks: Direct Bill to Devon
cc: J. Reta & S. McCarty

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 23, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1 H Battery OrderNo.: 2308871

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/16/2023 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 **2308871**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-04 1'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/14/2023 10:00:00 AM
Lab ID: 2308871-001 **Matrix:** SOIL
Received Date: 8/16/2023 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	8/17/2023 8:35:00 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2023 8:35:00 PM
Surr: DNOP	99.1	69-147		%Rec	1	8/17/2023 8:35:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2023 3:59:34 AM
Surr: BFB	92.5	15-244		%Rec	1	8/18/2023 3:59:34 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/18/2023 3:59:34 AM
Toluene	ND	0.048		mg/Kg	1	8/18/2023 3:59:34 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2023 3:59:34 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/18/2023 3:59:34 AM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	8/18/2023 3:59:34 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	670	59		mg/Kg	20	8/17/2023 5:18:54 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 **2308871**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-05 1'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/14/2023 10:05:00 AM
Lab ID: 2308871-002 **Matrix:** SOIL
Received Date: 8/16/2023 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)	24	9.7		mg/Kg	1	8/17/2023 8:54:07 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2023 8:54:07 PM
Surr: DNOP	101	69-147		%Rec	1	8/17/2023 8:54:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/18/2023 4:46:28 AM
Surr: BFB	95.9	15-244		%Rec	1	8/18/2023 4:46:28 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/18/2023 4:46:28 AM
Toluene	ND	0.047		mg/Kg	1	8/18/2023 4:46:28 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/18/2023 4:46:28 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/18/2023 4:46:28 AM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	8/18/2023 4:46:28 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	340	60		mg/Kg	20	8/17/2023 5:31:18 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 **2308871**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-06 1'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/14/2023 10:10:00 AM
Lab ID: 2308871-003 **Matrix:** SOIL
Received Date: 8/16/2023 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	8/17/2023 9:13:15 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2023 9:13:15 PM
Surr: DNOP	106	69-147		%Rec	1	8/17/2023 9:13:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/18/2023 5:09:53 AM
Surr: BFB	92.5	15-244		%Rec	1	8/18/2023 5:09:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	8/18/2023 5:09:53 AM
Toluene	ND	0.050		mg/Kg	1	8/18/2023 5:09:53 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/18/2023 5:09:53 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/18/2023 5:09:53 AM
Surr: 4-Bromofluorobenzene	105	39.1-146		%Rec	1	8/18/2023 5:09:53 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	160	60		mg/Kg	20	8/17/2023 5:43:43 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 **2308871**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-07 1'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/14/2023 10:15:00 AM
Lab ID: 2308871-004 **Matrix:** SOIL
Received Date: 8/16/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/17/2023 9:32:26 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/17/2023 9:32:26 PM
Surr: DNOP	101	69-147		%Rec	1	8/17/2023 9:32:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2023 5:33:16 AM
Surr: BFB	96.5	15-244		%Rec	1	8/18/2023 5:33:16 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/18/2023 5:33:16 AM
Toluene	ND	0.048		mg/Kg	1	8/18/2023 5:33:16 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2023 5:33:16 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2023 5:33:16 AM
Surr: 4-Bromofluorobenzene	109	39.1-146		%Rec	1	8/18/2023 5:33:16 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	110	60		mg/Kg	20	8/18/2023 11:15:41 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 **2308871**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-08 1'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/14/2023 10:20:00 AM
Lab ID: 2308871-005 **Matrix:** SOIL
Received Date: 8/16/2023 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	8/17/2023 9:51:34 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/17/2023 9:51:34 PM
Surr: DNOP	101	69-147		%Rec	1	8/17/2023 9:51:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/18/2023 5:56:40 AM
Surr: BFB	94.6	15-244		%Rec	1	8/18/2023 5:56:40 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/18/2023 5:56:40 AM
Toluene	ND	0.047		mg/Kg	1	8/18/2023 5:56:40 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/18/2023 5:56:40 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2023 5:56:40 AM
Surr: 4-Bromofluorobenzene	108	39.1-146		%Rec	1	8/18/2023 5:56:40 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	100	60		mg/Kg	20	8/18/2023 11:28:05 AM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308871**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **MB-76924**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **76924**	RunNo: **99051**							
Prep Date: **8/17/2023**	Analysis Date: **8/17/2023**	SeqNo: **3610531**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-76924**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **76924**	RunNo: **99051**							
Prep Date: **8/17/2023**	Analysis Date: **8/17/2023**	SeqNo: **3610532**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

Sample ID: **MB-76940**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **76940**	RunNo: **99079**							
Prep Date: **8/18/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611672**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-76940**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **76940**	RunNo: **99079**							
Prep Date: **8/18/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611673**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308871**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **LCS-76920**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76920**	RunNo: **99052**
Prep Date: **8/17/2023**	Analysis Date: **8/17/2023**	SeqNo: **3611330** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	112	61.9	130			
Surr: DNOP	5.0		5.000		101	69	147			

Sample ID: **MB-76932**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76932**	RunNo: **99076**
Prep Date: **8/17/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611404** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.4		10.00		84.1	69	147			

Sample ID: **LCS-76932**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76932**	RunNo: **99076**
Prep Date: **8/17/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611405** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		75.1	69	147			

Sample ID: **MB-76920**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76920**	RunNo: **99076**
Prep Date: **8/17/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611416** 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	8.6		10.00		86.1	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308871**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **lcs-76908**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **76908**	RunNo: **99036**
Prep Date: **8/16/2023**	Analysis Date: **8/17/2023**	SeqNo: **3610780** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.6	70	130			
Surr: BFB	2000		1000		196	15	244			

Sample ID: **mb-76908**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **76908**	RunNo: **99036**
Prep Date: **8/16/2023**	Analysis Date: **8/17/2023**	SeqNo: **3610781** 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			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation 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#: **2308871**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **LCS-76908**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **76908**	RunNo: **99036**
Prep Date: **8/16/2023**	Analysis Date: **8/17/2023**	SeqNo: **3610801** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.8	70	130			
Toluene	0.96	0.050	1.000	0	95.7	70	130			
Ethylbenzene	0.97	0.050	1.000	0	96.9	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.9	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	39.1	146			

Sample ID: **mb-76908**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **76908**	RunNo: **99036**
Prep Date: **8/16/2023**	Analysis Date: **8/17/2023**	SeqNo: **3610802** 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	1.1		1.000		108	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: Vertex Resources Services, Inc.

Work Order Number: 2308871

RcptNo: 1

Received By: Tracy Casarrubias 8/16/2023 7:40:00 AM

Completed By: Tracy Casarrubias 8/16/2023 8:08:48 AM

Reviewed By: SCM 08/16/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐	
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐	
5. Sample(s) in proper container(s)?	Yes ☑	No ☐		
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐		
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐		
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐	
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑	
10. Were any sample containers received broken?	Yes ☐	No ☑		
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH:	(<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?	
13. Is it clear what analyses were requested?	Yes ☑	No ☐		
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: TMC 8/16/23	

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 8/16/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.7	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Vertex (Devon)

Mailing Address: on file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 48 Hr

Project Name: Bindel 4 Fee 1H Battery

Project #: 236-01581

Project Manager: K. Stallings

Sampler: J. Reta

On Ice: ☒ Yes ☐ No Yogi

# of Coolers: 1

Cooler Temp(including CF): 4.9-0.2=4.7 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308871
08/14/23	10:00	Soil	WES23-04 1'	4oz Jar	Ice	001
	10:05		WES23-05 1'			002
	10:10		WES23-06 1'			003
	10:15		WES23-07 1'			004
	10:20		WES23-08 1'			005

Analysis Request

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

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
08/14/23	18:00	J. Reta			8/15/23	1130
8/15/23	1900			Courier	8/16/23	7:40

Remarks: Direct Bill to Devon
CC: J Reta & S. McCarty

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 23, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1 H Battery OrderNo.: 2308966

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 9 sample(s) on 8/17/2023 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 **2308966**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-09 0-1'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/15/2023 9:35:00 AM
Lab ID: 2308966-001 **Matrix:** SOIL
Received Date: 8/17/2023 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	8/18/2023 1:11:33 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2023 1:11:33 PM
Surr: DNOP	65.4	69-147	S	%Rec	1	8/18/2023 1:11:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/19/2023 7:07:00 AM
Surr: BFB	102	15-244		%Rec	1	8/19/2023 7:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	8/19/2023 7:07:00 AM
Toluene	ND	0.049		mg/Kg	1	8/19/2023 7:07:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/19/2023 7:07:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/19/2023 7:07:00 AM
Surr: 4-Bromofluorobenzene	91.4	39.1-146		%Rec	1	8/19/2023 7:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	190	60		mg/Kg	20	8/18/2023 10:38:11 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 **2308966**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-11 0-6.5
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/15/2023 9:20:00 AM
Lab ID: 2308966-002 **Matrix:** SOIL
Received Date: 8/17/2023 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	8/18/2023 1:35:26 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2023 1:35:26 PM
Surr: DNOP	125	69-147		%Rec	1	8/18/2023 1:35:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/19/2023 7:29:00 AM
Surr: BFB	102	15-244		%Rec	1	8/19/2023 7:29:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/19/2023 7:29:00 AM
Toluene	ND	0.047		mg/Kg	1	8/19/2023 7:29:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/19/2023 7:29:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/19/2023 7:29:00 AM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	8/19/2023 7:29:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	540	60		mg/Kg	20	8/18/2023 11:15:24 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.		

Analytical Report
Lab Order **2308966**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-12 0-6.5'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/15/2023 9:25:00 AM
Lab ID: 2308966-003 **Matrix:** SOIL
Received Date: 8/17/2023 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	8/18/2023 1:59:21 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2023 1:59:21 PM
Surr: DNOP	75.2	69-147		%Rec	1	8/18/2023 1:59:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/19/2023 7:51:00 AM
Surr: BFB	99.9	15-244		%Rec	1	8/19/2023 7:51:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/19/2023 7:51:00 AM
Toluene	ND	0.047		mg/Kg	1	8/19/2023 7:51:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/19/2023 7:51:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/19/2023 7:51:00 AM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	8/19/2023 7:51:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	360	60		mg/Kg	20	8/18/2023 11:27:49 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308966**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-13 0-6.5'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/15/2023 9:30:00 AM
Lab ID: 2308966-004 **Matrix:** SOIL
Received Date: 8/17/2023 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	8/18/2023 2:23:16 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2023 2:23:16 PM
Surr: DNOP	73.8	69-147		%Rec	1	8/18/2023 2:23:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/21/2023 12:41:00 PM
Surr: BFB	101	15-244		%Rec	1	8/21/2023 12:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/19/2023 8:34:00 AM
Toluene	ND	0.047		mg/Kg	1	8/19/2023 8:34:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/19/2023 8:34:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/19/2023 8:34:00 AM
Surr: 4-Bromofluorobenzene	92.1	39.1-146		%Rec	1	8/19/2023 8:34:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	360	60		mg/Kg	20	8/19/2023 12:05:02 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 **2308966**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-15 0-4'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/15/2023 10:00:00 AM
Lab ID: 2308966-005 **Matrix:** SOIL
Received Date: 8/17/2023 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)	18	10		mg/Kg	1	8/18/2023 2:47:12 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/18/2023 2:47:12 PM
Surr: DNOP	82.8	69-147		%Rec	1	8/18/2023 2:47:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/21/2023 1:03:00 PM
Surr: BFB	96.3	15-244		%Rec	1	8/21/2023 1:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/19/2023 8:56:00 AM
Toluene	ND	0.047		mg/Kg	1	8/19/2023 8:56:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/19/2023 8:56:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/19/2023 8:56:00 AM
Surr: 4-Bromofluorobenzene	93.2	39.1-146		%Rec	1	8/19/2023 8:56:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	8/19/2023 12:42:17 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 **2308966**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-16 0-4'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/15/2023 10:10:00 AM
Lab ID: 2308966-006 **Matrix:** SOIL
Received Date: 8/17/2023 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	8/18/2023 3:11:07 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/18/2023 3:11:07 PM
Surr: DNOP	82.3	69-147		%Rec	1	8/18/2023 3:11:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/21/2023 1:25:00 PM
Surr: BFB	105	15-244		%Rec	1	8/21/2023 1:25:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	8/19/2023 9:18:00 AM
Toluene	ND	0.049		mg/Kg	1	8/19/2023 9:18:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/19/2023 9:18:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/19/2023 9:18:00 AM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	8/19/2023 9:18:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	190	60		mg/Kg	20	8/19/2023 1:44:20 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 **2308966**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-32 6.5'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/15/2023 1:40:00 PM
Lab ID: 2308966-007 **Matrix:** SOIL
Received Date: 8/17/2023 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)	27	9.5		mg/Kg	1	8/18/2023 3:35:02 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2023 3:35:02 PM
Surr: DNOP	78.4	69-147		%Rec	1	8/18/2023 3:35:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/21/2023 1:46:00 PM
Surr: BFB	97.7	15-244		%Rec	1	8/21/2023 1:46:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/19/2023 9:39:00 AM
Toluene	ND	0.047		mg/Kg	1	8/19/2023 9:39:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/19/2023 9:39:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/19/2023 9:39:00 AM
Surr: 4-Bromofluorobenzene	94.0	39.1-146		%Rec	1	8/19/2023 9:39:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	480	60		mg/Kg	20	8/19/2023 1:56:45 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 **2308966**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-33 6.5'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/15/2023 1:30:00 PM
Lab ID: 2308966-008 **Matrix:** SOIL
Received Date: 8/17/2023 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)	51	9.5		mg/Kg	1	8/18/2023 3:58:57 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2023 3:58:57 PM
Surr: DNOP	79.2	69-147		%Rec	1	8/18/2023 3:58:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/21/2023 2:08:00 PM
Surr: BFB	101	15-244		%Rec	1	8/21/2023 2:08:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/19/2023 10:23:00 AM
Toluene	ND	0.046		mg/Kg	1	8/19/2023 10:23:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	8/19/2023 10:23:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	8/19/2023 10:23:00 AM
Surr: 4-Bromofluorobenzene	93.3	39.1-146		%Rec	1	8/19/2023 10:23:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	150	60		mg/Kg	20	8/19/2023 2:09:09 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 **2308966**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BES23-34 6.5'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/15/2023 1:35:00 PM
Lab ID: 2308966-009 **Matrix:** SOIL **Received Date:** 8/17/2023 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	8/18/2023 4:22:48 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/18/2023 4:22:48 PM
Surr: DNOP	82.8	69-147		%Rec	1	8/18/2023 4:22:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/21/2023 2:30:00 PM
Surr: BFB	96.7	15-244		%Rec	1	8/21/2023 2:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	8/19/2023 10:45:00 AM
Toluene	ND	0.046		mg/Kg	1	8/19/2023 10:45:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	8/19/2023 10:45:00 AM
Xylenes, Total	ND	0.092		mg/Kg	1	8/19/2023 10:45:00 AM
Surr: 4-Bromofluorobenzene	93.8	39.1-146		%Rec	1	8/19/2023 10:45:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	410	60		mg/Kg	20	8/19/2023 2:21:34 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.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308966**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **MB-76948**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **76948**	RunNo: **99079**
Prep Date: **8/18/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611702** Units: **mg/Kg**

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

Sample ID: **LCS-76948**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **76948**	RunNo: **99079**
Prep Date: **8/18/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611703** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	1.5	15.00	0	110	90	110			

Sample ID: **MB-76953**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **76953**	RunNo: **99079**
Prep Date: **8/18/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611734** Units: **mg/Kg**

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

Sample ID: **LCS-76953**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **76953**	RunNo: **99079**
Prep Date: **8/18/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611735** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308966**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **MB-76932**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76932**	RunNo: **99076**
Prep Date: **8/17/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611404** 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	8.4		10.00		84.1	69	147			

Sample ID: **LCS-76932**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76932**	RunNo: **99076**
Prep Date: **8/17/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611405** 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	86.5	61.9	130			
Surr: DNOP	3.8		5.000		75.1	69	147			

Sample ID: **MB-76983**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76983**	RunNo: **99148**
Prep Date: **8/21/2023**	Analysis Date: **8/22/2023**	SeqNo: **3614304** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.3		10.00		83.2	69	147			

Sample ID: **LCS-76983**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76983**	RunNo: **99148**
Prep Date: **8/21/2023**	Analysis Date: **8/22/2023**	SeqNo: **3614305** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.6	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308966**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **lcs-76926**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **76926**	RunNo: **99068**
Prep Date: **8/17/2023**	Analysis Date: **8/19/2023**	SeqNo: **3611957** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	81.3	70	130			
Surr: BFB	2100		1000		215	15	244			

Sample ID: **mb-76926**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **76926**	RunNo: **99068**
Prep Date: **8/17/2023**	Analysis Date: **8/19/2023**	SeqNo: **3611958** 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: **lcs-76946**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **76946**	RunNo: **99101**
Prep Date: **8/18/2023**	Analysis Date: **8/21/2023**	SeqNo: **3613217** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2100		1000		214	15	244			

Sample ID: **mb-76946**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **76946**	RunNo: **99101**
Prep Date: **8/18/2023**	Analysis Date: **8/21/2023**	SeqNo: **3613218** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		97.2	15	244			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308966**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **lcs-76926**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **76926**	RunNo: **99068**
Prep Date: **8/17/2023**	Analysis Date: **8/19/2023**	SeqNo: **3612066** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	82.8	70	130			
Toluene	0.84	0.050	1.000	0	83.6	70	130			
Ethylbenzene	0.85	0.050	1.000	0	85.2	70	130			
Xylenes, Total	2.5	0.10	3.000	0	84.8	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		94.8	39.1	146			

Sample ID: **mb-76926**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **76926**	RunNo: **99068**
Prep Date: **8/17/2023**	Analysis Date: **8/19/2023**	SeqNo: **3612067** 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	0.94		1.000		93.9	39.1	146			

Sample ID: **lcs-76946**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **76946**	RunNo: **99101**
Prep Date: **8/18/2023**	Analysis Date: **8/21/2023**	SeqNo: **3613314** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		95.3	39.1	146			

Sample ID: **mb-76946**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **76946**	RunNo: **99101**
Prep Date: **8/18/2023**	Analysis Date: **8/21/2023**	SeqNo: **3613315** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.93		1.000		93.0	39.1	146			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2308966

RcptNo: 1

Received By: Tracy Casarrubias 8/17/2023 7:40:00 AM

Completed By: Tracy Casarrubias 8/17/2023 8:39:55 AM

Reviewed By: SCM 08/17/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JM 8/17/2

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions: Mailing address, phone number and Email/Fax are missing on COC- TMC 8/17/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Vertex (Devon)

Mailing Address: on file.

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 48Hr

Project Name: Bindel 4Fee 1H Battery

Project #: 23E-01581

Project Manager: K. Stallings

Sampler: J. Reta

On Ice: ☒ Yes ☐ No 4 oz.

# of Coolers: 1

Cooler Temp(including CF): 3.1-0=3.4 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
08/15/23	9:35	Soil	WES23-09 0-1'	4oz Jar	Ice	23089616 001										
	9:20		WES23-11 0-6.5'			002										
	9:25		WES23-12 0-6.5'			003										
	9:30		WES23-13 0-6.5'			004										
	10:00		WES23-15 0-4'			005										
	10:10		WES23-16 0-4'			006										
	13:40		BES23-32 6.5'			007										
	13:30		BES23-33 6.5'			008										
	13:35		BES23-34 6.5'			009										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
08/15/23	17:00	J. Reta			8/16/23	915
8/15/23	1900			Via: courier	8/17/23	7:40

Remarks: Direct Bill to Devon
cc: J. Reta & S. McCurty

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

August 23, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1 H Battery OrderNo.: 2308A28

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/18/2023 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 **2308A28**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-10 0-6.5'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/16/2023 10:00:00 AM
Lab ID: 2308A28-001 **Matrix:** SOIL
Received Date: 8/18/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/18/2023 11:58:30 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2023 11:58:30 PM
Surr: DNOP	85.4	69-147		%Rec	1	8/18/2023 11:58:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/21/2023 4:43:35 PM
Surr: BFB	98.5	15-244		%Rec	1	8/21/2023 4:43:35 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/21/2023 4:43:35 PM
Toluene	ND	0.049		mg/Kg	1	8/21/2023 4:43:35 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/21/2023 4:43:35 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/21/2023 4:43:35 PM
Surr: 4-Bromofluorobenzene	113	39.1-146		%Rec	1	8/21/2023 4:43:35 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	8/21/2023 12:08:16 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2308A28**
Date Reported: **8/23/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: WES23-14 0-1'
Project: Bindel 4 Fee 1 H Battery
Collection Date: 8/16/2023 11:00:00 AM
Lab ID: 2308A28-002 **Matrix:** SOIL
Received Date: 8/18/2023 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	8.8		mg/Kg	1	8/19/2023 12:22:26 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/19/2023 12:22:26 AM
Surr: DNOP	86.3	69-147		%Rec	1	8/19/2023 12:22:26 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/21/2023 5:07:16 PM
Surr: BFB	97.7	15-244		%Rec	1	8/21/2023 5:07:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	8/21/2023 5:07:16 PM
Toluene	ND	0.048		mg/Kg	1	8/21/2023 5:07:16 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/21/2023 5:07:16 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/21/2023 5:07:16 PM
Surr: 4-Bromofluorobenzene	112	39.1-146		%Rec	1	8/21/2023 5:07:16 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	470	60		mg/Kg	20	8/21/2023 12:45:30 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.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308A28**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **MB-76966**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **76966**	RunNo: **99107**
Prep Date: **8/21/2023**	Analysis Date: **8/21/2023**	SeqNo: **3613352** Units: **mg/Kg**

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

Sample ID: **LCS-76966**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **76966**	RunNo: **99107**
Prep Date: **8/21/2023**	Analysis Date: **8/21/2023**	SeqNo: **3613353** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308A28**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **MB-76932**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76932**	RunNo: **99076**
Prep Date: **8/17/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611404** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.4		10.00		84.1	69	147			

Sample ID: **LCS-76932**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76932**	RunNo: **99076**
Prep Date: **8/17/2023**	Analysis Date: **8/18/2023**	SeqNo: **3611405** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		75.1	69	147			

Sample ID: **MB-76947**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **76947**	RunNo: **99076**
Prep Date: **8/18/2023**	Analysis Date: **8/18/2023**	SeqNo: **3612170** 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	8.0		10.00		79.7	69	147			

Sample ID: **LCS-76947**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **76947**	RunNo: **99076**
Prep Date: **8/18/2023**	Analysis Date: **8/18/2023**	SeqNo: **3612171** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.8	61.9	130			
Surr: DNOP	3.8		5.000		76.3	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308A28**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **lcs-76939**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **76939**	RunNo: **99112**
Prep Date: **8/18/2023**	Analysis Date: **8/21/2023**	SeqNo: **3612471** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.9	70	130			
Surr: BFB	1900		1000		194	15	244			

Sample ID: **mb-76939**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **76939**	RunNo: **99112**
Prep Date: **8/18/2023**	Analysis Date: **8/21/2023**	SeqNo: **3612472** 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	970		1000		96.9	15	244			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308A28**

23-Aug-23

Client: Vertex Resources Services, Inc.

Project: Bindel 4 Fee 1 H Battery

Sample ID: **LCS-76939**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **76939**	RunNo: **99112**
Prep Date: **8/18/2023**	Analysis Date: **8/21/2023**	SeqNo: **3612483** 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	88.2	70	130			
Toluene	0.90	0.050	1.000	0	89.7	70	130			
Ethylbenzene	0.91	0.050	1.000	0	91.3	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.5	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	39.1	146			

Sample ID: **mb-76939**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **76939**	RunNo: **99112**
Prep Date: **8/18/2023**	Analysis Date: **8/21/2023**	SeqNo: **3612484** 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	1.1		1.000		113	39.1	146			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2308A28

RcptNo: 1

Received By: **Tracy Casarrubias** 8/18/2023 7:40:00 AM

Completed By: **Tracy Casarrubias** 8/18/2023 8:10:30 AM

Reviewed By: JA 8-18-23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: SCM 8/18/23

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 8/18/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	6.0	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Vertex (Devon)

Mailing Address: on file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 48 Hr

Project Name: Bindel 4 Fee 1H Battery

Project #: 23E-01581

Project Manager: K. Stallings

Sampler: J. Reta

On Ice: ☒ Yes ☐ No 4oz

# of Coolers: 1

Cooler Temp(Including CF): 5.9 +0.1 = 6.0 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 7308A28	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)
8/16/2023	10:00	Soil	WES23-10 0-6.5'	4oz Jar	Ice	001										
	11:00		WES23-14 0-1'			002										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/16/2023	15:22	Jacob Reta			8/17/23	915
8/17/23	1900				8/18/23	7:40

Remarks: Direct Bill to Devon
cc: J. Reta & S. McCarty

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 08, 2023

Kent Stallings

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

RE: Bindel 4 Fee 1 OrderNo.: 2308G12

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/30/2023 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 **2308G12**
Date Reported: **9/8/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Bindel 4 Fee 1
Lab ID: 2308G12-001

Client Sample ID: WES23-04 0-1'
Collection Date: 8/28/2023 1:50:00 PM
Matrix: MEOH (SOIL) **Received Date:** 8/30/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	140	8.7		mg/Kg	1	8/31/2023 5:53:27 AM
Motor Oil Range Organics (MRO)	87	43		mg/Kg	1	8/31/2023 5:53:27 AM
Surr: DNOP	104	69-147		%Rec	1	8/31/2023 5:53:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/31/2023 7:01:00 AM
Surr: BFB	95.0	15-244		%Rec	1	8/31/2023 7:01:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.017		mg/Kg	1	8/31/2023 7:01:00 AM
Toluene	ND	0.033		mg/Kg	1	8/31/2023 7:01:00 AM
Ethylbenzene	ND	0.033		mg/Kg	1	8/31/2023 7:01:00 AM
Xylenes, Total	ND	0.067		mg/Kg	1	8/31/2023 7:01:00 AM
Surr: 4-Bromofluorobenzene	87.5	39.1-146		%Rec	1	8/31/2023 7:01:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	340	60		mg/Kg	20	8/30/2023 11:58:49 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.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G12**

08-Sep-23

Client: Devon Energy

Project: Bindel 4 Fee 1

Sample ID: **MB-77219**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77219**	RunNo: **99393**
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3626972** Units: **mg/Kg**

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

Sample ID: **LCS-77219**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77219**	RunNo: **99393**
Prep Date: **8/30/2023**	Analysis Date: **8/30/2023**	SeqNo: **3626973** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G12**

08-Sep-23

Client: Devon Energy

Project: Bindel 4 Fee 1

Sample ID: **MB-77197** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **77197** RunNo: **99363**

Prep Date: **8/30/2023** Analysis Date: **8/30/2023** SeqNo: **3625829** 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-77197** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **77197** RunNo: **99363**

Prep Date: **8/30/2023** Analysis Date: **8/30/2023** SeqNo: **3625830** 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	4.7		5.000		94.0	69	147			

Sample ID: **2308G12-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **WES23-04 0-1'** Batch ID: **77197** RunNo: **99363**

Prep Date: **8/30/2023** Analysis Date: **8/31/2023** SeqNo: **3625849** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	200	9.6	47.98	141.7	124	54.2	135			
Surr: DNOP	5.1		4.798		106	69	147			

Sample ID: **2308G12-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **WES23-04 0-1'** Batch ID: **77197** RunNo: **99363**

Prep Date: **8/30/2023** Analysis Date: **8/31/2023** SeqNo: **3625850** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	190	8.8	43.98	141.7	100	54.2	135	7.94	29.2	
Surr: DNOP	4.7		4.398		106	69	147	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G12**

08-Sep-23

Client: Devon Energy

Project: Bindel 4 Fee 1

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625421** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2200		1000		220	15	244			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625422** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.3	15	244			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625694** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2100		1000		212	15	244			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625695** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		97.8	15	244			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2308G12**

08-Sep-23

Client: Devon Energy

Project: Bindel 4 Fee 1

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625434** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.4	70	130			
Toluene	0.95	0.050	1.000	0	95.2	70	130			
Ethylbenzene	0.97	0.050	1.000	0	97.2	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.2	70	130			
Surr: 4-Bromofluorobenzene	0.96		1.000		95.5	39.1	146			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625436** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.1	39.1	146			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625736** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.4	70	130			
Toluene	0.97	0.050	1.000	0	96.5	70	130			
Ethylbenzene	0.98	0.050	1.000	0	97.6	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.9	70	130			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.3	39.1	146			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R99356**	RunNo: **99356**
Prep Date:	Analysis Date: **8/30/2023**	SeqNo: **3625737** 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		91.5	39.1	146			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Devon Energy | Work Order Number: 2308G12 | RcptNo: 1

Received By: Tracy Casarrubias 8/30/2023 7:10:00 AM

Completed By: Tracy Casarrubias 8/30/2023 8:24:04 AM

Reviewed By: TMS 8/30/23

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: 8-30-23

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 8/30/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.7	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Devon / Vertex

Mailing Address: On file

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 24 hr

Project Name: Bindel 4 Fee 1

Project #: 23E-01581

Project Manager: Kent Stallings

Sampler: SM

On Ice: ☑ Yes ☐ No 409.

# of Coolers: 1

Cooler Temp(including CF): 0.7 - 0 = 0.7 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2308612	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)
8/28/23	13:50	Soil	WES23-04 0-1'	4 oz jar	Ice	001	✓	✓					✓			

Analysis Request

Relinquished by:	Received by:	Via:	Date	Time
Date: 8/29/23 Time: 915				
Date: 8/29/23 Time: 1100			8/30/23	7:10

Remarks: Direct bill to: Devon
W/O #: 21139358
kstallings@vertex.ca
cc: smccarty@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.

Analytical Report
Lab Order **2309454**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** WES23-04 0-1'
Project: Bindel 4 Fee 1 **Collection Date:** 9/7/2023 8:05:00 AM
Lab ID: 2309454-001 **Matrix:** SOIL **Received Date:** 9/9/2023 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/13/2023 2:28:30 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/13/2023 2:28:30 AM
Surr: DNOP	78.7	69-147		%Rec	1	9/13/2023 2:28:30 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/13/2023 2:53:52 PM
Surr: BFB	97.6	15-244		%Rec	1	9/13/2023 2:53:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	9/13/2023 2:53:52 PM
Toluene	ND	0.048		mg/Kg	1	9/13/2023 2:53:52 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/13/2023 2:53:52 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/13/2023 2:53:52 PM
Surr: 4-Bromofluorobenzene	107	39.1-146		%Rec	1	9/13/2023 2:53:52 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	120	60		mg/Kg	20	9/13/2023 5:13:25 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.		

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 274563

CONDITIONS

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137
	Action Number: 274563
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation closure approved.	3/18/2024
amaxwell	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	3/18/2024