General Information

NMOCD District:	District 1 – Hobbs	Incident ID:	nGRL0921757058
Landowner:	Bureau of Land Management	API:	30-025-31371
Client:	Devon Energy Production Company, LP	Site Location:	Kachina 8 Federal Com #002
Date:	April 16, 2025	Project #:	23E-05198
Client Contact:	Jim Raley	Phone #:	575.689.7597
Vertex PM:	Kent Stallings	Phone #:	346.814.1413

Objective

The objective of the environmental remediation work plan is to identify exceedances found during the site assessment/characterization activity and propose an appropriate remediation technique to address the release at Kachina 8 Federal Com #002 (hereafter referred to as "site"). The release occurred when the fire tube developed a hole resulting in 3 barrels (bbl) of produced water and 3 bbl of crude oil being released into the formerly bermed area of the pad (Attachment 1). The release occurred inside the containment of the former treating area on the northwest corner of the now-reclaimed pad. Another potential historical release area was identified where the tank battery used to be on the southwest corner of the former pad Areas of environmental concern identified and delineated include the northwest and southwest corners of the now-reclaimed well pad.

No current depth to groundwater data exists within 0.5 miles of the site. According to documents filed with the New Mexico Office of the State Engineer, the nearest groundwater reference was 100 feet below ground surface (bgs) approximately 0.49 miles southwest of the site as of April 1967. Additionally, a stock pond and potential wetland exist less than 200 feet from the site. Closure criteria have been selected as per New Mexico Administrative Code 19.15.29. The closure criteria for the site are presented below.

Table 1. Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 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 = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)
BTEX – Benzene, toluene, ethylbenzene, and xylenes

Site Assessment/Characterization

Site characterization was started on November 14, 2023, and completed on March 27, 2025. The historical treater containment area is marked as "Area of Interest" on Figure 1 (Attachment 2). A total of 26 sample points (boreholes) were established, and 67 samples were collected for field screening. Samples were obtained at various depths for horizontal and vertical delineation, and samples at the greatest lateral limits and the deepest vertical distance below criteria were submitted to the laboratory for analysis. In total, 67 samples were submitted to Eurofins Environmental Testing in Albuquerque, New Mexico, for analysis. The sample locations are presented on Figure 1 (Attachment 2). Laboratory analysis results have been compared to the above noted closure criteria and the results from the characterization activity are presented in Table 2 (Attachment 3); exceedances to criteria are identified in the table as bold with green background. Laboratory data reports and Daily Field Reports are included in Attachment 4 and Attachment 5, respectively. All applicable research as it pertains to closure criteria selection is presented in Attachment 6.

Proposed Remedial Activities

Areas identified with contaminant concentrations above closure criteria will be remediated through excavation. Laboratory results from the site assessment/characterization have been referenced to estimate both the vertical and horizontal limits of the impacts and the volume of soil to be removed. Soil will be excavated to the extents of the known contamination or in 2 foot increments, whichever is less. Field screening will be utilized to confirm removal of contaminated soil below the applicable closure criteria. Impacted soil will be stored on a 30 mil liner prior to disposal at an approved facility. Once excavation is complete, confirmatory samples will be collected and laboratory analysis completed to confirm closure criteria guidelines are met. Excavations will be backfilled with clean soil sourced locally. The site will then be ripped and seeded with an appropriate BLM Seed Mix.

nGRL0921757058 (July 21, 2009)

Northwest and Southwest Corners of Reclaimed Pad

Exceedances to closure criteria were identified at BH25-24 in the northwest corner on the reclaimed pad and will be remediated to closure criteria via excavation. The area around BH24-24 will be excavated to a depth of 5 feet bgs to meet reclamation closure criteria for TPH and chloride. Exceedances to closure criteria were identified at multiple sample points on and around the southwest corner of the reclaimed pad and will be remediated to closure criteria via excavation. The entire release area will be excavated to 4 feet bgs to meet reclamation closure criteria for TPH and chloride, and increased to 7 feet bgs around BH23-05.

Heavy equipment will be used to complete excavation in areas free of infrastructure or equipment. A hydrovac truck may be utilized to identify utility and buried pipelines where necessary, and hand tools will be utilized to remove contaminated soil in close proximity to equipment, buried utilities, and pipelines. Confirmation samples will be collected as per New Mexico Oil Conservation Division (NMOCD) guidance and submitted for laboratory analysis of all applicable parameters. Surfaces of the final extents of the excavation will meet the most stringent NMOCD closure criteria. The southwest remediation area is approximately 3,178 square feet and the northwest area is 48 square feet as presented on Figure 1 (Attachment 2). The total estimated volume to be excavated is approximately **752 cubic yards.** Excavation is planned to be completed within 90 days of approval of this Environmental Site Remediation Work Plan.

Sample Point	Excavation Depth	Remediation Method
BH23-02	4'	Excavator, Hand Crew
BH23-06		
BH23-08		
BH23-09		
BH23-10		
BH23-05	7'	Excavator
BH25-24	5'	Excavator, Hand Crew

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

Lakin Pullman

Lakin Pullman, B.Sc.
ENVIRONMENTAL SPECIALIST, REPORTING

April 16, 2025
Date

Kent Stallings, P.G.

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

April 21, 2025
Date

Attachments

Attachment 1. NMOCD C-141
Attachment 2. Figures
Attachment 3. Tables
Attachment 4. Laboratory Data Reports and Chain of Custody Forms
Attachment 5. Daily Field Reports with Photographs
Attachment 6. Closure Criteria Research

ATTACHMENT 1

District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St Francis Dr , Santa Fe, NM 87505

RECEIVED
JUL 27 2009
HOBBSOCD

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised March 17, 1999

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy	Contact Roger Hernandez
Address P. O. Box 250 Artesia, NM 88211	Telephone No. 575-748-5238
Facility Name Kachina 8 Federal #2	Facility Type Oil Well

Surface Owner FEDERAL	Mineral Owner	Lease No.

LOCATION OF RELEASE

API #30-025-31371-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	8	18S	33E	1830	North	660	West	Lea County, NM

NATURE OF RELEASE

Type of Release 3 Bbls oil and 3 Bbls of Produced Water	Volume of Release 6 bbls total	Volume Recovered 2 BO
Source of Release Hole in fire tube	Date and Hour of Occurrence 7-21-2009 8:30 am	Date and Hour of Discovery 7-21-2009 8:30 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? BLM – Trish Bad Bear 9:35 am NMOCD – Jeff Leking 9:40 AM	
By Whom? Roger Hernandez	Date and Hour 7-21-2009 9:40 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully *

N/A

GW@ 25'

Describe Cause of Problem and Remedial Action Taken.*

Hole in fire tube – shut well in until hole is fixed.

Describe Area Affected and Cleanup Action Taken.*
4'x20' area contained inside the berm, Called vacuum truck, picked up 2 BO, raked, and fertilized inside of berm.

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

Signature: Roger Hernandez

Printed Name: Roger Hernandez

Title: Production Foreman

Date: July 22, 2009 Phone: 575-748-5238

OIL CONSERVATION DIVISION

Approved by ENV ENGINEER ~~District Supervisor~~: Geoffrey Leking

Approval Date: 08/05/09 Expiration Date: 10/05/09

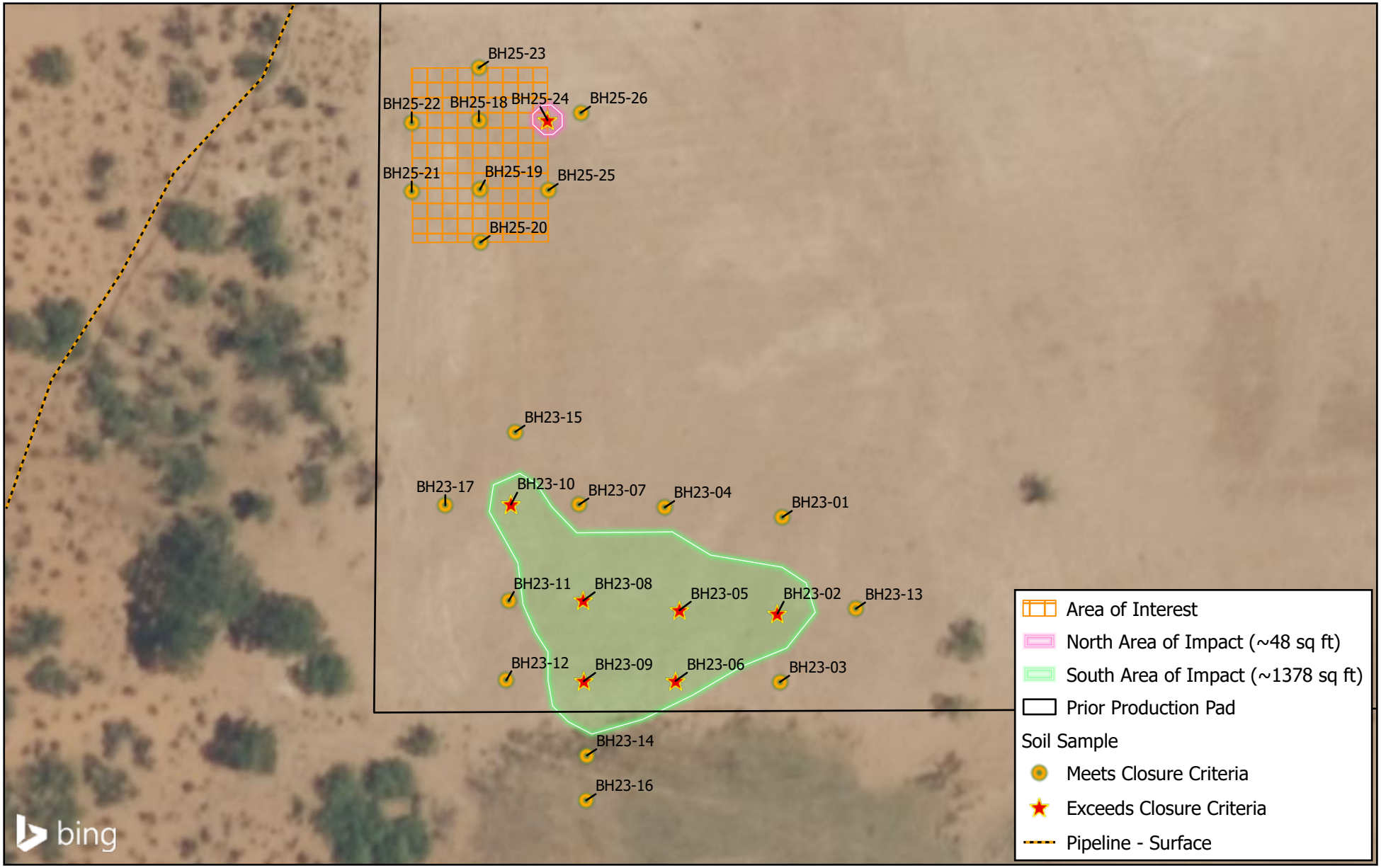
Conditions of Approval: DELINEATE TO CLEAN +1. SUBMIT FINAL C-141 BY 10/05/09.

Attached IRP-09-8-2255

* Attach Additional Sheets If Necessary

FGRL0921756522

ATTACHMENT 2



VERTEX

0 20 40 ft

NAD 1983 StatePlane New Mexico East FIPS 3001 Feet

Map Center:
Lat/Long: 32.763935°N, 103.691938°W

Date: Apr 16/25

N

Characterization Sampling Site Schematic
Kachina 8 Federal Com #002

FIGURE:
1

devon

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

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

VERSATILITY. EXPERTISE.

ATTACHMENT 3

Client Name: Devon Energy Production Company, LP
Site Name: Kachina 8 Federal Com #002
NMOCD Tracking #: nGRL0921757058
Project #: 23E-05198
Lab Reports: 2311A06, 2311927, 2311926, 2401658, and 885-22305-1

Table 2. Initial Characterization Laboratory Results - Depth to Groundwater <50 feet bgs

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH23-01	0	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-02	0	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	**2800**
	2	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	**840**
BH23-03	0	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	200
BH23-04	0	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	220
	2	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	400
BH23-05	0	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	490
	2	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	220
	4	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	**820**
	5	January 12, 2024	ND	ND	ND	ND	ND	ND	ND	**700**
	6	January 12, 2024	ND	ND	ND	ND	ND	ND	ND	**740**
	7	January 12, 2024	ND	ND	ND	ND	ND	ND	ND	540
BH23-06	0	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	170
	2	November 14, 2023	ND	ND	ND	ND	ND	ND	ND	**610**
BH23-07	0	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	290
	2	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	450
BH23-08	0	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	**750**
	2	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	69
	4	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	230
BH23-09	0	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	**2200**
	2	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	**1800**
	4	January 12, 2024	ND	ND	ND	ND	ND	ND	ND	120
BH23-10	0	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	**1100**
BH23-11	0	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	450
BH23-12	0	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-13	0	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	130
BH23-14	0	November 15, 2023	ND	ND	ND	14	51	14	65	ND
	2	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-15	0	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	ND
	2	November 15, 2023	ND	ND	ND	ND	ND	ND	ND	220
BH23-16	0	November 16, 2023	ND	ND	ND	9.4	ND	9.4	9.4	ND
	2	November 16, 2023	ND	ND	ND	ND	ND	ND	ND	ND
BH23-17	0	January 12, 2024	ND	ND	ND	ND	ND	ND	ND	ND
	2	January 12, 2024	ND	ND	ND	ND	ND	ND	ND	ND

Client Name: Devon Energy Production Company, LP
Site Name: Kachina 8 Federal Com #002
NMOCD Tracking #: nGRL0921757058
Project #: 23E-05198
Lab Reports: 2311A06, 2311927, 2311926, 2401658, and 885-22305-1

Table 2. Initial Characterization Laboratory Results - Depth to Groundwater <50 feet bgs

Sample Description			Petroleum Hydrocarbons							Inorganic
			Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	(GRO + DRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	Chloride Concentration (mg/kg)
BH25-18	0	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	210
	4	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	100
BH25-19	0	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	192
	4	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	170
BH25-20	0	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	380
BH25-21	0	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	160
	4	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	460
BH25-22	0	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 26, 2025	ND	ND	ND	ND	ND	ND	ND	580
BH25-23	0	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	290
	4	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	88
BH25-24	0	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	**940**
	4	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	**790**
	6	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	520
BH25-25	0	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	410
	4	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	310
BH25-26	0	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	ND
	2	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	550
	4	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	400
	6	March 27, 2025	ND	ND	ND	ND	ND	ND	ND	330

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

ATTACHMENT 4

eurofins | Environment Testing

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

December 04, 2023

Kent Stallings

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

RE: Kachina 8 Fed Com 002 OrderNo.: 2311926

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 19 sample(s) on 11/17/2023 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 do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-001 **Matrix:** SOIL

Client Sample ID: BH23-07 0'
Collection Date: 11/15/2023 9:00:00 AM
Received Date: 11/17/2023 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	11/23/2023 2:12:48 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/23/2023 2:12:48 AM
Surr: DNOP	84.3	69-147		%Rec	1	11/23/2023 2:12:48 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/27/2023 2:05:00 PM
Surr: BFB	100	15-244		%Rec	1	11/27/2023 2:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 2:05:00 PM
Toluene	ND	0.048		mg/Kg	1	11/27/2023 2:05:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/27/2023 2:05:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/27/2023 2:05:00 PM
Surr: 4-Bromofluorobenzene	94.4	39.1-146		%Rec	1	11/27/2023 2:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	290	60		mg/Kg	20	11/22/2023 10:09:43 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-002 **Matrix:** SOIL

Client Sample ID: BH23-07 2'
Collection Date: 11/15/2023 9:10:00 AM
Received Date: 11/17/2023 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	9.5		mg/Kg	1	11/23/2023 2:23:03 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/23/2023 2:23:03 AM
Surr: DNOP	86.7	69-147		%Rec	1	11/23/2023 2:23:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/27/2023 3:18:00 PM
Surr: BFB	99.1	15-244		%Rec	1	11/27/2023 3:18:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 3:18:00 PM
Toluene	ND	0.048		mg/Kg	1	11/27/2023 3:18:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/27/2023 3:18:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/27/2023 3:18:00 PM
Surr: 4-Bromofluorobenzene	94.1	39.1-146		%Rec	1	11/27/2023 3:18:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	450	60		mg/Kg	20	11/22/2023 9:18:02 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-003 **Matrix:** SOIL

Client Sample ID: BH23-08 0'
Collection Date: 11/15/2023 9:20:00 AM
Received Date: 11/17/2023 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	10		mg/Kg	1	11/23/2023 2:33:31 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/23/2023 2:33:31 AM
Surr: DNOP	88.5	69-147		%Rec	1	11/23/2023 2:33:31 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/27/2023 3:40:00 PM
Surr: BFB	98.1	15-244		%Rec	1	11/27/2023 3:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 3:40:00 PM
Toluene	ND	0.047		mg/Kg	1	11/27/2023 3:40:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/27/2023 3:40:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/27/2023 3:40:00 PM
Surr: 4-Bromofluorobenzene	93.3	39.1-146		%Rec	1	11/27/2023 3:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	750	60		mg/Kg	20	11/22/2023 9:30:26 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-004 **Matrix:** SOIL

Client Sample ID: BH23-08 2'
Collection Date: 11/15/2023 9:30:00 AM
Received Date: 11/17/2023 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	9.5		mg/Kg	1	11/23/2023 2:43:50 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/23/2023 2:43:50 AM
Surr: DNOP	88.6	69-147		%Rec	1	11/23/2023 2:43:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/27/2023 4:01:00 PM
Surr: BFB	97.1	15-244		%Rec	1	11/27/2023 4:01:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 4:01:00 PM
Toluene	ND	0.049		mg/Kg	1	11/27/2023 4:01:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/27/2023 4:01:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/27/2023 4:01:00 PM
Surr: 4-Bromofluorobenzene	92.0	39.1-146		%Rec	1	11/27/2023 4:01:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	69	60		mg/Kg	20	11/22/2023 9:42:51 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-005 **Matrix:** SOIL

Client Sample ID: BH23-08 4'
Collection Date: 11/15/2023 9:40:00 AM
Received Date: 11/17/2023 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	9.7		mg/Kg	1	11/23/2023 2:54:09 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/23/2023 2:54:09 AM
Surr: DNOP	88.8	69-147		%Rec	1	11/23/2023 2:54:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/27/2023 4:23:00 PM
Surr: BFB	101	15-244		%Rec	1	11/27/2023 4:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	11/27/2023 4:23:00 PM
Toluene	ND	0.049		mg/Kg	1	11/27/2023 4:23:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/27/2023 4:23:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/27/2023 4:23:00 PM
Surr: 4-Bromofluorobenzene	95.1	39.1-146		%Rec	1	11/27/2023 4:23:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	230	60		mg/Kg	20	11/22/2023 9:55:16 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-006 **Matrix:** SOIL

Client Sample ID: BH23-09 0'
Collection Date: 11/15/2023 9:50:00 AM
Received Date: 11/17/2023 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	9.5		mg/Kg	1	11/23/2023 3:04:29 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/23/2023 3:04:29 AM
Surr: DNOP	83.1	69-147		%Rec	1	11/23/2023 3:04:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/27/2023 4:45:00 PM
Surr: BFB	101	15-244		%Rec	1	11/27/2023 4:45:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 4:45:00 PM
Toluene	ND	0.047		mg/Kg	1	11/27/2023 4:45:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/27/2023 4:45:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/27/2023 4:45:00 PM
Surr: 4-Bromofluorobenzene	95.1	39.1-146		%Rec	1	11/27/2023 4:45:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	2200	59		mg/Kg	20	11/27/2023 10:36:29 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-007 **Matrix:** SOIL

Client Sample ID: BH23-09 2'
Collection Date: 11/15/2023 10:00:00 AM
Received Date: 11/17/2023 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	9.8		mg/Kg	1	11/23/2023 3:14:50 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/23/2023 3:14:50 AM
Surr: DNOP	91.1	69-147		%Rec	1	11/23/2023 3:14:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/27/2023 5:07:00 PM
Surr: BFB	96.4	15-244		%Rec	1	11/27/2023 5:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	11/27/2023 5:07:00 PM
Toluene	ND	0.049		mg/Kg	1	11/27/2023 5:07:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/27/2023 5:07:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/27/2023 5:07:00 PM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	11/27/2023 5:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	1800	59		mg/Kg	20	11/27/2023 10:51:38 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-008 **Matrix:** SOIL

Client Sample ID: BH23-10 0'
Collection Date: 11/15/2023 10:10:00 AM
Received Date: 11/17/2023 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	9.7		mg/Kg	1	11/23/2023 3:35:37 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/23/2023 3:35:37 AM
Surr: DNOP	90.2	69-147		%Rec	1	11/23/2023 3:35:37 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/27/2023 5:50:00 PM
Surr: BFB	93.7	15-244		%Rec	1	11/27/2023 5:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 5:50:00 PM
Toluene	ND	0.047		mg/Kg	1	11/27/2023 5:50:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/27/2023 5:50:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/27/2023 5:50:00 PM
Surr: 4-Bromofluorobenzene	90.4	39.1-146		%Rec	1	11/27/2023 5:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/27/2023 11:06:47 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-009 **Matrix:** SOIL

Client Sample ID: BH23-10 2'
Collection Date: 11/15/2023 10:20:00 AM
Received Date: 11/17/2023 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	9.7		mg/Kg	1	11/23/2023 3:46:08 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/23/2023 3:46:08 AM
Surr: DNOP	92.8	69-147		%Rec	1	11/23/2023 3:46:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/27/2023 6:12:00 PM
Surr: BFB	95.9	15-244		%Rec	1	11/27/2023 6:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 6:12:00 PM
Toluene	ND	0.047		mg/Kg	1	11/27/2023 6:12:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/27/2023 6:12:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/27/2023 6:12:00 PM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	11/27/2023 6:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	1100	60		mg/Kg	20	11/27/2023 11:21:55 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-010 **Matrix:** SOIL

Client Sample ID: BH23-11 0'
Collection Date: 11/15/2023 10:30:00 AM
Received Date: 11/17/2023 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	9.9		mg/Kg	1	11/23/2023 3:56:45 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/23/2023 3:56:45 AM
Surr: DNOP	91.8	69-147		%Rec	1	11/23/2023 3:56:45 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/27/2023 6:33:00 PM
Surr: BFB	95.7	15-244		%Rec	1	11/27/2023 6:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.023		mg/Kg	1	11/27/2023 6:33:00 PM
Toluene	ND	0.047		mg/Kg	1	11/27/2023 6:33:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/27/2023 6:33:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/27/2023 6:33:00 PM
Surr: 4-Bromofluorobenzene	89.7	39.1-146		%Rec	1	11/27/2023 6:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/27/2023 11:37:04 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-011 **Matrix:** SOIL

Client Sample ID: BH23-11 2'
Collection Date: 11/15/2023 10:40:00 AM
Received Date: 11/17/2023 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	9.4		mg/Kg	1	11/23/2023 4:07:23 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/23/2023 4:07:23 AM
Surr: DNOP	89.9	69-147		%Rec	1	11/23/2023 4:07:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/27/2023 6:55:00 PM
Surr: BFB	98.2	15-244		%Rec	1	11/27/2023 6:55:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	11/27/2023 6:55:00 PM
Toluene	ND	0.050		mg/Kg	1	11/27/2023 6:55:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/27/2023 6:55:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/27/2023 6:55:00 PM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	11/27/2023 6:55:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	450	60		mg/Kg	20	11/27/2023 11:52:12 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-012 **Matrix:** SOIL

Client Sample ID: BH23-12 0'
Collection Date: 11/15/2023 10:50:00 AM
Received Date: 11/17/2023 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	9.2		mg/Kg	1	11/23/2023 4:18:00 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/23/2023 4:18:00 AM
Surr: DNOP	84.8	69-147		%Rec	1	11/23/2023 4:18:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/27/2023 7:17:00 PM
Surr: BFB	92.8	15-244		%Rec	1	11/27/2023 7:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 7:17:00 PM
Toluene	ND	0.047		mg/Kg	1	11/27/2023 7:17:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/27/2023 7:17:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/27/2023 7:17:00 PM
Surr: 4-Bromofluorobenzene	89.8	39.1-146		%Rec	1	11/27/2023 7:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/27/2023 12:07:21 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-013 **Matrix:** SOIL

Client Sample ID: BH23-12 2'
Collection Date: 11/15/2023 11:00:00 AM
Received Date: 11/17/2023 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	9.3		mg/Kg	1	11/23/2023 4:28:51 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/23/2023 4:28:51 AM
Surr: DNOP	88.4	69-147		%Rec	1	11/23/2023 4:28:51 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/27/2023 7:38:00 PM
Surr: BFB	95.5	15-244		%Rec	1	11/27/2023 7:38:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 7:38:00 PM
Toluene	ND	0.048		mg/Kg	1	11/27/2023 7:38:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/27/2023 7:38:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/27/2023 7:38:00 PM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	11/27/2023 7:38:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/27/2023 12:22:31 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-014 **Matrix:** SOIL

Client Sample ID: BH23-13 0'
Collection Date: 11/15/2023 11:10:00 AM
Received Date: 11/17/2023 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	9.4		mg/Kg	1	11/23/2023 4:39:40 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/23/2023 4:39:40 AM
Surr: DNOP	91.2	69-147		%Rec	1	11/23/2023 4:39:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/27/2023 8:00:00 PM
Surr: BFB	93.4	15-244		%Rec	1	11/27/2023 8:00:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	11/27/2023 8:00:00 PM
Toluene	ND	0.049		mg/Kg	1	11/27/2023 8:00:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/27/2023 8:00:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/27/2023 8:00:00 PM
Surr: 4-Bromofluorobenzene	91.2	39.1-146		%Rec	1	11/27/2023 8:00:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/27/2023 12:37:41 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-015 **Matrix:** SOIL

Client Sample ID: BH23-13 2'
Collection Date: 11/15/2023 11:20:00 AM
Received Date: 11/17/2023 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	9.3		mg/Kg	1	11/23/2023 4:50:37 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/23/2023 4:50:37 AM
Surr: DNOP	88.8	69-147		%Rec	1	11/23/2023 4:50:37 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/27/2023 8:22:00 PM
Surr: BFB	99.1	15-244		%Rec	1	11/27/2023 8:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 8:22:00 PM
Toluene	ND	0.047		mg/Kg	1	11/27/2023 8:22:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/27/2023 8:22:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/27/2023 8:22:00 PM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	11/27/2023 8:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	130	60		mg/Kg	20	11/27/2023 12:52:50 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-016 **Matrix:** SOIL

Client Sample ID: BH23-14 0'
Collection Date: 11/15/2023 11:30:00 AM
Received Date: 11/17/2023 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)	14	9.7		mg/Kg	1	11/23/2023 5:01:23 AM
Motor Oil Range Organics (MRO)	51	49		mg/Kg	1	11/23/2023 5:01:23 AM
Surr: DNOP	85.7	69-147		%Rec	1	11/23/2023 5:01:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/27/2023 8:43:00 PM
Surr: BFB	92.4	15-244		%Rec	1	11/27/2023 8:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	11/27/2023 8:43:00 PM
Toluene	ND	0.049		mg/Kg	1	11/27/2023 8:43:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/27/2023 8:43:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/27/2023 8:43:00 PM
Surr: 4-Bromofluorobenzene	88.0	39.1-146		%Rec	1	11/27/2023 8:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	59		mg/Kg	20	11/27/2023 1:38:19 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-017 **Matrix:** SOIL

Client Sample ID: BH23-14 2'
Collection Date: 11/15/2023 11:40:00 AM
Received Date: 11/17/2023 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	9.9		mg/Kg	1	11/23/2023 5:12:19 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/23/2023 5:12:19 AM
Surr: DNOP	86.9	69-147		%Rec	1	11/23/2023 5:12:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/27/2023 9:05:00 PM
Surr: BFB	95.4	15-244		%Rec	1	11/27/2023 9:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.025		mg/Kg	1	11/27/2023 9:05:00 PM
Toluene	ND	0.049		mg/Kg	1	11/27/2023 9:05:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/27/2023 9:05:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/27/2023 9:05:00 PM
Surr: 4-Bromofluorobenzene	89.8	39.1-146		%Rec	1	11/27/2023 9:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	11/27/2023 1:53:27 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-018 **Matrix:** SOIL

Client Sample ID: BH23-15 0'
Collection Date: 11/15/2023 11:50:00 AM
Received Date: 11/17/2023 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	9.5		mg/Kg	1	11/22/2023 9:11:12 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/22/2023 9:11:12 PM
Surr: DNOP	95.0	69-147		%Rec	1	11/22/2023 9:11:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/23/2023 9:58:49 AM
Surr: BFB	89.0	15-244		%Rec	1	11/23/2023 9:58:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 9:58:49 AM
Toluene	ND	0.047		mg/Kg	1	11/23/2023 9:58:49 AM
Ethylbenzene	ND	0.047		mg/Kg	1	11/23/2023 9:58:49 AM
Xylenes, Total	ND	0.095		mg/Kg	1	11/23/2023 9:58:49 AM
Surr: 4-Bromofluorobenzene	90.4	39.1-146		%Rec	1	11/23/2023 9:58:49 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	11/21/2023 8:23:28 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 **2311926**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Fed Com 002
Lab ID: 2311926-019 **Matrix:** SOIL

Client Sample ID: BH23-15 2'
Collection Date: 11/15/2023 12:00:00 PM
Received Date: 11/17/2023 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	11/22/2023 9:21:45 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2023 9:21:45 PM
Surr: DNOP	102	69-147		%Rec	1	11/22/2023 9:21:45 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/23/2023 11:08:53 AM
Surr: BFB	92.1	15-244		%Rec	1	11/23/2023 11:08:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 11:08:53 AM
Toluene	ND	0.048		mg/Kg	1	11/23/2023 11:08:53 AM
Ethylbenzene	ND	0.048		mg/Kg	1	11/23/2023 11:08:53 AM
Xylenes, Total	ND	0.095		mg/Kg	1	11/23/2023 11:08:53 AM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	11/23/2023 11:08:53 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	220	60		mg/Kg	20	11/21/2023 8:35:52 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.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311926**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Fed Com 002

Sample ID: **MB-78941**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **PBS**	Batch ID: **78941**	RunNo: **101366**								
Prep Date: **11/21/2023**	Analysis Date: **11/21/2023**	SeqNo: **3729033**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78941**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **LCSS**	Batch ID: **78941**	RunNo: **101366**								
Prep Date: **11/21/2023**	Analysis Date: **11/21/2023**	SeqNo: **3729034**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.4	90	110			

Sample ID: **MB-78961**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **PBS**	Batch ID: **78961**	RunNo: **101389**								
Prep Date: **11/22/2023**	Analysis Date: **11/22/2023**	SeqNo: **3730194**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78961**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **LCSS**	Batch ID: **78961**	RunNo: **101389**								
Prep Date: **11/22/2023**	Analysis Date: **11/22/2023**	SeqNo: **3730195**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Sample ID: **MB-78968**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **PBS**	Batch ID: **78968**	RunNo: **101390**								
Prep Date: **11/22/2023**	Analysis Date: **11/22/2023**	SeqNo: **3730381**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-78968**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **LCSS**	Batch ID: **78968**	RunNo: **101390**								
Prep Date: **11/22/2023**	Analysis Date: **11/22/2023**	SeqNo: **3730382**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.9	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#: **2311926**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Fed Com 002

Sample ID: **2311926-017AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-14 2'** Batch ID: **78933** RunNo: **101387**
Prep Date: **11/22/2023** Analysis Date: **11/23/2023** SeqNo: **3729913** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.5	47.53	0	86.3	54.2	135			
Surr: DNOP	4.3		4.753		89.5	69	147			

Sample ID: **2311926-017AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-14 2'** Batch ID: **78933** RunNo: **101387**
Prep Date: **11/22/2023** Analysis Date: **11/23/2023** SeqNo: **3729914** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.8	48.97	0	85.8	54.2	135	2.48	29.2	
Surr: DNOP	4.3		4.897		87.2	69	147	0	0	

Sample ID: **LCS-78921** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78921** RunNo: **101387**
Prep Date: **11/21/2023** Analysis Date: **11/22/2023** SeqNo: **3729953** 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	85.4	61.9	130			
Surr: DNOP	4.3		5.000		86.3	69	147			

Sample ID: **LCS-78933** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **78933** RunNo: **101387**
Prep Date: **11/22/2023** Analysis Date: **11/23/2023** SeqNo: **3729954** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	83.5	61.9	130			
Surr: DNOP	4.2		5.000		84.7	69	147			

Sample ID: **MB-78921** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **78921** RunNo: **101387**
Prep Date: **11/21/2023** Analysis Date: **11/22/2023** SeqNo: **3729956** 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		88.8	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311926**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Fed Com 002

Sample ID: **MB-78933**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **78933**	RunNo: **101387**
Prep Date: **11/22/2023**	Analysis Date: **11/23/2023**	SeqNo: **3729957** 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		87.0	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311926**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Fed Com 002

Sample ID: **lcs-78913**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **78913**	RunNo: **101367**							
Prep Date: **11/20/2023**	Analysis Date: **11/23/2023**	SeqNo: **3730045**	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	82.4	70	130			
Surr: BFB	1900		1000		186	15	244			

Sample ID: **mb-78913**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **78913**	RunNo: **101367**							
Prep Date: **11/20/2023**	Analysis Date: **11/23/2023**	SeqNo: **3730046**	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	900		1000		90.3	15	244			

Sample ID: **2311926-018ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH23-15 0'**	Batch ID: **78913**	RunNo: **101367**							
Prep Date: **11/20/2023**	Analysis Date: **11/23/2023**	SeqNo: **3730048**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.7	23.58	0	86.5	70	130			
Surr: BFB	1800		943.4		191	15	244			

Sample ID: **2311926-018amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH23-15 0'**	Batch ID: **78913**	RunNo: **101367**							
Prep Date: **11/20/2023**	Analysis Date: **11/23/2023**	SeqNo: **3730049**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.58	0	89.1	70	130	2.92	20	
Surr: BFB	1800		943.4		196	15	244	0	0	

Sample ID: **lcs-78911**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **78911**	RunNo: **101421**							
Prep Date: **11/20/2023**	Analysis Date: **11/27/2023**	SeqNo: **3731552**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.4	70	130			
Surr: BFB	2100		1000		210	15	244			

Sample ID: **mb-78911**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **78911**	RunNo: **101421**							
Prep Date: **11/20/2023**	Analysis Date: **11/27/2023**	SeqNo: **3731554**	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#: **2311926**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Fed Com 002

Sample ID: **mb-78911**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **78911**	RunNo: **101421**
Prep Date: **11/20/2023**	Analysis Date: **11/27/2023**	SeqNo: **3731554** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		99.5	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#: **2311926**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Fed Com 002

Sample ID: **LCS-78913** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **78913** RunNo: **101367**

Prep Date: **11/20/2023** Analysis Date: **11/23/2023** SeqNo: **3730116** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.9	70	130			
Toluene	0.92	0.050	1.000	0	92.2	70	130			
Ethylbenzene	0.91	0.050	1.000	0	91.4	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.5	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.9	39.1	146			

Sample ID: **mb-78913** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **78913** RunNo: **101367**

Prep Date: **11/20/2023** Analysis Date: **11/23/2023** SeqNo: **3730117** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		92.3	39.1	146			

Sample ID: **2311926-019ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-15 2'** Batch ID: **78913** RunNo: **101367**

Prep Date: **11/20/2023** Analysis Date: **11/23/2023** SeqNo: **3730120** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.024	0.9506	0	91.8	70	130			
Toluene	0.89	0.048	0.9506	0	94.0	70	130			
Ethylbenzene	0.89	0.048	0.9506	0	93.2	70	130			
Xylenes, Total	2.6	0.095	2.852	0	92.8	70	130			
Surr: 4-Bromofluorobenzene	0.89		0.9506		93.6	39.1	146			

Sample ID: **2311926-019amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-15 2'** Batch ID: **78913** RunNo: **101367**

Prep Date: **11/20/2023** Analysis Date: **11/23/2023** SeqNo: **3730121** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9434	0	87.9	70	130	5.12	20	
Toluene	0.85	0.047	0.9434	0	89.8	70	130	5.26	20	
Ethylbenzene	0.84	0.047	0.9434	0	89.4	70	130	4.93	20	
Xylenes, Total	2.5	0.094	2.830	0	89.8	70	130	4.11	20	
Surr: 4-Bromofluorobenzene	0.87		0.9434		92.3	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311926**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Fed Com 002

Sample ID: **lcs-78911**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **78911**	RunNo: **101421**
Prep Date: **11/20/2023**	Analysis Date: **11/27/2023**	SeqNo: **3731974** 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	94.1	70	130			
Toluene	0.94	0.050	1.000	0	93.6	70	130			
Ethylbenzene	0.94	0.050	1.000	0	93.6	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.1	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.1	39.1	146			

Sample ID: **mb-78911**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **78911**	RunNo: **101421**
Prep Date: **11/20/2023**	Analysis Date: **11/27/2023**	SeqNo: **3731975** Units: **mg/Kg**

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

Qualifiers:

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

eurofins Environment Testing

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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2311926 RcptNo: 1

Received By: Tracy Casarrubias 11/17/2023 7:45:00 AM

Completed By: Tracy Casarrubias 11/17/2023 8:42:52 AM

Reviewed By: TMC 11/17/23

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: YU 11/17/23

Special Handling (if applicable)

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

Person Notified: ____ Date: ____

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

Regarding: ____

Client Instructions: Mailing address,phone number and Email/Fax are missing on COC- TMC 11/17/23

16. Additional remarks:

Client did not relinquish chain of custody

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	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 day

Project Name: Kachina 8 Fed Com #002

Project #: 23E-05198

Project Manager: Kent Stallings

Sampler: AT/BM

On Ice: ☑ Yes ☐ No 4009

# of Coolers: 1

Cooler Temp(including CF): 3.3-0=3.3 (°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. 2311926	BTEX / MTBE / TMB's (8021)	TPH:8015D GRO / DRO / MRO	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11.15.23	0900	Soil	BH23-07 0'	4oz jar	Ice	001										
	0910		BH23-07 2'			002										
	0920		BH23-08 0'			003										
	0930		BH23-08 2'			004										
	0940		BH23-08 4'			005										
	0950		BH23-09 0'			006										
	1000		BH23-09 2'			007										
	1010		BH23-10 0'			008										
	1020		BH23-10 2'			009										
	1030		BH23-11 0'			010										
	1040		BH23-11 2'			011										
	1050		BH23-12 0'			012										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
11.15.23					11/16/23	900
11/16/23	1900			Courier	11/17/23	7:45

Remarks: cc: Kstallings@vertex.ca
aharris@vertex.ca

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

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: Kachina 8 Fed Com #002

Project #: 23E-05198

Project Manager: Kent Stallings

Sampler: NH/BM

On Ice: ☑ Yes ☐ No 4 Jogi

# of Coolers: 1

Cooler Temp (including CF): 3.3 - 0 = 3.3 (°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. 2311926	BTEX / MTBE / TMB's (8021)	TPH:8015D GRO / DRO / MRO	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11.15.23	1100	Soil	BH23-12 2'	4oz jar	Ice	013										
	1110		BH23-13 0'			014										
	1120		BH23-13 2'			015										
	1130		BH23-14 0'			016										
	1140		BH23-14 2'			017										
	1150		BH23-15 0'			018										
	1200		BH23-15 2'			019										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
11.15.23						
11/16/23	1900				11/16/23	900
				Courier	11/17/23	7:45

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

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

eurofins | Environment Testing

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

November 30, 2023

Kent Stallings

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

RE: Kachina 8 Federal Com 002 OrderNo.: 2311927

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 13 sample(s) on 11/17/2023 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 do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-001 **Matrix:** SOIL

Client Sample ID: BH23-01 0.0'
Collection Date: 11/14/2023 9:00:00 AM
Received Date: 11/17/2023 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	9.9		mg/Kg	1	11/22/2023 9:32:18 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/22/2023 9:32:18 PM
Surr: DNOP	94.5	69-147		%Rec	1	11/22/2023 9:32:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/23/2023 12:19:10 PM
Surr: BFB	94.9	15-244		%Rec	1	11/23/2023 12:19:10 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/23/2023 12:19:10 PM
Toluene	ND	0.047		mg/Kg	1	11/23/2023 12:19:10 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/23/2023 12:19:10 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/23/2023 12:19:10 PM
Surr: 4-Bromofluorobenzene	93.6	39.1-146		%Rec	1	11/23/2023 12:19:10 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	11/21/2023 8:48:16 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 **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-002 **Matrix:** SOIL

Client Sample ID: BH23-01 2.0'
Collection Date: 11/14/2023 9:10:00 AM
Received Date: 11/17/2023 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	9.2		mg/Kg	1	11/22/2023 9:42:50 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/22/2023 9:42:50 PM
Surr: DNOP	118	69-147		%Rec	1	11/22/2023 9:42:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/23/2023 12:42:42 PM
Surr: BFB	94.7	15-244		%Rec	1	11/23/2023 12:42:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 12:42:42 PM
Toluene	ND	0.047		mg/Kg	1	11/23/2023 12:42:42 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/23/2023 12:42:42 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/23/2023 12:42:42 PM
Surr: 4-Bromofluorobenzene	93.2	39.1-146		%Rec	1	11/23/2023 12:42:42 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	11/21/2023 9:25:29 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-003 **Matrix:** SOIL

Client Sample ID: BH23-02 0.0'
Collection Date: 11/14/2023 9:20:00 AM
Received Date: 11/17/2023 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	9.3		mg/Kg	1	11/22/2023 9:53:21 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/22/2023 9:53:21 PM
Surr: DNOP	94.0	69-147		%Rec	1	11/22/2023 9:53:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/23/2023 1:06:14 PM
Surr: BFB	94.2	15-244		%Rec	1	11/23/2023 1:06:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 1:06:14 PM
Toluene	ND	0.048		mg/Kg	1	11/23/2023 1:06:14 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/23/2023 1:06:14 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/23/2023 1:06:14 PM
Surr: 4-Bromofluorobenzene	91.9	39.1-146		%Rec	1	11/23/2023 1:06:14 PM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	2800	150		mg/Kg	50	11/22/2023 5:59:30 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 **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-004 **Matrix:** SOIL

Client Sample ID: BH23-02 2.0'
Collection Date: 11/14/2023 9:30:00 AM
Received Date: 11/17/2023 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	11/22/2023 10:03:51 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2023 10:03:51 PM
Surr: DNOP	103	69-147		%Rec	1	11/22/2023 10:03:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/23/2023 1:29:45 PM
Surr: BFB	95.4	15-244		%Rec	1	11/23/2023 1:29:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/23/2023 1:29:45 PM
Toluene	ND	0.046		mg/Kg	1	11/23/2023 1:29:45 PM
Ethylbenzene	ND	0.046		mg/Kg	1	11/23/2023 1:29:45 PM
Xylenes, Total	ND	0.093		mg/Kg	1	11/23/2023 1:29:45 PM
Surr: 4-Bromofluorobenzene	94.3	39.1-146		%Rec	1	11/23/2023 1:29:45 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	840	60		mg/Kg	20	11/21/2023 10:39:55 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 **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-005 **Matrix:** SOIL

Client Sample ID: BH23-03 0.0'
Collection Date: 11/14/2023 9:40:00 AM
Received Date: 11/17/2023 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	11/22/2023 10:14:30 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2023 10:14:30 PM
Surr: DNOP	98.0	69-147		%Rec	1	11/22/2023 10:14:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/23/2023 1:53:25 PM
Surr: BFB	94.5	15-244		%Rec	1	11/23/2023 1:53:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/23/2023 1:53:25 PM
Toluene	ND	0.047		mg/Kg	1	11/23/2023 1:53:25 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/23/2023 1:53:25 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/23/2023 1:53:25 PM
Surr: 4-Bromofluorobenzene	93.3	39.1-146		%Rec	1	11/23/2023 1:53:25 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	11/21/2023 10:52:19 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 **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-006 **Matrix:** SOIL

Client Sample ID: BH23-03 2.0'
Collection Date: 11/14/2023 9:50:00 AM
Received Date: 11/17/2023 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	9.2		mg/Kg	1	11/22/2023 10:25:08 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/22/2023 10:25:08 PM
Surr: DNOP	126	69-147		%Rec	1	11/22/2023 10:25:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/23/2023 2:16:50 PM
Surr: BFB	95.3	15-244		%Rec	1	11/23/2023 2:16:50 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 2:16:50 PM
Toluene	ND	0.047		mg/Kg	1	11/23/2023 2:16:50 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/23/2023 2:16:50 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/23/2023 2:16:50 PM
Surr: 4-Bromofluorobenzene	94.6	39.1-146		%Rec	1	11/23/2023 2:16:50 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	200	60		mg/Kg	20	11/21/2023 11:04:44 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 **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-007 **Matrix:** SOIL

Client Sample ID: BH23-04 0.0'
Collection Date: 11/14/2023 10:00:00 AM
Received Date: 11/17/2023 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	9.5		mg/Kg	1	11/22/2023 10:35:35 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2023 10:35:35 PM
Surr: DNOP	89.9	69-147		%Rec	1	11/22/2023 10:35:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/23/2023 2:40:28 PM
Surr: BFB	94.0	15-244		%Rec	1	11/23/2023 2:40:28 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 2:40:28 PM
Toluene	ND	0.049		mg/Kg	1	11/23/2023 2:40:28 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/23/2023 2:40:28 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/23/2023 2:40:28 PM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	11/23/2023 2:40:28 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	220	60		mg/Kg	20	11/21/2023 11:17:08 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 **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-008 **Matrix:** SOIL

Client Sample ID: BH23-04 2.0'
Collection Date: 11/14/2023 10:10:00 AM
Received Date: 11/17/2023 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	9.4		mg/Kg	1	11/22/2023 10:46:02 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/22/2023 10:46:02 PM
Surr: DNOP	100	69-147		%Rec	1	11/22/2023 10:46:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/23/2023 3:04:02 PM
Surr: BFB	94.5	15-244		%Rec	1	11/23/2023 3:04:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 3:04:02 PM
Toluene	ND	0.047		mg/Kg	1	11/23/2023 3:04:02 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/23/2023 3:04:02 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/23/2023 3:04:02 PM
Surr: 4-Bromofluorobenzene	94.0	39.1-146		%Rec	1	11/23/2023 3:04:02 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	400	60		mg/Kg	20	11/21/2023 11:29:32 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 **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-009 **Matrix:** SOIL

Client Sample ID: BH23-05 0.0'
Collection Date: 11/14/2023 10:20:00 AM
Received Date: 11/17/2023 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	9.2		mg/Kg	1	11/22/2023 11:06:44 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/22/2023 11:06:44 PM
Surr: DNOP	108	69-147		%Rec	1	11/22/2023 11:06:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/23/2023 3:50:56 PM
Surr: BFB	94.2	15-244		%Rec	1	11/23/2023 3:50:56 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/23/2023 3:50:56 PM
Toluene	ND	0.049		mg/Kg	1	11/23/2023 3:50:56 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/23/2023 3:50:56 PM
Xylenes, Total	ND	0.098		mg/Kg	1	11/23/2023 3:50:56 PM
Surr: 4-Bromofluorobenzene	92.9	39.1-146		%Rec	1	11/23/2023 3:50:56 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	490	60		mg/Kg	20	11/21/2023 11:41:57 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-010 **Matrix:** SOIL

Client Sample ID: BH23-05 2.0'
Collection Date: 11/14/2023 10:30:00 AM
Received Date: 11/17/2023 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	9.7		mg/Kg	1	11/22/2023 11:17:08 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/22/2023 11:17:08 PM
Surr: DNOP	108	69-147		%Rec	1	11/22/2023 11:17:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/23/2023 4:14:34 PM
Surr: BFB	95.6	15-244		%Rec	1	11/23/2023 4:14:34 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 4:14:34 PM
Toluene	ND	0.049		mg/Kg	1	11/23/2023 4:14:34 PM
Ethylbenzene	ND	0.049		mg/Kg	1	11/23/2023 4:14:34 PM
Xylenes, Total	ND	0.097		mg/Kg	1	11/23/2023 4:14:34 PM
Surr: 4-Bromofluorobenzene	92.6	39.1-146		%Rec	1	11/23/2023 4:14:34 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	220	60		mg/Kg	20	11/21/2023 11:54:21 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-011 **Matrix:** SOIL

Client Sample ID: BH23-05 4.0'
Collection Date: 11/14/2023 10:40:00 AM
Received Date: 11/17/2023 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	11/22/2023 11:27:33 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2023 11:27:33 PM
Surr: DNOP	101	69-147		%Rec	1	11/22/2023 11:27:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/23/2023 4:38:13 PM
Surr: BFB	96.0	15-244		%Rec	1	11/23/2023 4:38:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 4:38:13 PM
Toluene	ND	0.047		mg/Kg	1	11/23/2023 4:38:13 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/23/2023 4:38:13 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/23/2023 4:38:13 PM
Surr: 4-Bromofluorobenzene	95.0	39.1-146		%Rec	1	11/23/2023 4:38:13 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	820	60		mg/Kg	20	11/22/2023 12:06:46 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 **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-012 **Matrix:** SOIL

Client Sample ID: BH23-06 0.0'
Collection Date: 11/14/2023 10:50:00 AM
Received Date: 11/17/2023 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	11/22/2023 11:37:56 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2023 11:37:56 PM
Surr: DNOP	100	69-147		%Rec	1	11/22/2023 11:37:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/23/2023 5:01:45 PM
Surr: BFB	96.4	15-244		%Rec	1	11/23/2023 5:01:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	11/23/2023 5:01:45 PM
Toluene	ND	0.047		mg/Kg	1	11/23/2023 5:01:45 PM
Ethylbenzene	ND	0.047		mg/Kg	1	11/23/2023 5:01:45 PM
Xylenes, Total	ND	0.094		mg/Kg	1	11/23/2023 5:01:45 PM
Surr: 4-Bromofluorobenzene	96.1	39.1-146		%Rec	1	11/23/2023 5:01:45 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	170	60		mg/Kg	20	11/22/2023 12:19:10 AM

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

Qualifiers:

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

Analytical Report
Lab Order **2311927**
Date Reported: **11/30/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311927-013 **Matrix:** SOIL

Client Sample ID: BH23-06 2.0'
Collection Date: 11/14/2023 11:00:00 AM
Received Date: 11/17/2023 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	9.7		mg/Kg	1	11/22/2023 11:48:18 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2023 11:48:18 PM
Surr: DNOP	108	69-147		%Rec	1	11/22/2023 11:48:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/23/2023 5:25:16 PM
Surr: BFB	96.3	15-244		%Rec	1	11/23/2023 5:25:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/23/2023 5:25:16 PM
Toluene	ND	0.048		mg/Kg	1	11/23/2023 5:25:16 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/23/2023 5:25:16 PM
Xylenes, Total	ND	0.095		mg/Kg	1	11/23/2023 5:25:16 PM
Surr: 4-Bromofluorobenzene	94.4	39.1-146		%Rec	1	11/23/2023 5:25:16 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	610	60		mg/Kg	20	11/22/2023 12:56:25 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.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311927**

30-Nov-23

Client: Devon Energy

Project: Kachina 8 Federal Com 002

Sample ID: **MB-78941**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **78941**	RunNo: **101366**
Prep Date: **11/21/2023**	Analysis Date: **11/21/2023**	SeqNo: **3729033** Units: **mg/Kg**

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

Sample ID: **LCS-78941**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **78941**	RunNo: **101366**
Prep Date: **11/21/2023**	Analysis Date: **11/21/2023**	SeqNo: **3729034** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.4	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#: **2311927**

30-Nov-23

Client: Devon Energy

Project: Kachina 8 Federal Com 002

Sample ID: **LCS-78921**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **78921**	RunNo: **101387**
Prep Date: **11/21/2023**	Analysis Date: **11/22/2023**	SeqNo: **3729953** 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	85.4	61.9	130			
Surr: DNOP	4.3		5.000		86.3	69	147			

Sample ID: **LCS-78933**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **78933**	RunNo: **101387**
Prep Date: **11/22/2023**	Analysis Date: **11/23/2023**	SeqNo: **3729954** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		5.000		84.7	69	147			

Sample ID: **MB-78921**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **78921**	RunNo: **101387**
Prep Date: **11/21/2023**	Analysis Date: **11/22/2023**	SeqNo: **3729956** 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		88.8	69	147			

Sample ID: **MB-78933**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **78933**	RunNo: **101387**
Prep Date: **11/22/2023**	Analysis Date: **11/23/2023**	SeqNo: **3729957** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		87.0	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311927**

30-Nov-23

Client: Devon Energy

Project: Kachina 8 Federal Com 002

Sample ID: **lcs-78913**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **78913**	RunNo: **101367**
Prep Date: **11/20/2023**	Analysis Date: **11/23/2023**	SeqNo: **3730045** 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	82.4	70	130			
Surr: BFB	1900		1000		186	15	244			

Sample ID: **mb-78913**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **78913**	RunNo: **101367**
Prep Date: **11/20/2023**	Analysis Date: **11/23/2023**	SeqNo: **3730046** 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	900		1000		90.3	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#: **2311927**

30-Nov-23

Client: Devon Energy

Project: Kachina 8 Federal Com 002

Sample ID: **LCS-78913** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **78913** RunNo: **101367**

Prep Date: **11/20/2023** Analysis Date: **11/23/2023** SeqNo: **3730116** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.9	70	130			
Toluene	0.92	0.050	1.000	0	92.2	70	130			
Ethylbenzene	0.91	0.050	1.000	0	91.4	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.5	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.9	39.1	146			

Sample ID: **mb-78913** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **78913** RunNo: **101367**

Prep Date: **11/20/2023** Analysis Date: **11/23/2023** SeqNo: **3730117** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		92.3	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

eurofins | Environment Testing

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

Sample Log-In Check List

Client Name: Devon Energy | Work Order Number: 2311927 | RcptNo: 1

Received By: Tracy Casarrubias 11/17/2023 7:45:00 AM

Completed By: Tracy Casarrubias 11/17/2023 8:54:44 AM

Reviewed By: TMC 11/17/23

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: TMC 11/17/23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: Mailing address,phone number and Email/Fax are missing on COC- TMC 11/17/23

16. Additional remarks:

Client did not relinquish chain of custody

17. **Cooler Information**

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

Chain-of-Custody Record

Client: Devon

Direct Bill

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☑ Standard ☑ Rush 5 DAY

Project Name: Kachina 8 Federal Com #002

Project #: 23E-05198

Project Manager: Kent Stallings

Sampler: AH/BM

On Ice: ☑ Yes ☐ No yogi

# of Coolers: 1

Cooler Temp(including CF): 5.2-0=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. 2311927
11-14-23	0900	Soil	BH23-01	0.0'	4 oz	ICE	001
	0910		BH23-01	2.0'			002
	0920		BH23-02	0.0'			003
	0930		BH23-02	2.0'			004
	0940		BH23-03	0.0'			005
	0950		BH23-03	2.0'			006
	1000		BH23-04	0.0'			007
	1010		BH23-04	2.0'			008
	1020		BH23-05	0.0'			009
	1030		BH23-05	2.0'			010
	1040		BH23-05	4.0'			011
	1050		BH23-06	0.0'			012

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

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			ACummings		11/16/23	700
Date: 11/16/23	Time: 1400	Relinquished by: ACummings	Received by:	Via: Courier	Date: 11/17/23	Time: 7:45

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

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

Chain-of-Custody Record

Client: Devon

Direct Bill

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☑ Standard ☑ Rush 5 day

Project Name: Kachina 8 Federal Com #002

Project #: 23E-05198

Project Manager: Kent Stallings

Sampler: KT/BM

On Ice: ☑ Yes ☐ No 40gi

# of Coolers: 1

Cooler Temp(Including CF): 5.2-0=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. 2311927	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11-14-23	1100	Soil	BH23-06 2.0'	402	ICE	013	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					11/16/23	900
11/16/23	900			Courier	11/17/23	7:45

Remarks: CC: Kstallings@vertex.ca
gharris@vertex.ca

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

eurofins | Environment Testing

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

December 04, 2023

Kent Stallings

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

RE: Kachina 8 Federal Com 002 OrderNo.: 2311A06

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 2 sample(s) on 11/18/2023 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 do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2311A06**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311A06-001 **Matrix:** SOIL

Client Sample ID: BH23-16 0.0'
Collection Date: 11/16/2023 11:00:00 AM
Received Date: 11/18/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	9.4	9.3		mg/Kg	1	11/28/2023 6:30:36 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/28/2023 6:30:36 PM
Surr: DNOP	102	69-147		%Rec	1	11/28/2023 6:30:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/27/2023 1:02:38 PM
Surr: BFB	88.8	15-244		%Rec	1	11/27/2023 1:02:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	11/27/2023 1:02:38 PM
Toluene	ND	0.050		mg/Kg	1	11/27/2023 1:02:38 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/27/2023 1:02:38 PM
Xylenes, Total	ND	0.099		mg/Kg	1	11/27/2023 1:02:38 PM
Surr: 4-Bromofluorobenzene	93.7	39.1-146		%Rec	1	11/27/2023 1:02:38 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	11/28/2023 7:27:53 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 **2311A06**
Date Reported: **12/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Kachina 8 Federal Com 002
Lab ID: 2311A06-002 **Matrix:** SOIL

Client Sample ID: BH23-16 2.0'
Collection Date: 11/16/2023 11:10:00 AM
Received Date: 11/18/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	11/28/2023 6:41:00 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/28/2023 6:41:00 PM
Surr: DNOP	83.1	69-147		%Rec	1	11/28/2023 6:41:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/27/2023 1:25:53 PM
Surr: BFB	87.3	15-244		%Rec	1	11/27/2023 1:25:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	11/27/2023 1:25:53 PM
Toluene	ND	0.048		mg/Kg	1	11/27/2023 1:25:53 PM
Ethylbenzene	ND	0.048		mg/Kg	1	11/27/2023 1:25:53 PM
Xylenes, Total	ND	0.096		mg/Kg	1	11/27/2023 1:25:53 PM
Surr: 4-Bromofluorobenzene	93.6	39.1-146		%Rec	1	11/27/2023 1:25:53 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	11/28/2023 8:05:07 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311A06**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Federal Com 002

Sample ID: **MB-79035**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **79035**	RunNo: **101444**							
Prep Date: **11/28/2023**	Analysis Date: **11/28/2023**	SeqNo: **3733080**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-79035**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **79035**	RunNo: **101444**							
Prep Date: **11/28/2023**	Analysis Date: **11/28/2023**	SeqNo: **3733081**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.5	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311A06**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Federal Com 002

Sample ID: **LCS-78965**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **78965**	RunNo: **101429**
Prep Date: **11/22/2023**	Analysis Date: **11/28/2023**	SeqNo: **3732955** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.7	61.9	130			
Surr: DNOP	4.7		5.000		93.7	69	147			

Sample ID: **MB-78965**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **78965**	RunNo: **101429**
Prep Date: **11/22/2023**	Analysis Date: **11/28/2023**	SeqNo: **3732957** 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			

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#: **2311A06**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Federal Com 002

Sample ID: **lcs-78950**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **78950**	RunNo: **101398**
Prep Date: **11/22/2023**	Analysis Date: **11/27/2023**	SeqNo: **3730673** 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	81.5	70	130			
Surr: BFB	1700		1000		172	15	244			

Sample ID: **mb-78950**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **78950**	RunNo: **101398**
Prep Date: **11/22/2023**	Analysis Date: **11/27/2023**	SeqNo: **3730674** 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	860		1000		86.2	15	244			

Sample ID: **2311a06-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-16 0.0'**	Batch ID: **78950**	RunNo: **101398**
Prep Date: **11/22/2023**	Analysis Date: **11/27/2023**	SeqNo: **3731862** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	24.93	0	84.6	70	130			
Surr: BFB	1800		997.0		181	15	244			

Sample ID: **2311a06-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-16 0.0'**	Batch ID: **78950**	RunNo: **101398**
Prep Date: **11/22/2023**	Analysis Date: **11/27/2023**	SeqNo: **3731863** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	24.83	0	82.1	70	130	3.47	20	
Surr: BFB	1800		993.0		184	15	244	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311A06**

04-Dec-23

Client: Devon Energy

Project: Kachina 8 Federal Com 002

Sample ID: **LCS-78950** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **78950** RunNo: **101398**

Prep Date: **11/22/2023** Analysis Date: **11/27/2023** SeqNo: **3730676** 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	94.9	70	130			
Toluene	0.97	0.050	1.000	0	96.8	70	130			
Ethylbenzene	0.95	0.050	1.000	0	94.7	70	130			
Xylenes, Total	2.8	0.10	3.000	0	94.7	70	130			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.7	39.1	146			

Sample ID: **mb-78950** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **78950** RunNo: **101398**

Prep Date: **11/22/2023** Analysis Date: **11/27/2023** SeqNo: **3730677** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.3	39.1	146			

Sample ID: **2311a06-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-16 2.0'** Batch ID: **78950** RunNo: **101398**

Prep Date: **11/22/2023** Analysis Date: **11/27/2023** SeqNo: **3731972** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9542	0	87.3	70	130			
Toluene	0.85	0.048	0.9542	0	88.7	70	130			
Ethylbenzene	0.84	0.048	0.9542	0	88.0	70	130			
Xylenes, Total	2.5	0.095	2.863	0	88.3	70	130			
Surr: 4-Bromofluorobenzene	0.88		0.9542		92.0	39.1	146			

Sample ID: **2311a06-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BH23-16 2.0'** Batch ID: **78950** RunNo: **101398**

Prep Date: **11/22/2023** Analysis Date: **11/27/2023** SeqNo: **3731973** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9606	0	89.6	70	130	3.25	20	
Toluene	0.88	0.048	0.9606	0	91.7	70	130	4.01	20	
Ethylbenzene	0.88	0.048	0.9606	0	91.7	70	130	4.76	20	
Xylenes, Total	2.6	0.096	2.882	0	91.0	70	130	3.61	20	
Surr: 4-Bromofluorobenzene	0.90		0.9606		93.6	39.1	146	0	0	

Qualifiers:

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

eurofins | Environment Testing

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

Sample Log-In Check List

Client Name: Devon Energy | Work Order Number: 2311A06 | RcptNo: 1

Received By: **Tracy Casarrubias** 11/18/2023 7:30:00 AM

Completed By: **Tracy Casarrubias** 11/18/2023 9:11:01 AM

Reviewed By: SCM 11/20/23

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: TMC 11/18/23

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 11/18/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes	Morty		

Chain-of-Custody Record

Client: Devon

Direct Bill

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☑ Standard ☑ Rush 5 Day

Project Name: Kachina 8 Federal Com #002

Project #: 23E-05198

Project Manager: Kent Stallings

Sampler: AH/BM

On Ice: ☑ Yes ☐ No MARY

# of Coolers: 1

Cooler Temp(Including CF): 1.1-0=1.1 (°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. 2311A06	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11-16-23	11:00	S.	BH23-16 0.0'	4oz	ICE	001	✓	✓					✓			
✓	11:10	✓	BH23-16 2.0'	✓	✓	002	✓	✓								

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					11/17/23	900
Date: 11/17/23	Time: 1900	Relinquished by:	Received by:	Via: Courier	Date 11/18/23	Time 7:30

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

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

eurofins | Environment Testing

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

January 25, 2024

Kent Stallings

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

RE: Kachina 8 Federal Com 2 OrderNo.: 2401658

Dear Kent Stallings:

Eurofins Environment Testing South Central, LLC received 6 sample(s) on 1/17/2024 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2401658**
Date Reported: **1/25/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-09 4.0'
Project: Kachina 8 Federal Com 2
Collection Date: 1/12/2024 10:00:00 AM
Lab ID: 2401658-001 **Matrix:** SOIL **Received Date:** 1/17/2024 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/22/2024 12:47:46 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/22/2024 12:47:46 PM
Surr: DNOP	97.9	69-147		%Rec	1	1/22/2024 12:47:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/23/2024 12:50:05 AM
Surr: BFB	96.4	15-244		%Rec	1	1/23/2024 12:50:05 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	1/23/2024 12:50:05 AM
Toluene	ND	0.048		mg/Kg	1	1/23/2024 12:50:05 AM
Ethylbenzene	ND	0.048		mg/Kg	1	1/23/2024 12:50:05 AM
Xylenes, Total	ND	0.096		mg/Kg	1	1/23/2024 12:50:05 AM
Surr: 4-Bromofluorobenzene	85.3	39.1-146		%Rec	1	1/23/2024 12:50:05 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	120	60		mg/Kg	20	1/22/2024 3:59:51 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 **2401658**
Date Reported: **1/25/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-17 0.0'
Project: Kachina 8 Federal Com 2 **Collection Date:** 1/12/2024 10:10:00 AM
Lab ID: 2401658-002 **Matrix:** SOIL **Received Date:** 1/17/2024 8:10:00 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	1/22/2024 12:58:27 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/22/2024 12:58:27 PM
Surr: DNOP	104	69-147		%Rec	1	1/22/2024 12:58:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/23/2024 1:13:48 AM
Surr: BFB	97.6	15-244		%Rec	1	1/23/2024 1:13:48 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	1/23/2024 1:13:48 AM
Toluene	ND	0.049		mg/Kg	1	1/23/2024 1:13:48 AM
Ethylbenzene	ND	0.049		mg/Kg	1	1/23/2024 1:13:48 AM
Xylenes, Total	ND	0.098		mg/Kg	1	1/23/2024 1:13:48 AM
Surr: 4-Bromofluorobenzene	86.5	39.1-146		%Rec	1	1/23/2024 1:13:48 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/22/2024 4:45:19 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 **2401658**
Date Reported: **1/25/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-17 2.0'
Project: Kachina 8 Federal Com 2
Collection Date: 1/12/2024 10:20:00 AM
Lab ID: 2401658-003 **Matrix:** SOIL **Received Date:** 1/17/2024 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	1/22/2024 1:09:09 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/22/2024 1:09:09 PM
Surr: DNOP	102	69-147		%Rec	1	1/22/2024 1:09:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/23/2024 1:37:44 AM
Surr: BFB	97.8	15-244		%Rec	1	1/23/2024 1:37:44 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	1/23/2024 1:37:44 AM
Toluene	ND	0.049		mg/Kg	1	1/23/2024 1:37:44 AM
Ethylbenzene	ND	0.049		mg/Kg	1	1/23/2024 1:37:44 AM
Xylenes, Total	ND	0.099		mg/Kg	1	1/23/2024 1:37:44 AM
Surr: 4-Bromofluorobenzene	85.8	39.1-146		%Rec	1	1/23/2024 1:37:44 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	1/22/2024 5:00:29 PM

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

Qualifiers:

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

Analytical Report
Lab Order **2401658**
Date Reported: **1/25/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-05 5.0'
Project: Kachina 8 Federal Com 2 **Collection Date:** 1/12/2024 10:30:00 AM
Lab ID: 2401658-004 **Matrix:** SOIL **Received Date:** 1/17/2024 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/22/2024 1:19:51 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/22/2024 1:19:51 PM
Surr: DNOP	102	69-147		%Rec	1	1/22/2024 1:19:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/23/2024 2:01:50 AM
Surr: BFB	97.4	15-244		%Rec	1	1/23/2024 2:01:50 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	1/23/2024 2:01:50 AM
Toluene	ND	0.050		mg/Kg	1	1/23/2024 2:01:50 AM
Ethylbenzene	ND	0.050		mg/Kg	1	1/23/2024 2:01:50 AM
Xylenes, Total	ND	0.10		mg/Kg	1	1/23/2024 2:01:50 AM
Surr: 4-Bromofluorobenzene	86.2	39.1-146		%Rec	1	1/23/2024 2:01:50 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	700	60		mg/Kg	20	1/22/2024 5:45:56 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 **2401658**
Date Reported: **1/25/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-05 6.0'
Project: Kachina 8 Federal Com 2 **Collection Date:** 1/12/2024 10:40:00 AM
Lab ID: 2401658-005 **Matrix:** SOIL **Received Date:** 1/17/2024 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/22/2024 1:30:33 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/22/2024 1:30:33 PM
Surr: DNOP	103	69-147		%Rec	1	1/22/2024 1:30:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/23/2024 2:25:23 AM
Surr: BFB	99.1	15-244		%Rec	1	1/23/2024 2:25:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	1/23/2024 2:25:23 AM
Toluene	ND	0.047		mg/Kg	1	1/23/2024 2:25:23 AM
Ethylbenzene	ND	0.047		mg/Kg	1	1/23/2024 2:25:23 AM
Xylenes, Total	ND	0.094		mg/Kg	1	1/23/2024 2:25:23 AM
Surr: 4-Bromofluorobenzene	86.4	39.1-146		%Rec	1	1/23/2024 2:25:23 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	740	60		mg/Kg	20	1/22/2024 6:01:06 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 **2401658**
Date Reported: **1/25/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-05 7.0'
Project: Kachina 8 Federal Com 2
Collection Date: 1/12/2024 10:50:00 AM
Lab ID: 2401658-006 **Matrix:** SOIL **Received Date:** 1/17/2024 8:10:00 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	1/22/2024 1:41:24 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/22/2024 1:41:24 PM
Surr: DNOP	103	69-147		%Rec	1	1/22/2024 1:41:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/23/2024 2:48:53 AM
Surr: BFB	97.1	15-244		%Rec	1	1/23/2024 2:48:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	1/23/2024 2:48:53 AM
Toluene	ND	0.049		mg/Kg	1	1/23/2024 2:48:53 AM
Ethylbenzene	ND	0.049		mg/Kg	1	1/23/2024 2:48:53 AM
Xylenes, Total	ND	0.099		mg/Kg	1	1/23/2024 2:48:53 AM
Surr: 4-Bromofluorobenzene	85.1	39.1-146		%Rec	1	1/23/2024 2:48:53 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	540	60		mg/Kg	20	1/22/2024 6:16:15 PM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401658**

25-Jan-24

Client: Vertex Resources Services, Inc.

Project: Kachina 8 Federal Com 2

Sample ID: **MB-80030**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **80030**	RunNo: **102597**
Prep Date: **1/22/2024**	Analysis Date: **1/22/2024**	SeqNo: **3791140** Units: **mg/Kg**

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

Sample ID: **LCS-80030**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **80030**	RunNo: **102597**
Prep Date: **1/22/2024**	Analysis Date: **1/22/2024**	SeqNo: **3791141** 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#: **2401658**

25-Jan-24

Client: Vertex Resources Services, Inc.

Project: Kachina 8 Federal Com 2

Sample ID: **LCS-80002** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **80002** RunNo: **102610**

Prep Date: **1/19/2024** Analysis Date: **1/22/2024** SeqNo: **3790936** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	61.9	130			
Surr: DNOP	4.9		5.000		98.0	69	147			

Sample ID: **MB-80002** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **80002** RunNo: **102610**

Prep Date: **1/19/2024** Analysis Date: **1/22/2024** SeqNo: **3790938** 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		100	69	147			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2401658**

25-Jan-24

Client: Vertex Resources Services, Inc.

Project: Kachina 8 Federal Com 2

Sample ID: **lcs-80000**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **80000**	RunNo: **102587**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3790762** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	70	130			
Surr: BFB	2200		1000		219	15	244			

Sample ID: **mb-80000**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **80000**	RunNo: **102587**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3790763** 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		96.3	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#: **2401658**

25-Jan-24

Client: Vertex Resources Services, Inc.

Project: Kachina 8 Federal Com 2

Sample ID: **LCS-80000**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **80000**	RunNo: **102587**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3790786** 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	79.0	70	130			
Toluene	0.81	0.050	1.000	0	80.8	70	130			
Ethylbenzene	0.81	0.050	1.000	0	81.4	70	130			
Xylenes, Total	2.5	0.10	3.000	0	81.7	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.5	39.1	146			

Sample ID: **mb-80000**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **80000**	RunNo: **102587**
Prep Date: **1/19/2024**	Analysis Date: **1/22/2024**	SeqNo: **3790787** 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	0.86		1.000		85.9	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.		

eurofins | Environment Testing

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

Sample Log-In Check List

Client Name: **Vertex Resources** Work Order Number: **2401658** RcptNo: **1**

Received By: **Tracy Casarrubias** **1/17/2024 8:10:00 AM**

Completed By: **Tracy Casarrubias** **1/17/2024 8:42:54 AM**

Reviewed By: SCM 1/17/24

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: TM 1/17/24

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 1/17/24

16. Additional remarks:

Client did not relinquish chain of custody

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Vertex

ON FILE

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☑ Standard ☑ Rush 5 Day

Project Name: Kachina 8 Federal Com 2

Project #: 23E-05198

Project Manager: Kent Stallings

Sampler: MH

On Ice: ☑ Yes ☐ No 4009

# of Coolers: 1

Cooler Temp(including CF): 2.0 +0=2.0 (°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. 2401658	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)
1-12-24	10:00	Soil	BH23-09 4.0'	4oz	ICE	001										
	10:10		BH23-17 6.0'			002										
	10:20		BH23-17 2.0'			003										
	10:30		BH23-05 5.0'			004										
	10:40		BH23-05 6.0'			005										
	10:50		BH23-05 7.0'			006										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					1/16/24	1630
Date: 1/16/24	Time: 1900	Relinquished by:	Received by:	Via: courier	Date 1/17/24	Time 8:10

Remarks: CC: Kstallings@vertex.ca
ahams@vertex.ca

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 4/7/2025 10:43:10 AM

JOB DESCRIPTION

Kachina 8 Federal Com #002

JOB NUMBER

885-22305-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

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

Authorization

Generated
4/7/2025 10:43:10 AM

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

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Laboratory Job ID: 885-22305-1

Table of Contents

Definitions/Glossary

Client: Vertex Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Vertex Job ID: 885-22305-1
Project: Kachina 8 Federal Com #002

Job ID: 885-22305-1 Eurofins Albuquerque

Job Narrative
885-22305-1

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

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

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

Receipt
The samples were received on 3/29/2025 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C.

Receipt Exceptions
Collection time discrepancies on samples selected. Client instructed to move forward with times listed on COC.
885-22305-4, 5, 6, 7, 8, 9, 10,11 12, 13, 23, 24, 25, 26, 27

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

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

Diesel Range Organics
Method 8015D_DRO: The continuing calibration verification (CCV) associated with batch 885-23520 recovered above the upper control limit for Diesel Range Organics [C10-C28]. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: 885-22305-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 2, 25, 26, 27, MB.

Method 8015D_DRO: The matrix spike (MS) precision for preparation batch 885-23494, 23499 and analytical batch 885-23520 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

Method 8015D_DRO: Surrogate recovery for the following samples were outside the upper control limit: BH25-21 2' (885-22305-10), BH25-21 4' (885-22305-11) and BH25-25 4' (885-22305-22). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015D_DRO: The surrogate recovery for the blank associated with preparation batch 885-23494 and analytical batch 885-23520 was outside the upper control limits. Samples reported have passing or ND/high surrogate results. Reporting all results as is.

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

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

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-18 0'
Date Collected: 03/26/25 11:00
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 12:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*35 - 166*	*03/31/25 13:10*	*04/03/25 12:25*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 12:25	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 12:25	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 12:25	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 12:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*48 - 145*	*03/31/25 13:10*	*04/03/25 12:25*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		04/01/25 14:18	04/03/25 02:01	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/01/25 14:18	04/03/25 02:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*91*		*62 - 134*	*04/01/25 14:18*	*04/03/25 02:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/01/25 14:07	04/02/25 10:49	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-18 2'

Date Collected: 03/26/25 11:10
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-2

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 13:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*03/31/25 13:10*	*04/03/25 13:30*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 13:30	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 13:30	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 13:30	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 13:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*03/31/25 13:10*	*04/03/25 13:30*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.2		mg/Kg		04/01/25 14:18	04/03/25 02:35	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		04/01/25 14:18	04/03/25 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*127*		*62 - 134*	*04/01/25 14:18*	*04/03/25 02:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**210**		60		mg/Kg		04/01/25 14:07	04/02/25 11:30	20

Client Sample Results

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-18 4'
Lab Sample ID: 885-22305-3
Date Collected: 03/26/25 11:20
Matrix: Solid
Date Received: 03/29/25 09:15

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*03/31/25 13:10*	*04/03/25 14:35*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 14:35	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 14:35	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 14:35	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*03/31/25 13:10*	*04/03/25 14:35*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		04/01/25 14:18	04/03/25 02:47	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/01/25 14:18	04/03/25 02:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*108*		*62 - 134*	*04/01/25 14:18*	*04/03/25 02:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		60		mg/Kg		04/01/25 14:07	04/02/25 12:11	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-19 0'
Date Collected: 03/26/25 11:30
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*03/31/25 13:10*	*04/03/25 14:57*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 14:57	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 14:57	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 14:57	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*03/31/25 13:10*	*04/03/25 14:57*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.1		mg/Kg		04/01/25 14:18	04/03/25 02:59	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		04/01/25 14:18	04/03/25 02:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*118*		*62 - 134*	*04/01/25 14:18*	*04/03/25 02:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/01/25 14:07	04/02/25 12:24	20

Client Sample Results

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-19 2'
Lab Sample ID: 885-22305-5
Date Collected: 03/26/25 11:40
Matrix: Solid
Date Received: 03/29/25 09:15

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*	*03/31/25 13:10*	*04/03/25 15:18*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 15:18	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 15:18	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 15:18	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*03/31/25 13:10*	*04/03/25 15:18*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.2		mg/Kg		04/01/25 14:18	04/03/25 03:11	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		04/01/25 14:18	04/03/25 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*101*		*62 - 134*	*04/01/25 14:18*	*04/03/25 03:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**190**		60		mg/Kg		04/01/25 14:07	04/02/25 13:05	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-19 4'

Date Collected: 03/26/25 11:50
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-6

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*	*03/31/25 13:10*	*04/03/25 15:40*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 15:40	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 15:40	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 15:40	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*03/31/25 13:10*	*04/03/25 15:40*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		04/01/25 14:18	04/03/25 03:22	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/01/25 14:18	04/03/25 03:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*91*		*62 - 134*	*04/01/25 14:18*	*04/03/25 03:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**170**		60		mg/Kg		04/01/25 14:07	04/02/25 13:18	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-20 0'

Date Collected: 03/26/25 12:00
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-7

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 16:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*35 - 166*	*03/31/25 13:10*	*04/03/25 16:02*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 16:02	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 16:02	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 16:02	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 16:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*	*03/31/25 13:10*	*04/03/25 16:02*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		04/01/25 14:18	04/03/25 03:34	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/01/25 14:18	04/03/25 03:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*	*04/01/25 14:18*	*04/03/25 03:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		59		mg/Kg		04/01/25 14:07	04/02/25 13:32	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-20 2'

Date Collected: 03/26/25 12:10
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-8

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*	*03/31/25 13:10*	*04/03/25 16:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 16:23	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 16:23	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 16:23	1
Xylenes, Total	ND		0.099		mg/Kg		03/31/25 13:10	04/03/25 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*48 - 145*	*03/31/25 13:10*	*04/03/25 16:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		04/01/25 14:18	04/03/25 03:46	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/01/25 14:18	04/03/25 03:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*79*		*62 - 134*	*04/01/25 14:18*	*04/03/25 03:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**380**		60		mg/Kg		04/01/25 14:07	04/02/25 13:46	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-21 0'

Date Collected: 03/26/25 12:20
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-9

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*03/31/25 13:10*	*04/03/25 16:45*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 16:45	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 16:45	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 16:45	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*03/31/25 13:10*	*04/03/25 16:45*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		04/01/25 14:18	04/03/25 04:09	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/01/25 14:18	04/03/25 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*84*		*62 - 134*	*04/01/25 14:18*	*04/03/25 04:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		61		mg/Kg		04/01/25 14:07	04/02/25 13:59	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-21 2'

Date Collected: 03/26/25 12:30
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-10

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*03/31/25 13:10*	*04/03/25 17:07*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 17:07	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 17:07	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 17:07	1
Xylenes, Total	ND		0.099		mg/Kg		03/31/25 13:10	04/03/25 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*03/31/25 13:10*	*04/03/25 17:07*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.1		mg/Kg		04/01/25 14:18	04/03/25 04:20	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		04/01/25 14:18	04/03/25 04:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*140*	*S1+*	*62 - 134*	*04/01/25 14:18*	*04/03/25 04:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**160**		60		mg/Kg		04/01/25 14:07	04/02/25 14:13	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-21 4'
Date Collected: 03/26/25 12:40
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*03/31/25 13:10*	*04/03/25 17:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 17:50	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 17:50	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 17:50	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*48 - 145*	*03/31/25 13:10*	*04/03/25 17:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7		mg/Kg		04/01/25 14:18	04/03/25 04:32	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/01/25 14:18	04/03/25 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*135*	*S1+*	*62 - 134*	*04/01/25 14:18*	*04/03/25 04:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**460**		60		mg/Kg		04/01/25 14:07	04/02/25 14:27	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-22 0'

Date Collected: 03/26/25 12:50
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-12

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*03/31/25 13:10*	*04/03/25 18:12*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 18:12	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 18:12	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 18:12	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*03/31/25 13:10*	*04/03/25 18:12*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		04/01/25 14:18	04/03/25 04:44	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		04/01/25 14:18	04/03/25 04:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*117*		*62 - 134*	*04/01/25 14:18*	*04/03/25 04:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/01/25 14:07	04/02/25 14:40	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-22 2'

Date Collected: 03/26/25 13:00
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-13

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*35 - 166*	*03/31/25 13:10*	*04/03/25 18:33*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 18:33	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 18:33	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 18:33	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*03/31/25 13:10*	*04/03/25 18:33*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		04/01/25 14:18	04/03/25 04:55	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/01/25 14:18	04/03/25 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*115*		*62 - 134*	*04/01/25 14:18*	*04/03/25 04:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**580**		60		mg/Kg		04/01/25 14:07	04/02/25 14:54	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-23 0'

Date Collected: 03/27/25 09:30
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-14

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*03/31/25 13:10*	*04/03/25 18:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 18:55	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 18:55	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 18:55	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*03/31/25 13:10*	*04/03/25 18:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		04/01/25 14:18	04/03/25 05:07	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/01/25 14:18	04/03/25 05:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*04/01/25 14:18*	*04/03/25 05:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/01/25 14:07	04/02/25 15:08	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-23 2'

Date Collected: 03/27/25 09:40
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-15

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*	*03/31/25 13:10*	*04/03/25 19:17*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 19:17	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 19:17	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 19:17	1
Xylenes, Total	ND		0.099		mg/Kg		03/31/25 13:10	04/03/25 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*03/31/25 13:10*	*04/03/25 19:17*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		04/01/25 14:18	04/03/25 05:19	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/01/25 14:18	04/03/25 05:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*109*		*62 - 134*	*04/01/25 14:18*	*04/03/25 05:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**290**		60		mg/Kg		04/01/25 14:07	04/02/25 15:49	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-23 4'

Date Collected: 03/27/25 09:50
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-16

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*35 - 166*	*03/31/25 13:10*	*04/03/25 19:38*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 19:38	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 19:38	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 19:38	1
Xylenes, Total	ND		0.099		mg/Kg		03/31/25 13:10	04/03/25 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*03/31/25 13:10*	*04/03/25 19:38*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		04/01/25 14:18	04/03/25 05:30	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		04/01/25 14:18	04/03/25 05:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*	*04/01/25 14:18*	*04/03/25 05:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**88**		59		mg/Kg		04/01/25 14:07	04/02/25 16:02	20

Client Sample Results

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-24 0'
Lab Sample ID: 885-22305-17
Date Collected: 03/27/25 10:00
Matrix: Solid
Date Received: 03/29/25 09:15

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 20:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*	*03/31/25 13:10*	*04/03/25 20:00*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 20:00	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 20:00	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 20:00	1
Xylenes, Total	ND		0.099		mg/Kg		03/31/25 13:10	04/03/25 20:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*03/31/25 13:10*	*04/03/25 20:00*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		04/01/25 14:18	04/03/25 05:42	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/01/25 14:18	04/03/25 05:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*82*		*62 - 134*	*04/01/25 14:18*	*04/03/25 05:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/01/25 14:07	04/02/25 16:16	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-24 2'

Date Collected: 03/27/25 10:10
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-18

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*03/31/25 13:10*	*04/03/25 20:22*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 20:22	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 20:22	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 20:22	1
Xylenes, Total	ND		0.099		mg/Kg		03/31/25 13:10	04/03/25 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*03/31/25 13:10*	*04/03/25 20:22*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		04/04/25 11:45	04/04/25 13:10	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/04/25 11:45	04/04/25 13:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*126*		*62 - 134*	*04/04/25 11:45*	*04/04/25 13:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**940**		60		mg/Kg		04/01/25 14:07	04/02/25 16:29	20

Client Sample Results

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-24 4'
Lab Sample ID: 885-22305-19
Date Collected: 03/27/25 10:20
Matrix: Solid
Date Received: 03/29/25 09:15

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*35 - 166*	*03/31/25 13:10*	*04/03/25 20:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 20:44	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 20:44	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 20:44	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*03/31/25 13:10*	*04/03/25 20:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7		mg/Kg		04/01/25 14:18	04/03/25 06:05	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/01/25 14:18	04/03/25 06:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*117*		*62 - 134*	*04/01/25 14:18*	*04/03/25 06:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**790**		60		mg/Kg		04/01/25 14:07	04/02/25 16:43	20

Client Sample Results

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-25 0'
Lab Sample ID: 885-22305-20
Date Collected: 03/27/25 10:30
Matrix: Solid
Date Received: 03/29/25 09:15

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*03/31/25 13:10*	*04/03/25 21:05*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 21:05	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 21:05	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 21:05	1
Xylenes, Total	ND		0.099		mg/Kg		03/31/25 13:10	04/03/25 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*	*03/31/25 13:10*	*04/03/25 21:05*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/01/25 14:18	04/03/25 06:17	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/01/25 14:18	04/03/25 06:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*	*04/01/25 14:18*	*04/03/25 06:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/01/25 14:07	04/02/25 16:57	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-25 2'
Date Collected: 03/27/25 10:40
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-21
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/01/25 10:41	04/03/25 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*35 - 166*	*04/01/25 10:41*	*04/03/25 16:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/01/25 10:41	04/03/25 16:58	1
Ethylbenzene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 16:58	1
Toluene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 16:58	1
Xylenes, Total	ND		0.099		mg/Kg		04/01/25 10:41	04/03/25 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*48 - 145*	*04/01/25 10:41*	*04/03/25 16:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND	F2	9.4		mg/Kg		04/01/25 13:47	04/03/25 07:03	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/01/25 13:47	04/03/25 07:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*130*		*62 - 134*	*04/01/25 13:47*	*04/03/25 07:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**410**		60		mg/Kg		04/01/25 15:07	04/02/25 18:32	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-25 4'
Date Collected: 03/27/25 10:50
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-22
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/01/25 10:41	04/03/25 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*35 - 166*	*04/01/25 10:41*	*04/03/25 18:10*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/01/25 10:41	04/03/25 18:10	1
Ethylbenzene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 18:10	1
Toluene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 18:10	1
Xylenes, Total	ND		0.10		mg/Kg		04/01/25 10:41	04/03/25 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*48 - 145*	*04/01/25 10:41*	*04/03/25 18:10*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.4		mg/Kg		04/01/25 13:47	04/03/25 07:38	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/01/25 13:47	04/03/25 07:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*137*	*S1+*	*62 - 134*	*04/01/25 13:47*	*04/03/25 07:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**310**		60		mg/Kg		04/01/25 15:07	04/02/25 17:38	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-26 0'

Date Collected: 03/27/25 13:00
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-23

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/01/25 10:41	04/03/25 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*35 - 166*	*04/01/25 10:41*	*04/03/25 19:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/01/25 10:41	04/03/25 19:21	1
Ethylbenzene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 19:21	1
Toluene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 19:21	1
Xylenes, Total	ND		0.099		mg/Kg		04/01/25 10:41	04/03/25 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*48 - 145*	*04/01/25 10:41*	*04/03/25 19:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.2		mg/Kg		04/01/25 13:47	04/03/25 07:50	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		04/01/25 13:47	04/03/25 07:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*101*		*62 - 134*	*04/01/25 13:47*	*04/03/25 07:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		04/01/25 15:07	04/02/25 17:51	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-26 2'

Date Collected: 03/27/25 13:10
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-24

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/01/25 10:41	04/03/25 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*35 - 166*	*04/01/25 10:41*	*04/03/25 19:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/01/25 10:41	04/03/25 19:44	1
Ethylbenzene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 19:44	1
Toluene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 19:44	1
Xylenes, Total	ND		0.10		mg/Kg		04/01/25 10:41	04/03/25 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*48 - 145*	*04/01/25 10:41*	*04/03/25 19:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		04/01/25 13:47	04/03/25 08:02	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/01/25 13:47	04/03/25 08:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*82*		*62 - 134*	*04/01/25 13:47*	*04/03/25 08:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**550**		60		mg/Kg		04/01/25 15:07	04/02/25 19:13	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-26 4'

Date Collected: 03/27/25 13:20
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-25

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/01/25 10:41	04/03/25 20:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*35 - 166*	*04/01/25 10:41*	*04/03/25 20:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/01/25 10:41	04/03/25 20:08	1
Ethylbenzene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 20:08	1
Toluene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 20:08	1
Xylenes, Total	ND		0.10		mg/Kg		04/01/25 10:41	04/03/25 20:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*48 - 145*	*04/01/25 10:41*	*04/03/25 20:08*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		04/01/25 13:47	04/03/25 08:13	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/01/25 13:47	04/03/25 08:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*93*		*62 - 134*	*04/01/25 13:47*	*04/03/25 08:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**400**		59		mg/Kg		04/01/25 15:07	04/02/25 19:27	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-22 6'

Date Collected: 03/27/25 13:30
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-26

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/01/25 10:41	04/03/25 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*35 - 166*	*04/01/25 10:41*	*04/03/25 20:32*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/01/25 10:41	04/03/25 20:32	1
Ethylbenzene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 20:32	1
Toluene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 20:32	1
Xylenes, Total	ND		0.10		mg/Kg		04/01/25 10:41	04/03/25 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*48 - 145*	*04/01/25 10:41*	*04/03/25 20:32*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		04/01/25 13:47	04/03/25 08:25	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		04/01/25 13:47	04/03/25 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*101*		*62 - 134*	*04/01/25 13:47*	*04/03/25 08:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**330**		60		mg/Kg		04/01/25 15:07	04/02/25 19:41	20

Client Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Client Sample ID: BH25-24 6'

Date Collected: 03/27/25 13:40
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-27

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/01/25 10:41	04/03/25 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*35 - 166*	*04/01/25 10:41*	*04/03/25 20:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/01/25 10:41	04/03/25 20:55	1
Ethylbenzene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 20:55	1
Toluene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 20:55	1
Xylenes, Total	ND		0.10		mg/Kg		04/01/25 10:41	04/03/25 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*48 - 145*	*04/01/25 10:41*	*04/03/25 20:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		04/01/25 13:47	04/03/25 08:36	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		04/01/25 13:47	04/03/25 08:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*	*04/01/25 13:47*	*04/03/25 08:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**520**		60		mg/Kg		04/01/25 15:07	04/02/25 19:54	20

QC Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

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

Lab Sample ID: MB 885-23401/1-A
Matrix: Solid
Analysis Batch: 23608

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23401

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/31/25 13:10	04/03/25 12:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*03/31/25 13:10*	*04/03/25 12:03*	*1*

Lab Sample ID: LCS 885-23401/2-A
Matrix: Solid
Analysis Batch: 23608

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23401

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	24.6		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*202*		*35 - 166*

Lab Sample ID: 885-22305-1 MS
Matrix: Solid
Analysis Batch: 23608

Client Sample ID: BH25-18 0'
Prep Type: Total/NA
Prep Batch: 23401

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		24.9	23.6		mg/Kg		95	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*208*		*35 - 166*

Lab Sample ID: 885-22305-1 MSD
Matrix: Solid
Analysis Batch: 23608

Client Sample ID: BH25-18 0'
Prep Type: Total/NA
Prep Batch: 23401

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.9	23.8		mg/Kg		96	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*208*		*35 - 166*

Lab Sample ID: MB 885-23471/1-A
Matrix: Solid
Analysis Batch: 23640

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23471

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		04/01/25 10:41	04/03/25 16:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*35 - 166*	*04/01/25 10:41*	*04/03/25 16:34*	*1*

QC Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

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

Lab Sample ID: LCS 885-23471/2-A
Matrix: Solid
Analysis Batch: 23640

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23471

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	32.2		mg/Kg		129	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*237*		*35 - 166*

Lab Sample ID: 885-22305-21 MS
Matrix: Solid
Analysis Batch: 23640

Client Sample ID: BH25-25 2'
Prep Type: Total/NA
Prep Batch: 23471

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		25.0	28.9		mg/Kg		116	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*226*		*35 - 166*

Lab Sample ID: 885-22305-21 MSD
Matrix: Solid
Analysis Batch: 23640

Client Sample ID: BH25-25 2'
Prep Type: Total/NA
Prep Batch: 23471

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.9	29.9		mg/Kg		120	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*234*		*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-23401/1-A
Matrix: Solid
Analysis Batch: 23609

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23401

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		03/31/25 13:10	04/03/25 12:03	1
Ethylbenzene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 12:03	1
Toluene	ND		0.050		mg/Kg		03/31/25 13:10	04/03/25 12:03	1
Xylenes, Total	ND		0.10		mg/Kg		03/31/25 13:10	04/03/25 12:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*03/31/25 13:10*	*04/03/25 12:03*	*1*

QC Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

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

Lab Sample ID: LCS 885-23401/3-A
Matrix: Solid
Analysis Batch: 23609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23401

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.970		mg/Kg		97	70 - 130		
Ethylbenzene			1.00	0.962		mg/Kg		96	70 - 130		
Toluene			1.00	0.945		mg/Kg		94	70 - 130		
Xylenes, Total			3.00	2.89		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*48 - 145*

Lab Sample ID: 885-22305-2 MS
Matrix: Solid
Analysis Batch: 23609

Client Sample ID: BH25-18 2'
Prep Type: Total/NA
Prep Batch: 23401

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.999	0.999		mg/Kg		100	70 - 130		
Ethylbenzene	ND		0.999	1.02		mg/Kg		102	70 - 130		
Toluene	ND		0.999	0.985		mg/Kg		99	70 - 130		
Xylenes, Total	ND		3.00	3.05		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*

Lab Sample ID: 885-22305-2 MSD
Matrix: Solid
Analysis Batch: 23609

Client Sample ID: BH25-18 2'
Prep Type: Total/NA
Prep Batch: 23401

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		1.00	0.990		mg/Kg		99	70 - 130	1	20
Ethylbenzene	ND		1.00	0.988		mg/Kg		99	70 - 130	3	20
Toluene	ND		1.00	0.969		mg/Kg		97	70 - 130	2	20
Xylenes, Total	ND		3.00	2.98		mg/Kg		99	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*48 - 145*

Lab Sample ID: MB 885-23471/1-A
Matrix: Solid
Analysis Batch: 23641

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23471

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		04/01/25 10:41	04/03/25 16:34	1
Ethylbenzene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 16:34	1
Toluene	ND		0.050		mg/Kg		04/01/25 10:41	04/03/25 16:34	1
Xylenes, Total	ND		0.10		mg/Kg		04/01/25 10:41	04/03/25 16:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*48 - 145*	*04/01/25 10:41*	*04/03/25 16:34*	*1*

QC Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

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

Lab Sample ID: LCS 885-23471/3-A
Matrix: Solid
Analysis Batch: 23641

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23471

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	1.03		mg/Kg		103	70 - 130		
Ethylbenzene			1.00	1.00		mg/Kg		100	70 - 130		
Toluene			1.00	1.00		mg/Kg		100	70 - 130		
Xylenes, Total			3.00	3.15		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*48 - 145*

Lab Sample ID: 885-22305-22 MS
Matrix: Solid
Analysis Batch: 23641

Client Sample ID: BH25-25 4'
Prep Type: Total/NA
Prep Batch: 23471

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.998	1.05		mg/Kg		105	70 - 130		
Ethylbenzene	ND		0.998	1.03		mg/Kg		104	70 - 130		
Toluene	ND		0.998	1.02		mg/Kg		103	70 - 130		
Xylenes, Total	ND		2.99	3.28		mg/Kg		110	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*48 - 145*

Lab Sample ID: 885-22305-22 MSD
Matrix: Solid
Analysis Batch: 23641

Client Sample ID: BH25-25 4'
Prep Type: Total/NA
Prep Batch: 23471

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.996	1.05		mg/Kg		105	70 - 130	0	20
Ethylbenzene	ND		0.996	1.06		mg/Kg		106	70 - 130	2	20
Toluene	ND		0.996	1.04		mg/Kg		104	70 - 130	1	20
Xylenes, Total	ND		2.99	3.29		mg/Kg		110	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*48 - 145*

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

Lab Sample ID: MB 885-23494/1-A
Matrix: Solid
Analysis Batch: 23520

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23494

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/01/25 13:47	04/03/25 06:40	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/01/25 13:47	04/03/25 06:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*153*	*S1+*	*62 - 134*	*04/01/25 13:47*	*04/03/25 06:40*	*1*

QC Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

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

Lab Sample ID: LCS 885-23494/2-A
Matrix: Solid
Analysis Batch: 23520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23494

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	65.7		mg/Kg		131	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*127*		*62 - 134*

Lab Sample ID: 885-22305-21 MS
Matrix: Solid
Analysis Batch: 23520

Client Sample ID: BH25-25 2'
Prep Type: Total/NA
Prep Batch: 23494

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND	F2	49.0	27.3		mg/Kg		56	44 - 136		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*43*	*S1-*	*62 - 134*

Lab Sample ID: 885-22305-21 MSD
Matrix: Solid
Analysis Batch: 23520

Client Sample ID: BH25-25 2'
Prep Type: Total/NA
Prep Batch: 23494

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND	F2	48.8	60.9	F2	mg/Kg		125	44 - 136	76	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*84*		*62 - 134*

Lab Sample ID: MB 885-23499/1-A
Matrix: Solid
Analysis Batch: 23520

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23499

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		04/01/25 14:18	04/03/25 01:37	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		04/01/25 14:18	04/03/25 01:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*158*	*S1+*	*62 - 134*	*04/01/25 14:18*	*04/03/25 01:37*	*1*

Lab Sample ID: LCS 885-23499/2-A
Matrix: Solid
Analysis Batch: 23520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23499

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	56.9		mg/Kg		114	60 - 135		

QC Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

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

Lab Sample ID: LCS 885-23499/2-A
Matrix: Solid
Analysis Batch: 23520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23499

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	132		62 - 134

Lab Sample ID: 885-22305-1 MS
Matrix: Solid
Analysis Batch: 23520

Client Sample ID: BH25-18 0'
Prep Type: Total/NA
Prep Batch: 23499

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	ND		49.9	44.5		mg/Kg		89	44 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
Di-n-octyl phthalate (Surr)	60	S1-	62 - 134

Lab Sample ID: 885-22305-1 MSD
Matrix: Solid
Analysis Batch: 23520

Client Sample ID: BH25-18 0'
Prep Type: Total/NA
Prep Batch: 23499

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		46.2	44.9		mg/Kg		97	44 - 136	1	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	81		62 - 134

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-23498/1-A
Matrix: Solid
Analysis Batch: 23534

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23498

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5		mg/Kg		04/01/25 14:07	04/02/25 10:21	1

Lab Sample ID: LCS 885-23498/2-A
Matrix: Solid
Analysis Batch: 23534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23498

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	15.0	14.5		mg/Kg		97	90 - 110

Lab Sample ID: 885-22305-1 MS
Matrix: Solid
Analysis Batch: 23534

Client Sample ID: BH25-18 0'
Prep Type: Total/NA
Prep Batch: 23498

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	ND		29.8	ND		mg/Kg		NC	50 - 150

QC Sample Results

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 885-22305-1 MSD — **Client Sample ID: BH25-18 0'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 23534 — **Prep Batch: 23498**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	ND		30.3	ND		mg/Kg		NC	50 - 150	NC	20

Lab Sample ID: 885-22305-2 MS — **Client Sample ID: BH25-18 2'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 23534 — **Prep Batch: 23498**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	210		30.2	249	4	mg/Kg		118	50 - 150

Lab Sample ID: 885-22305-2 MSD — **Client Sample ID: BH25-18 2'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 23534 — **Prep Batch: 23498**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	210		29.8	244	4	mg/Kg		103	50 - 150	2	20

Lab Sample ID: MB 885-23502/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 23534 — **Prep Batch: 23502**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5		mg/Kg		04/01/25 15:07	04/02/25 17:10	1

Lab Sample ID: LCS 885-23502/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 23534 — **Prep Batch: 23502**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	15.0	14.5		mg/Kg		97	90 - 110

Lab Sample ID: 885-22305-21 MS — **Client Sample ID: BH25-25 2'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 23534 — **Prep Batch: 23502**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	410		29.7	452	4	mg/Kg		126	50 - 150

Lab Sample ID: 885-22305-21 MSD — **Client Sample ID: BH25-25 2'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 23534 — **Prep Batch: 23502**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	410		30.2	434	4	mg/Kg		66	50 - 150	4	20

QC Association Summary

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

GC VOA

Prep Batch: 23401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-1	BH25-18 0'	Total/NA	Solid	5030C	
885-22305-2	BH25-18 2'	Total/NA	Solid	5030C	
885-22305-3	BH25-18 4'	Total/NA	Solid	5030C	
885-22305-4	BH25-19 0'	Total/NA	Solid	5030C	
885-22305-5	BH25-19 2'	Total/NA	Solid	5030C	
885-22305-6	BH25-19 4'	Total/NA	Solid	5030C	
885-22305-7	BH25-20 0'	Total/NA	Solid	5030C	
885-22305-8	BH25-20 2'	Total/NA	Solid	5030C	
885-22305-9	BH25-21 0'	Total/NA	Solid	5030C	
885-22305-10	BH25-21 2'	Total/NA	Solid	5030C	
885-22305-11	BH25-21 4'	Total/NA	Solid	5030C	
885-22305-12	BH25-22 0'	Total/NA	Solid	5030C	
885-22305-13	BH25-22 2'	Total/NA	Solid	5030C	
885-22305-14	BH25-23 0'	Total/NA	Solid	5030C	
885-22305-15	BH25-23 2'	Total/NA	Solid	5030C	
885-22305-16	BH25-23 4'	Total/NA	Solid	5030C	
885-22305-17	BH25-24 0'	Total/NA	Solid	5030C	
885-22305-18	BH25-24 2'	Total/NA	Solid	5030C	
885-22305-19	BH25-24 4'	Total/NA	Solid	5030C	
885-22305-20	BH25-25 0'	Total/NA	Solid	5030C	
MB 885-23401/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-23401/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-23401/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-22305-1 MS	BH25-18 0'	Total/NA	Solid	5030C	
885-22305-1 MSD	BH25-18 0'	Total/NA	Solid	5030C	
885-22305-2 MS	BH25-18 2'	Total/NA	Solid	5030C	
885-22305-2 MSD	BH25-18 2'	Total/NA	Solid	5030C	

Prep Batch: 23471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-21	BH25-25 2'	Total/NA	Solid	5030C	
885-22305-22	BH25-25 4'	Total/NA	Solid	5030C	
885-22305-23	BH25-26 0'	Total/NA	Solid	5030C	
885-22305-24	BH25-26 2'	Total/NA	Solid	5030C	
885-22305-25	BH25-26 4'	Total/NA	Solid	5030C	
885-22305-26	BH25-22 6'	Total/NA	Solid	5030C	
885-22305-27	BH25-24 6'	Total/NA	Solid	5030C	
MB 885-23471/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-23471/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-23471/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-22305-21 MS	BH25-25 2'	Total/NA	Solid	5030C	
885-22305-21 MSD	BH25-25 2'	Total/NA	Solid	5030C	
885-22305-22 MS	BH25-25 4'	Total/NA	Solid	5030C	
885-22305-22 MSD	BH25-25 4'	Total/NA	Solid	5030C	

Analysis Batch: 23608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-1	BH25-18 0'	Total/NA	Solid	8015M/D	23401
885-22305-2	BH25-18 2'	Total/NA	Solid	8015M/D	23401
885-22305-3	BH25-18 4'	Total/NA	Solid	8015M/D	23401
885-22305-4	BH25-19 0'	Total/NA	Solid	8015M/D	23401

QC Association Summary

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

GC VOA (Continued)

Analysis Batch: 23608 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-5	BH25-19 2'	Total/NA	Solid	8015M/D	23401
885-22305-6	BH25-19 4'	Total/NA	Solid	8015M/D	23401
885-22305-7	BH25-20 0'	Total/NA	Solid	8015M/D	23401
885-22305-8	BH25-20 2'	Total/NA	Solid	8015M/D	23401
885-22305-9	BH25-21 0'	Total/NA	Solid	8015M/D	23401
885-22305-10	BH25-21 2'	Total/NA	Solid	8015M/D	23401
885-22305-11	BH25-21 4'	Total/NA	Solid	8015M/D	23401
885-22305-12	BH25-22 0'	Total/NA	Solid	8015M/D	23401
885-22305-13	BH25-22 2'	Total/NA	Solid	8015M/D	23401
885-22305-14	BH25-23 0'	Total/NA	Solid	8015M/D	23401
885-22305-15	BH25-23 2'	Total/NA	Solid	8015M/D	23401
885-22305-16	BH25-23 4'	Total/NA	Solid	8015M/D	23401
885-22305-17	BH25-24 0'	Total/NA	Solid	8015M/D	23401
885-22305-18	BH25-24 2'	Total/NA	Solid	8015M/D	23401
885-22305-19	BH25-24 4'	Total/NA	Solid	8015M/D	23401
885-22305-20	BH25-25 0'	Total/NA	Solid	8015M/D	23401
MB 885-23401/1-A	Method Blank	Total/NA	Solid	8015M/D	23401
LCS 885-23401/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	23401
885-22305-1 MS	BH25-18 0'	Total/NA	Solid	8015M/D	23401
885-22305-1 MSD	BH25-18 0'	Total/NA	Solid	8015M/D	23401

Analysis Batch: 23609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-1	BH25-18 0'	Total/NA	Solid	8021B	23401
885-22305-2	BH25-18 2'	Total/NA	Solid	8021B	23401
885-22305-3	BH25-18 4'	Total/NA	Solid	8021B	23401
885-22305-4	BH25-19 0'	Total/NA	Solid	8021B	23401
885-22305-5	BH25-19 2'	Total/NA	Solid	8021B	23401
885-22305-6	BH25-19 4'	Total/NA	Solid	8021B	23401
885-22305-7	BH25-20 0'	Total/NA	Solid	8021B	23401
885-22305-8	BH25-20 2'	Total/NA	Solid	8021B	23401
885-22305-9	BH25-21 0'	Total/NA	Solid	8021B	23401
885-22305-10	BH25-21 2'	Total/NA	Solid	8021B	23401
885-22305-11	BH25-21 4'	Total/NA	Solid	8021B	23401
885-22305-12	BH25-22 0'	Total/NA	Solid	8021B	23401
885-22305-13	BH25-22 2'	Total/NA	Solid	8021B	23401
885-22305-14	BH25-23 0'	Total/NA	Solid	8021B	23401
885-22305-15	BH25-23 2'	Total/NA	Solid	8021B	23401
885-22305-16	BH25-23 4'	Total/NA	Solid	8021B	23401
885-22305-17	BH25-24 0'	Total/NA	Solid	8021B	23401
885-22305-18	BH25-24 2'	Total/NA	Solid	8021B	23401
885-22305-19	BH25-24 4'	Total/NA	Solid	8021B	23401
885-22305-20	BH25-25 0'	Total/NA	Solid	8021B	23401
MB 885-23401/1-A	Method Blank	Total/NA	Solid	8021B	23401
LCS 885-23401/3-A	Lab Control Sample	Total/NA	Solid	8021B	23401
885-22305-2 MS	BH25-18 2'	Total/NA	Solid	8021B	23401
885-22305-2 MSD	BH25-18 2'	Total/NA	Solid	8021B	23401

Analysis Batch: 23640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-21	BH25-25 2'	Total/NA	Solid	8015M/D	23471

QC Association Summary

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

GC VOA (Continued)

Analysis Batch: 23640 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-22	BH25-25 4'	Total/NA	Solid	8015M/D	23471
885-22305-23	BH25-26 0'	Total/NA	Solid	8015M/D	23471
885-22305-24	BH25-26 2'	Total/NA	Solid	8015M/D	23471
885-22305-25	BH25-26 4'	Total/NA	Solid	8015M/D	23471
885-22305-26	BH25-22 6'	Total/NA	Solid	8015M/D	23471
885-22305-27	BH25-24 6'	Total/NA	Solid	8015M/D	23471
MB 885-23471/1-A	Method Blank	Total/NA	Solid	8015M/D	23471
LCS 885-23471/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	23471
885-22305-21 MS	BH25-25 2'	Total/NA	Solid	8015M/D	23471
885-22305-21 MSD	BH25-25 2'	Total/NA	Solid	8015M/D	23471

Analysis Batch: 23641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-21	BH25-25 2'	Total/NA	Solid	8021B	23471
885-22305-22	BH25-25 4'	Total/NA	Solid	8021B	23471
885-22305-23	BH25-26 0'	Total/NA	Solid	8021B	23471
885-22305-24	BH25-26 2'	Total/NA	Solid	8021B	23471
885-22305-25	BH25-26 4'	Total/NA	Solid	8021B	23471
885-22305-26	BH25-22 6'	Total/NA	Solid	8021B	23471
885-22305-27	BH25-24 6'	Total/NA	Solid	8021B	23471
MB 885-23471/1-A	Method Blank	Total/NA	Solid	8021B	23471
LCS 885-23471/3-A	Lab Control Sample	Total/NA	Solid	8021B	23471
885-22305-22 MS	BH25-25 4'	Total/NA	Solid	8021B	23471
885-22305-22 MSD	BH25-25 4'	Total/NA	Solid	8021B	23471

GC Semi VOA

Prep Batch: 23494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-21	BH25-25 2'	Total/NA	Solid	SHAKE	
885-22305-22	BH25-25 4'	Total/NA	Solid	SHAKE	
885-22305-23	BH25-26 0'	Total/NA	Solid	SHAKE	
885-22305-24	BH25-26 2'	Total/NA	Solid	SHAKE	
885-22305-25	BH25-26 4'	Total/NA	Solid	SHAKE	
885-22305-26	BH25-22 6'	Total/NA	Solid	SHAKE	
885-22305-27	BH25-24 6'	Total/NA	Solid	SHAKE	
MB 885-23494/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-23494/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-22305-21 MS	BH25-25 2'	Total/NA	Solid	SHAKE	
885-22305-21 MSD	BH25-25 2'	Total/NA	Solid	SHAKE	

Prep Batch: 23499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-1	BH25-18 0'	Total/NA	Solid	SHAKE	
885-22305-2	BH25-18 2'	Total/NA	Solid	SHAKE	
885-22305-3	BH25-18 4'	Total/NA	Solid	SHAKE	
885-22305-4	BH25-19 0'	Total/NA	Solid	SHAKE	
885-22305-5	BH25-19 2'	Total/NA	Solid	SHAKE	
885-22305-6	BH25-19 4'	Total/NA	Solid	SHAKE	
885-22305-7	BH25-20 0'	Total/NA	Solid	SHAKE	
885-22305-8	BH25-20 2'	Total/NA	Solid	SHAKE	

QC Association Summary

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

GC Semi VOA (Continued)

Prep Batch: 23499 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-9	BH25-21 0'	Total/NA	Solid	SHAKE	
885-22305-10	BH25-21 2'	Total/NA	Solid	SHAKE	
885-22305-11	BH25-21 4'	Total/NA	Solid	SHAKE	
885-22305-12	BH25-22 0'	Total/NA	Solid	SHAKE	
885-22305-13	BH25-22 2'	Total/NA	Solid	SHAKE	
885-22305-14	BH25-23 0'	Total/NA	Solid	SHAKE	
885-22305-15	BH25-23 2'	Total/NA	Solid	SHAKE	
885-22305-16	BH25-23 4'	Total/NA	Solid	SHAKE	
885-22305-17	BH25-24 0'	Total/NA	Solid	SHAKE	
885-22305-19	BH25-24 4'	Total/NA	Solid	SHAKE	
885-22305-20	BH25-25 0'	Total/NA	Solid	SHAKE	
MB 885-23499/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-23499/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-22305-1 MS	BH25-18 0'	Total/NA	Solid	SHAKE	
885-22305-1 MSD	BH25-18 0'	Total/NA	Solid	SHAKE	

Analysis Batch: 23520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-1	BH25-18 0'	Total/NA	Solid	8015M/D	23499
885-22305-2	BH25-18 2'	Total/NA	Solid	8015M/D	23499
885-22305-3	BH25-18 4'	Total/NA	Solid	8015M/D	23499
885-22305-4	BH25-19 0'	Total/NA	Solid	8015M/D	23499
885-22305-5	BH25-19 2'	Total/NA	Solid	8015M/D	23499
885-22305-6	BH25-19 4'	Total/NA	Solid	8015M/D	23499
885-22305-7	BH25-20 0'	Total/NA	Solid	8015M/D	23499
885-22305-8	BH25-20 2'	Total/NA	Solid	8015M/D	23499
885-22305-9	BH25-21 0'	Total/NA	Solid	8015M/D	23499
885-22305-10	BH25-21 2'	Total/NA	Solid	8015M/D	23499
885-22305-11	BH25-21 4'	Total/NA	Solid	8015M/D	23499
885-22305-12	BH25-22 0'	Total/NA	Solid	8015M/D	23499
885-22305-13	BH25-22 2'	Total/NA	Solid	8015M/D	23499
885-22305-14	BH25-23 0'	Total/NA	Solid	8015M/D	23499
885-22305-15	BH25-23 2'	Total/NA	Solid	8015M/D	23499
885-22305-16	BH25-23 4'	Total/NA	Solid	8015M/D	23499
885-22305-17	BH25-24 0'	Total/NA	Solid	8015M/D	23499
885-22305-19	BH25-24 4'	Total/NA	Solid	8015M/D	23499
885-22305-20	BH25-25 0'	Total/NA	Solid	8015M/D	23499
885-22305-21	BH25-25 2'	Total/NA	Solid	8015M/D	23494
885-22305-22	BH25-25 4'	Total/NA	Solid	8015M/D	23494
885-22305-23	BH25-26 0'	Total/NA	Solid	8015M/D	23494
885-22305-24	BH25-26 2'	Total/NA	Solid	8015M/D	23494
885-22305-25	BH25-26 4'	Total/NA	Solid	8015M/D	23494
885-22305-26	BH25-22 6'	Total/NA	Solid	8015M/D	23494
885-22305-27	BH25-24 6'	Total/NA	Solid	8015M/D	23494
MB 885-23494/1-A	Method Blank	Total/NA	Solid	8015M/D	23494
MB 885-23499/1-A	Method Blank	Total/NA	Solid	8015M/D	23499
LCS 885-23494/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	23494
LCS 885-23499/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	23499
885-22305-1 MS	BH25-18 0'	Total/NA	Solid	8015M/D	23499
885-22305-1 MSD	BH25-18 0'	Total/NA	Solid	8015M/D	23499
885-22305-21 MS	BH25-25 2'	Total/NA	Solid	8015M/D	23494

QC Association Summary

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

GC Semi VOA (Continued)

Analysis Batch: 23520 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-21 MSD	BH25-25 2'	Total/NA	Solid	8015M/D	23494

Analysis Batch: 23661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-18	BH25-24 2'	Total/NA	Solid	8015M/D	23668

Prep Batch: 23668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-18	BH25-24 2'	Total/NA	Solid	SHAKE	

HPLC/IC

Prep Batch: 23498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-1	BH25-18 0'	Total/NA	Solid	300_Prep	
885-22305-2	BH25-18 2'	Total/NA	Solid	300_Prep	
885-22305-3	BH25-18 4'	Total/NA	Solid	300_Prep	
885-22305-4	BH25-19 0'	Total/NA	Solid	300_Prep	
885-22305-5	BH25-19 2'	Total/NA	Solid	300_Prep	
885-22305-6	BH25-19 4'	Total/NA	Solid	300_Prep	
885-22305-7	BH25-20 0'	Total/NA	Solid	300_Prep	
885-22305-8	BH25-20 2'	Total/NA	Solid	300_Prep	
885-22305-9	BH25-21 0'	Total/NA	Solid	300_Prep	
885-22305-10	BH25-21 2'	Total/NA	Solid	300_Prep	
885-22305-11	BH25-21 4'	Total/NA	Solid	300_Prep	
885-22305-12	BH25-22 0'	Total/NA	Solid	300_Prep	
885-22305-13	BH25-22 2'	Total/NA	Solid	300_Prep	
885-22305-14	BH25-23 0'	Total/NA	Solid	300_Prep	
885-22305-15	BH25-23 2'	Total/NA	Solid	300_Prep	
885-22305-16	BH25-23 4'	Total/NA	Solid	300_Prep	
885-22305-17	BH25-24 0'	Total/NA	Solid	300_Prep	
885-22305-18	BH25-24 2'	Total/NA	Solid	300_Prep	
885-22305-19	BH25-24 4'	Total/NA	Solid	300_Prep	
885-22305-20	BH25-25 0'	Total/NA	Solid	300_Prep	
MB 885-23498/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-23498/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-22305-1 MS	BH25-18 0'	Total/NA	Solid	300_Prep	
885-22305-1 MSD	BH25-18 0'	Total/NA	Solid	300_Prep	
885-22305-2 MS	BH25-18 2'	Total/NA	Solid	300_Prep	
885-22305-2 MSD	BH25-18 2'	Total/NA	Solid	300_Prep	

Prep Batch: 23502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-21	BH25-25 2'	Total/NA	Solid	300_Prep	
885-22305-22	BH25-25 4'	Total/NA	Solid	300_Prep	
885-22305-23	BH25-26 0'	Total/NA	Solid	300_Prep	
885-22305-24	BH25-26 2'	Total/NA	Solid	300_Prep	
885-22305-25	BH25-26 4'	Total/NA	Solid	300_Prep	
885-22305-26	BH25-22 6'	Total/NA	Solid	300_Prep	
885-22305-27	BH25-24 6'	Total/NA	Solid	300_Prep	
MB 885-23502/1-A	Method Blank	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Vertex
Project/Site: Kachina 8 Federal Com #002

Job ID: 885-22305-1

HPLC/IC (Continued)

Prep Batch: 23502 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 885-23502/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-22305-21 MS	BH25-25 2'	Total/NA	Solid	300_Prep	
885-22305-21 MSD	BH25-25 2'	Total/NA	Solid	300_Prep	

Analysis Batch: 23534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22305-1	BH25-18 0'	Total/NA	Solid	300.0	23498
885-22305-2	BH25-18 2'	Total/NA	Solid	300.0	23498
885-22305-3	BH25-18 4'	Total/NA	Solid	300.0	23498
885-22305-4	BH25-19 0'	Total/NA	Solid	300.0	23498
885-22305-5	BH25-19 2'	Total/NA	Solid	300.0	23498
885-22305-6	BH25-19 4'	Total/NA	Solid	300.0	23498
885-22305-7	BH25-20 0'	Total/NA	Solid	300.0	23498
885-22305-8	BH25-20 2'	Total/NA	Solid	300.0	23498
885-22305-9	BH25-21 0'	Total/NA	Solid	300.0	23498
885-22305-10	BH25-21 2'	Total/NA	Solid	300.0	23498
885-22305-11	BH25-21 4'	Total/NA	Solid	300.0	23498
885-22305-12	BH25-22 0'	Total/NA	Solid	300.0	23498
885-22305-13	BH25-22 2'	Total/NA	Solid	300.0	23498
885-22305-14	BH25-23 0'	Total/NA	Solid	300.0	23498
885-22305-15	BH25-23 2'	Total/NA	Solid	300.0	23498
885-22305-16	BH25-23 4'	Total/NA	Solid	300.0	23498
885-22305-17	BH25-24 0'	Total/NA	Solid	300.0	23498
885-22305-18	BH25-24 2'	Total/NA	Solid	300.0	23498
885-22305-19	BH25-24 4'	Total/NA	Solid	300.0	23498
885-22305-20	BH25-25 0'	Total/NA	Solid	300.0	23498
885-22305-21	BH25-25 2'	Total/NA	Solid	300.0	23502
885-22305-22	BH25-25 4'	Total/NA	Solid	300.0	23502
885-22305-23	BH25-26 0'	Total/NA	Solid	300.0	23502
885-22305-24	BH25-26 2'	Total/NA	Solid	300.0	23502
885-22305-25	BH25-26 4'	Total/NA	Solid	300.0	23502
885-22305-26	BH25-22 6'	Total/NA	Solid	300.0	23502
885-22305-27	BH25-24 6'	Total/NA	Solid	300.0	23502
MB 885-23498/1-A	Method Blank	Total/NA	Solid	300.0	23498
MB 885-23502/1-A	Method Blank	Total/NA	Solid	300.0	23502
LCS 885-23498/2-A	Lab Control Sample	Total/NA	Solid	300.0	23498
LCS 885-23502/2-A	Lab Control Sample	Total/NA	Solid	300.0	23502
885-22305-1 MS	BH25-18 0'	Total/NA	Solid	300.0	23498
885-22305-1 MSD	BH25-18 0'	Total/NA	Solid	300.0	23498
885-22305-2 MS	BH25-18 2'	Total/NA	Solid	300.0	23498
885-22305-2 MSD	BH25-18 2'	Total/NA	Solid	300.0	23498
885-22305-21 MS	BH25-25 2'	Total/NA	Solid	300.0	23502
885-22305-21 MSD	BH25-25 2'	Total/NA	Solid	300.0	23502

Lab Chronicle

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-18 0'
Lab Sample ID: 885-22305-1
Date Collected: 03/26/25 11:00
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 12:25
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 12:25
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 02:01
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 10:49

Client Sample ID: BH25-18 2'
Lab Sample ID: 885-22305-2
Date Collected: 03/26/25 11:10
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 13:30
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 13:30
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 02:35
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 11:30

Client Sample ID: BH25-18 4'
Lab Sample ID: 885-22305-3
Date Collected: 03/26/25 11:20
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 14:35
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 14:35
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 02:47
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 12:11

Client Sample ID: BH25-19 0'
Lab Sample ID: 885-22305-4
Date Collected: 03/26/25 11:30
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 14:57

Lab Chronicle

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-19 0'
Lab Sample ID: 885-22305-4
Date Collected: 03/26/25 11:30
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 14:57
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 02:59
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 12:24

Client Sample ID: BH25-19 2'
Lab Sample ID: 885-22305-5
Date Collected: 03/26/25 11:40
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 15:18
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 15:18
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 03:11
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 13:05

Client Sample ID: BH25-19 4'
Lab Sample ID: 885-22305-6
Date Collected: 03/26/25 11:50
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 15:40
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 15:40
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 03:22
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 13:18

Client Sample ID: BH25-20 0'
Lab Sample ID: 885-22305-7
Date Collected: 03/26/25 12:00
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 16:02
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 16:02

Lab Chronicle

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-20 0'
Lab Sample ID: 885-22305-7
Date Collected: 03/26/25 12:00
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 03:34
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 13:32

Client Sample ID: BH25-20 2'
Lab Sample ID: 885-22305-8
Date Collected: 03/26/25 12:10
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 16:23
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 16:23
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 03:46
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 13:46

Client Sample ID: BH25-21 0'
Lab Sample ID: 885-22305-9
Date Collected: 03/26/25 12:20
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 16:45
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 16:45
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 04:09
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 13:59

Client Sample ID: BH25-21 2'
Lab Sample ID: 885-22305-10
Date Collected: 03/26/25 12:30
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 17:07
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 17:07
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 04:20

Lab Chronicle

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-21 2'
Lab Sample ID: 885-22305-10
Date Collected: 03/26/25 12:30
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 14:13

Client Sample ID: BH25-21 4'
Lab Sample ID: 885-22305-11
Date Collected: 03/26/25 12:40
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 17:50
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 17:50
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 04:32
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 14:27

Client Sample ID: BH25-22 0'
Lab Sample ID: 885-22305-12
Date Collected: 03/26/25 12:50
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 18:12
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 18:12
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 04:44
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 14:40

Client Sample ID: BH25-22 2'
Lab Sample ID: 885-22305-13
Date Collected: 03/26/25 13:00
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 18:33
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 18:33
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 04:55
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 14:54

Lab Chronicle

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-23 0'
Lab Sample ID: 885-22305-14
Date Collected: 03/27/25 09:30
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 18:55
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 18:55
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 05:07
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 15:08

Client Sample ID: BH25-23 2'
Lab Sample ID: 885-22305-15
Date Collected: 03/27/25 09:40
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 19:17
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 19:17
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 05:19
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 15:49

Client Sample ID: BH25-23 4'
Lab Sample ID: 885-22305-16
Date Collected: 03/27/25 09:50
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 19:38
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 19:38
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 05:30
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 16:02

Client Sample ID: BH25-24 0'
Lab Sample ID: 885-22305-17
Date Collected: 03/27/25 10:00
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 20:00

Lab Chronicle

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-24 0'
Lab Sample ID: 885-22305-17
Date Collected: 03/27/25 10:00
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 20:00
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 05:42
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 16:16

Client Sample ID: BH25-24 2'
Lab Sample ID: 885-22305-18
Date Collected: 03/27/25 10:10
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 20:22
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 20:22
Total/NA	Prep	SHAKE			23668	MI	EET ALB	04/04/25 11:45
Total/NA	Analysis	8015M/D		1	23661	MI	EET ALB	04/04/25 13:10
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 16:29

Client Sample ID: BH25-24 4'
Lab Sample ID: 885-22305-19
Date Collected: 03/27/25 10:20
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 20:44
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 20:44
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 06:05
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 16:43

Client Sample ID: BH25-25 0'
Lab Sample ID: 885-22305-20
Date Collected: 03/27/25 10:30
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8015M/D		1	23608	AT	EET ALB	04/03/25 21:05
Total/NA	Prep	5030C			23401	JP	EET ALB	03/31/25 13:10
Total/NA	Analysis	8021B		1	23609	AT	EET ALB	04/03/25 21:05

Lab Chronicle

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-25 0'
Lab Sample ID: 885-22305-20
Date Collected: 03/27/25 10:30
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			23499	MI	EET ALB	04/01/25 14:18
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 06:17
Total/NA	Prep	300_Prep			23498	DL	EET ALB	04/01/25 14:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 16:57

Client Sample ID: BH25-25 2'
Lab Sample ID: 885-22305-21
Date Collected: 03/27/25 10:40
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8015M/D		1	23640	JP	EET ALB	04/03/25 16:58
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8021B		1	23641	JP	EET ALB	04/03/25 16:58
Total/NA	Prep	SHAKE			23494	MI	EET ALB	04/01/25 13:47
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 07:03
Total/NA	Prep	300_Prep			23502	DL	EET ALB	04/01/25 15:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 18:32

Client Sample ID: BH25-25 4'
Lab Sample ID: 885-22305-22
Date Collected: 03/27/25 10:50
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8015M/D		1	23640	JP	EET ALB	04/03/25 18:10
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8021B		1	23641	JP	EET ALB	04/03/25 18:10
Total/NA	Prep	SHAKE			23494	MI	EET ALB	04/01/25 13:47
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 07:38
Total/NA	Prep	300_Prep			23502	DL	EET ALB	04/01/25 15:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 17:38

Client Sample ID: BH25-26 0'
Lab Sample ID: 885-22305-23
Date Collected: 03/27/25 13:00
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8015M/D		1	23640	JP	EET ALB	04/03/25 19:21
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8021B		1	23641	JP	EET ALB	04/03/25 19:21
Total/NA	Prep	SHAKE			23494	MI	EET ALB	04/01/25 13:47
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 07:50

Lab Chronicle

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-26 0'
Lab Sample ID: 885-22305-23
Date Collected: 03/27/25 13:00
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			23502	DL	EET ALB	04/01/25 15:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 17:51

Client Sample ID: BH25-26 2'
Lab Sample ID: 885-22305-24
Date Collected: 03/27/25 13:10
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8015M/D		1	23640	JP	EET ALB	04/03/25 19:44
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8021B		1	23641	JP	EET ALB	04/03/25 19:44
Total/NA	Prep	SHAKE			23494	MI	EET ALB	04/01/25 13:47
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 08:02
Total/NA	Prep	300_Prep			23502	DL	EET ALB	04/01/25 15:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 19:13

Client Sample ID: BH25-26 4'
Lab Sample ID: 885-22305-25
Date Collected: 03/27/25 13:20
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8015M/D		1	23640	JP	EET ALB	04/03/25 20:08
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8021B		1	23641	JP	EET ALB	04/03/25 20:08
Total/NA	Prep	SHAKE			23494	MI	EET ALB	04/01/25 13:47
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 08:13
Total/NA	Prep	300_Prep			23502	DL	EET ALB	04/01/25 15:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 19:27

Client Sample ID: BH25-22 6'
Lab Sample ID: 885-22305-26
Date Collected: 03/27/25 13:30
Matrix: Solid
Date Received: 03/29/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8015M/D		1	23640	JP	EET ALB	04/03/25 20:32
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8021B		1	23641	JP	EET ALB	04/03/25 20:32
Total/NA	Prep	SHAKE			23494	MI	EET ALB	04/01/25 13:47
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 08:25
Total/NA	Prep	300_Prep			23502	DL	EET ALB	04/01/25 15:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 19:41

Lab Chronicle

Client: Vertex
Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Client Sample ID: BH25-24 6'
Date Collected: 03/27/25 13:40
Date Received: 03/29/25 09:15

Lab Sample ID: 885-22305-27
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8015M/D		1	23640	JP	EET ALB	04/03/25 20:55
Total/NA	Prep	5030C			23471	AT	EET ALB	04/01/25 10:41
Total/NA	Analysis	8021B		1	23641	JP	EET ALB	04/03/25 20:55
Total/NA	Prep	SHAKE			23494	MI	EET ALB	04/01/25 13:47
Total/NA	Analysis	8015M/D		1	23520	MI	EET ALB	04/03/25 08:36
Total/NA	Prep	300_Prep			23502	DL	EET ALB	04/01/25 15:07
Total/NA	Analysis	300.0		20	23534	RC	EET ALB	04/02/25 19:54

Laboratory References:

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

Accreditation/Certification Summary

Client: Vertex Job ID: 885-22305-1
Project/Site: Kachina 8 Federal Com #002

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-27-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-26

Chain-of-Custody Record

Client: Vertex

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: Kachina 8 Federal com #002

Project #: 23E-05198

Project Manager: Sally Carthar

Sampler: AH

On Ice: ☑ Yes ☐ No Checking

# of Coolers: 1

Cooler Temp (including CF): 5.6+0.2=5.8 (°C)

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

885-22305 COC

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
3-26-25	1100	Soil	BH25-18 0'	4oz	ICE											
	11:10		BH25-18 2'													
	1120		BH25-18 4'													
	1130		BH25-19 0'													
	1140		BH25-19 2'													
	1150		BH25-19 4'													
	1200		BH25-20 0'													
	1210		BH25-20 2'													
	1220		BH25-21 0'													
	1230		BH25-21 2'													
	1240		BH25-21 4'													
	1250		BH25-22 0'													

Date	Time	Relinquished by	Received by	Via	Date	Time
3-27-25	1700				3/28/25	915
3/28/25	1910			courier	3/29/25	8:46

Remarks: Direct Bill to Devon

Work Order # 1007025701

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

Chain-of-Custody Record

Client: Vertex

Mailing Address: on FILE

Phone #:

email or Fax#:

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

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

Turn-Around Time:
☐ Standard ☑ Rush 5 Day

Project Name: Kachina 8 Federal Com #002

Project #: 23E-05198

Project Manager: Sally Carthar

Sampler: AH

On Ice: ☒ Yes ☐ No checking

# of Coolers: 1

Cooler Temp(including CF): 5.6 +0.2=5.8 (°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.
3-26-25	1300	Soil	BH25-22	2'	4oz	ICE	
3-27-25	0930		BH25-23	0'			
	0940		BH25-23	2'			
	0950		BH25-23	4'			
	1000		BH25-24	0'			
	1010		BH25-24	2'			
	1020		BH25-24	4'			
	1030		BH25-25	0'			
	1040		BH25-25	2'			
	1050		BH25-25	4'			
	1300		BH25-26	0'			
	1310		BH25-26	2'			

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
3-27-25	1700	AH				
3/28/25	1900			courier	3/29/25	8:40

Remarks: Direct Bill to Devon

Work Order # 1007025701

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

Chain-of-Custody Record

Client: Vertex

Mailing Address: ON FILE

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush 5 Day

Project Name: Kachina 8 Federal com #002

Project #: 23E-05198

Project Manager: Sally Carthar

Sampler: AH

On Ice: ☑ Yes ☐ No check

# of Coolers: 1

Cooler Temp(including CF): 5.6 +0.2=5.8 (°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.
3-27-25	1320	Soil	BH25-26 4'	4oz	ICE	
	1330		BH25-22 6'			
	1340		BH25-24 6'			

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
3-27-25	1700				3/28/25	915
3/28/25	1900			courier	3/29/25	8:40

Remarks: Direct Bill Devon

Work Order # 1007025701

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

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-22305-1

Login Number: 22305 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

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

ATTACHMENT 5

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	11/14/2023
Site Location Name:	Kachina 8 Federal Com #002	Report Run Date:	12/5/2023 12:50 AM
Client Contact Name:	Jim Raley	API #:	
Client Contact Phone #:	575-748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	11/14/2023 10:05 AM
Departed Site	11/14/2023 2:49 PM

Field Notes

10:31 Completed safety meeting and filled out tailgate form and FLHA

11:10 Collecting BH samples 1-6

11:43 Setting stakes for new one call boundaries

13:23 Screened all samples for chloride

14:12 Took photos of boreholes and entire delineation area

14:32 Tested all samples for TPH

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: South	**Viewing Direction**: West
	
Steer clear of riser	Stake #1
Viewing Direction: Northwest	**Viewing Direction**: Northeast
	
Stake #2	Stake #3

Daily Site Visit Report

Viewing Direction: Northeast	**Viewing Direction**: West
	
Stake #4	BH23-01
Viewing Direction: West	**Viewing Direction**: Southwest
	
BH23-02	BH23-03

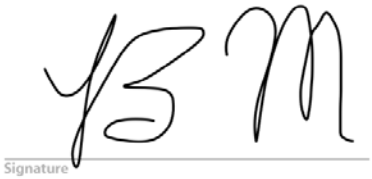
Daily Site Visit Report

Viewing Direction: Southwest	**Viewing Direction**: West
	
BH23-04	BH23-05
Viewing Direction: Northwest	**Viewing Direction**: East
	
BH23-06	Delineation area

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Bryce Mortimer

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	11/15/2023
Site Location Name:	Kachina 8 Federal Com #002	Report Run Date:	12/5/2023 12:54 AM
Client Contact Name:	Jim Raley	API #:	
Client Contact Phone #:	575-748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	11/15/2023 8:16 AM
Departed Site	11/15/2023 1:30 PM

Field Notes

8:44 Completed safety meeting and filled out tailgate and FLHA

9:56 Collecting borehole samples 7-13

10:55 Samples 7-13 screened for chloride (9 was dirty)

11:37 Collected samples 14-15

12:24 Screened samples 14-15 for chloride

13:08 All samples tested for TPH

13:23 All samples jarred

13:23 Filled open boreholes back in

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: Southwest

BH23-07

Viewing Direction: West

BH23-08

Viewing Direction: Southwest

BH23-09

Viewing Direction: West

BH23-10

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: Southwest
	
BH23-11	BH23-12
Viewing Direction: East	**Viewing Direction**: West
	
BH23-13	BH23-14 (0’ had TPH level of 231ppm but vegetation has recovered. Naturally occurring organic material may be culprit to high concentration.)

Daily Site Visit Report

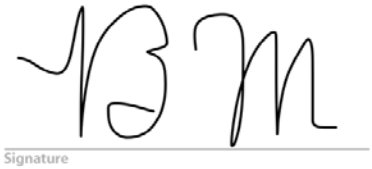
Viewing Direction: West

BH23-15

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Bryce Mortimer

Signature: 
Signature

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	1/12/2024
Site Location Name:	Kachina 8 Federal Com #002	Report Run Date:	1/29/2024 3:52 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	1/12/2024 10:00 AM
Departed Site	1/12/2024 2:30 PM

Field Notes

14:04 Completed safety paperwork and initial line locate upon arrival to site

14:04 On site to complete delineation

14:05 Obtained:
BH23-05 @ 5, 6, and 7’ bgs.
BH23-09 @ 4’ bgs.
BH23-17 @ 0 and 2’ bgs.

14:06 BH23-05 barely passing closure criteria at 7’ depth.

Next Steps & Recommendations

1 Send samples to lab

Daily Site Visit Report

Site Photos

Viewing Direction: East

BH23-05 in middle of area

Viewing Direction: North

BH23-09 off south side of site

Viewing Direction: East

BH24-17 on west side of side

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Austin Harris

Signature: 
Signature

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	3/27/2025
Site Location Name:	Kachina 8 Federal Com #002	Report Run Date:	3/27/2025 9:43 PM
Client Contact Name:	Jim Raley	API #:	
Client Contact Phone #:	575-748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/27/2025 9:00 AM
Departed Site	3/27/2025 1:46 PM

Field Notes

9:25 Completed safety paperwork on site

9:26 Conducted magnetic line locate on pre plotted sample locations

9:26 On site to continue characterization sampling

13:45 Obtained:
BH25-22 @ 6’ depth
BH25-23 @ 0, 2, 4’ depth
BH25-24 @ 0, 2, 4, 6’ depth
BH25-25 @ 0, 2, 4’ depth
BH25-26 step out east from 24 @ 0, 2, 4’ depths

Next Steps & Recommendations

1 Send samples to lab to determine if remediation necessary

Daily Site Visit Report

Site Photos

Viewing Direction: South

Sampling area in northwest corner of site

Viewing Direction: South

BH25-23 on North end

Viewing Direction: West

BH25-24 east of 18

Viewing Direction: West

BH25-25 South of 24 and East of 19

Daily Site Visit Report

Viewing Direction: Northwest

Attempted 6’ depth samples at BH25-20, hit refusal at 4’. Moved over 1’ and hit refusal at 3.5’.

Viewing Direction: North

Obtained 6’ depth sample at BH25-22

Viewing Direction: West

BH25-26 step out east from 24

Daily Site Visit Report

Daily Site Visit Signature

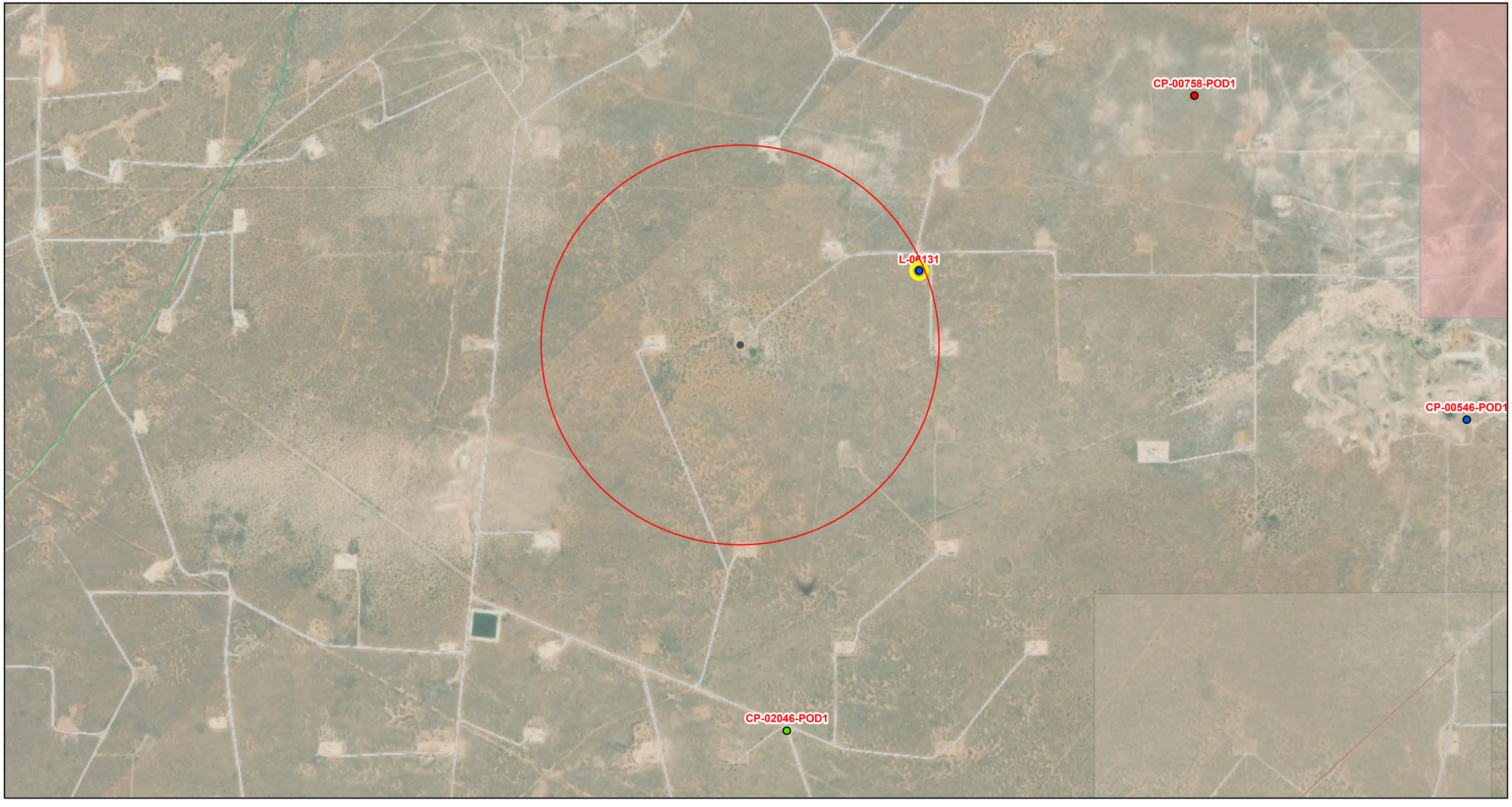
Inspector: Austin Harris

Signature: 
Signature

ATTACHMENT 6

Closure Criteria Determination				
Site Name: Kachina 8 Federal Com #002				
Spill Coordinates: 32.763811,-103.691958		X: 622521	Y: 3625860	
Site Specific Conditions		Value	Unit	Reference
1	Depth to Groundwater (nearest reference)	100	feet	1
	Distance between release and nearest DTGW reference	2,566	feet	
		0.49	miles	
	Date of nearest DTGW reference measurement	April 29, 1967		
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	7,049	feet	2
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	148	feet	3
4	Within 300 feet from an occupied residence, school, hospital, institution or church	31,922	feet	4
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	2,566	feet	5
	ii) Within 1000 feet of any fresh water well or spring	2,566	feet	5
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)	6
7	Within 300 feet of a wetland	112	feet	7
8	Within the area overlying a subsurface mine	No	(Y/N)	8
	Distance between release and nearest registered mine	77,600	feet	
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low	9
	Distance between release and nearest unstable area	73,084	feet	
10	Within a 100-year Floodplain	Undetermined	year	10
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	48,241	feet	
11	Soil Type	Fine sand, fine sandy loam		11
12	Ecological Classification	Loamy Sand		12
13	Geology	Eolian and piedmont deposits		13
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'	

OSE POD 0.5 miles



3/10/2025, 4:58:18 PM

1:18,056

GIS WATERS PODs
- Active
- Pending
- Plugged

OSE District Boundary

Water Right Regulations
- Critical Management Area - Guidelines
- Closure Area

New Mexico State Trust Lands
- Subsurface Estate

NHD Flowlines
- Pipeline
- Stream River

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

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

Online web user

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

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replaced, O=orphaned, C=the file is closed)			(quarters are smallest to largest)						(NAD83 UTM in meters)				(In feet)	(In feet)	(In feet)
POD Number	**Code**	**Sub basin**	**County**	**Q64**	**Q16**	**Q4**	**Sec**	**Tws**	**Range**	**X**	**Y**	**Map**	**Distance**	**Well Depth**	**Depth Water**	**Water Column**
L 06131		L	LE	SW	NW	NE	08	18S	33E	623241.0	3626167.0 *		782	194	100	94
CP 00758 POD1		CP	LE			SW	04	18S	33E	624345.0	3626886.0 *		2092	250		
L 13909 POD1		L	LE	SE	NW	SE	31	17S	33E	621734.8	3628514.5		2768	240	100	140
CP 00546 POD1		CP	LE	NE	NE	SE	09	18S	33E	625464.0	3625597.0 *		2954	90	70	20
L 04649		L	LE	NW	NW	SW	03	18S	33E	625644.0	3627213.0 *		3403	100	45	55
CP 00072 POD4		CP	LE	NW	SE	NE	10	18S	33E	625948.0	3626028.0		3431	70		
L 03454		L	LE		NE	NE	30	18S	33E	622200.0	3621422.0 *		4449	100	35	65
CP 01417 POD1		CP	LE				11	18S	33E	627036.4	3625738.0		4517	120	54	66
L 14159 POD1		L	LE	SW	NW	SW	28	17S	33E	624029.6	3630169.3		4565	298	165	133
CP 00072 POD3		CP	LE	NE	SE	SE	10	18S	33E	627076.0	3625223.0 *		4599	70		
CP 00701		CP	LE		NW	SW	11	18S	33E	627373.0	3625534.0 *		4862	100		
CP 00701 POD2		CP	LE	SE	NW	SW	11	18S	33E	627472.0	3625433.0 *		4969	100		

Average Depth to Water: **81 fee**

Minimum Depth: **35 feet**

Maximum Depth: **165 feet**

Record Count: 12

UTM Filters (in meters):
Easting: 622521
Northing: 3625860
Radius: 005000

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

Point of Diversion Summary

quarters are 1=NW 2=NE 3=SW 4=SE
quarters are smallest to largest

NAD83 UTM in meters

Well Tag	POD Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 06131	SW	NW	NE	08	18S	33E	623241.0	3626167.0 *	

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

Driller License:	99	**Driller Company:**	O.R. MUSSELWHITE WATER WELL SE		
Driller Name:					
Drill Start Date:	1967-04-27	**Drill Finish Date:**	1967-04-29	**Plug Date:**	
Log File Date:	1967-05-02	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	194	**Depth Water:**	100

Water Bearing Stratifications:

Top	Bottom	Description
130	135	Sandstone/Gravel/Conglomerate
185	193	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
150	194

Water Right Summary

get image list

WR File Number:	L 06131	**Subbasin:**	L	**Cross Reference:**	
Primary Purpose:	STK 72-12-1 LIVESTOCK WATERING				
Primary Status:	PMT Permit				
Total Acres:		**Subfile:**		**Header:**	
Total Diversion:	3.000	**Cause/Case:**			
Owner:	SCHARBAUER CATTLE COMPANY	**Owner Class:**	Owner		
Contact:	BOB JAMES				

Documents on File

(acre-feet per annum)

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion	Consumptive
get images	507170	72121	1967-04-28	PMT	LOG	L 06131	T		3.000	

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
L 06131		Shallow	SW	NW	NE	08	18S	33E	623241.0	3626167.0 *		

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

SANTA FE

Form WR-23

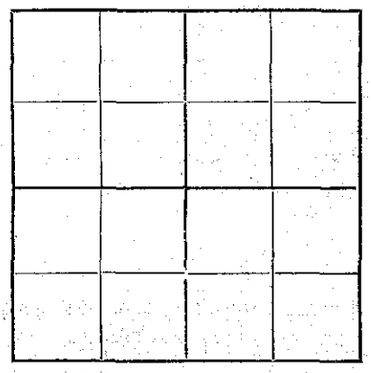
STATE ENGINEER OFFICE

56170

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1



(Plat of 640 acres)

(A) Owner of well Scharbauer Cattle Company

Street and Number Box 1471

City Midland, State Texas

Well was drilled under Permit No. L-6131 and is located in the

SW ¼ NW ¼ NE ¼ of Section 8 Twp. 18S Rge. 33E

(B) Drilling Contractor C. R. Musslewhite License No. WD99

Street and Number Box 56

City Hobbs, State New Mexico

Drilling was commenced April 27, 19 68

Drilling was completed April 29, 19 68

Elevation at top of casing in feet above sea level _____ Total depth of well 194

State whether well is shallow or artesian Shallow Depth to water upon completion 100

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1	130	135	5	Sand & gravel
2	185	193	8	Gravel
3				
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
7	24	10	0	194	194	none	150	194

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used

Section 5 PLUGGING RECORD

Name of Plugging Contractor _____ License No. _____

Street and Number _____ City _____ State _____

Tons of Clay used _____ Tons of Roughage used _____ Type of roughage _____

Plugging method used _____ Date Plugged _____ 19 ____

Plugging approved by:

_____ Basin Supervisor

Cement Plugs were placed as follows:

No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

FOR USE OF STATE ENGINEER ONLY

Date Received 1967 MAY -2 AM 8:28

File No. L-6131 Use Stock Location No. 18.33.8.213

L-6131

Section 6

LOG OF WELL

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color	Type of Material Encountered
0	3	3	White	Caliche rock
3	33	30	White	Caliche & rock
33	85	52	Grey	Sandy shale
85	130	45	"	Sand, consolidated
130	135	5	"	Sand & gravel
135	185	50	"	Sand, consolidated
185	193	8	Red	Gravel
193	194	1	"	Shale, red bed

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

O. R. Musselwhite

Well Driller

U.S. Fish and Wildlife Service

National Wetlands Inventory

Kachina 8 Federal Com #002
Watercourse 7,049ft

September 13, 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.

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

U.S. Fish and Wildlife Service
National Wetlands Inventory

Kachina 8 Federal Com #002
Lakebed 148 ft

December 13, 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.

Kachina 8 Federal Com #002

31,922 feet to nearest residence

Active & Inactive Points of Diversion

(with Ownership Information)

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

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q64	q16	q4	Sec	Tws	Range	X	Y	Map	Distance
L 06131	L	STK	3.000	SCHARBAUER CATTLE COMPANY	LE	L 06131				Shallow	SW	NW	NE	08	18S	33E	623241.0	3626167.0 *		782.7
CP 02046	CP	MON	0.000	PHILLIPS 66	LE	CP 02046 POD1	NA				NE	SW	NW	17	18S	33E	622729.7	3624309.1		1,564.9
CP 00758	CP	EXP	0.000	OXY USA INC.	LE	CP 00758 POD1				Shallow			SW	04	18S	33E	624345.0	3626886.0 *		2,092.8
L 13909	L	DOM	1.000	BARRY ALLEN SR	LE	L 13909 POD1				Shallow	SE	NW	SE	31	17S	33E	621734.8	3628514.5		2,768.5
RA 12300	RA	DOM	1.000	BARRY ALLEN SR	LE	RA 12300 POD1					SE	NW	SE	31	17S	33E	621734.8	3628514.5		2,768.5
CP 00546	CP	COM	0.000	B.J. WOOLEY	LE	CP 00546 POD1				Shallow	NE	NE	SE	09	18S	33E	625464.0	3625597.0 *		2,954.7
L 04649	L	DOM	3.000	WILLARD T. MCBROOM	LE	L 04649				Shallow	NW	NW	SW	03	18S	33E	625644.0	3627213.0 *		3,403.5
CP 00072	CP	COM	18.660	JILL CAVINESS	LE	CP 00072 POD4					NW	SE	NE	10	18S	33E	625948.0	3626028.0		3,431.1
CP 00072 A	CP	COM	18.660	KRM, INC.	LE	CP 00072 POD4					NW	SE	NE	10	18S	33E	625948.0	3626028.0		3,431.1
CP 00072 B	CP	COM	18.660	MARY UNDERWOOD	LE	CP 00072 POD4					NW	SE	NE	10	18S	33E	625948.0	3626028.0		3,431.1
CP 01566	CP	COM	67.400	JILL CAVINESS	LE	CP 00072 POD4					NW	SE	NE	10	18S	33E	625948.0	3626028.0		3,431.1
RA 09195	RA	STK	3.000	ANGELL #2 FAMILY LIMITED PART	LE	RA 09195					NE	NE	NW	32	17S	33E	623000.0	3629585.0 *		3,755.7
L 13034	L	SRO	23.000	JOHN W. BOONE	LE	L 13034 POD1					SE	SE	NW	33	17S	33E	624613.0	3629008.0 *		3,779.7
L 13042	L	SRO	23.000	HOMER R. DENIUS	LE	L 13042 POD1					SW	NE	SE	33	17S	33E	625222.0	3628618.0 *		3,860.3
RA 09192	RA	STK	3.000	CAVINESS RANCH	LE	RA 09192					SE	SE	SW	29	17S	33E	622994.0	3629788.0 *		3,956.4
RA 09196	RA	STK	3.000	ANGELL #2 FAMILY LIMITED PART	LE	RA 09196					SE	SE	SW	29	17S	33E	622994.0	3629788.0 *		3,956.4
L 13035	L	SRO	23.000	JAMES P. DUNAGAN	LE	L 13035 POD1					SE	NE	SE	33	17S	33E	625422.0	3628618.0 *		4,002.8
L 13039	L	SRO	23.000	HOMER R. DENIUS	LE	L 13039 POD1					SW	NE	NW	33	17S	33E	624407.0	3629410.0 *		4,019.9
RA 09194	RA	STK	3.000	ANGELL #2 FAMILY LIMITED PART	LE	RA 09194					SE	SW	NE	33	17S	33E	625015.0	3629014.0 *		4,020.9
L 13056	L	COM	100.000	GEORGE H. WILLIAMS	LE	L 13056 POD1						SW	NE	33	17S	33E	624916.0	3629115.0 *		4,041.2
L 13031	L	SRO	50.000	HOMER R. DENIUS	LE	L 13031 POD1					NE	NE	SE	33	17S	33E	625422.0	3628818.0 *		4,143.1
L 13033	L	SRO	23.000	HOMER R. DENIUS	LE	L 13033 POD1					NE	NE	NW	33	17S	33E	624607.0	3629610.0 *		4,291.1
L 03454	L	DOM	3.000	W H ELLISON	LE	L 03454				Shallow		NE	NE	30	18S	33E	622200.0	3621422.0 *		4,449.6
CP 01417	CP	EXP	0.000	JILL CAVINESS	LE	CP 01417 POD1				Shallow				11	18S	33E	627036.4	3625738.0		4,517.0
CP 01566	CP	COM	67.400	JILL CAVINESS	LE	CP 01417 POD1				Shallow				11	18S	33E	627036.4	3625738.0		4,517.0
L 14159	L	STK	3.000	LIMESTONE LIVESTOCK	LE	L 14159 POD1				Shallow	SW	NW	SW	28	17S	33E	624029.6	3630169.3		4,565.7
CP 00072	CP	COM	18.660	JILL CAVINESS	LE	CP 00072 POD3					NE	SE	SE	10	18S	33E	627076.0	3625223.0 *		4,599.3
CP 00072 A	CP	COM	18.660	KRM, INC.	LE	CP 00072 POD3					NE	SE	SE	10	18S	33E	627076.0	3625223.0 *		4,599.3
CP 00072 B	CP	COM	18.660	MARY UNDERWOOD	LE	CP 00072 POD3					NE	SE	SE	10	18S	33E	627076.0	3625223.0 *		4,599.3
RA 09193	RA	OIL	82.000	ANGELL #2 FAMILY LIMITED PART	LE	RA 09193					NE	NE	NE	33	17S	33E	625412.0	3629623.0 *		4,745.3
CP 00771	CP	EXP	0.000	KRM INC.	LE	CP 00771 POD1					SE	SE	NE	03	18S	33E	627045.0	3627437.0 *		4,791.0
RA 13517	RA	EXP	0.000	CROSS TIMBERS ENERGY LLC	LE	RA 13517 POD1	NA				SW	SW	NW	29	17S	33E	622476.1	3630671.1		4,811.3
CP 00701	CP	PRO	0.000	HEYCO'S HARVEY YATES	LE	CP 00701				Shallow		NW	SW	11	18S	33E	627373.0	3625534.0 *		4,862.9

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

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q64	q16	q4	Sec	Tws	Range	X	Y	Map	Distance
CP 00807	CP	PLS	3.000	KENNETH SMITH	LE	CP 00807 POD1					NW	NW	NW	14	18S	33E	627283.0	3624828.0 *		4,872.5
CP 00701	CP	PRO	0.000	HEYCO'S HARVEY YATES	LE	CP 00701 POD2				Shallow	SE	NW	SW	11	18S	33E	627472.0	3625433.0 *		4,969.4
L 10167	L	COM	40.000	ANGELL #2 FAMILY LIMITED PARTN	LE	L 10167							SE	34	17S	33E	626736.0	3628536.0 *		4,992.7

Record Count: 36

Filters Applied:

UTM Filters (in meters):
Easting: 622521
Northing: 3625860
Radius: 005000

Sorted By: Distance

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

3/10/25 4:24 PM MST **Active & Inactive Points of Diversion**

U.S. Fish and Wildlife Service
National Wetlands Inventory

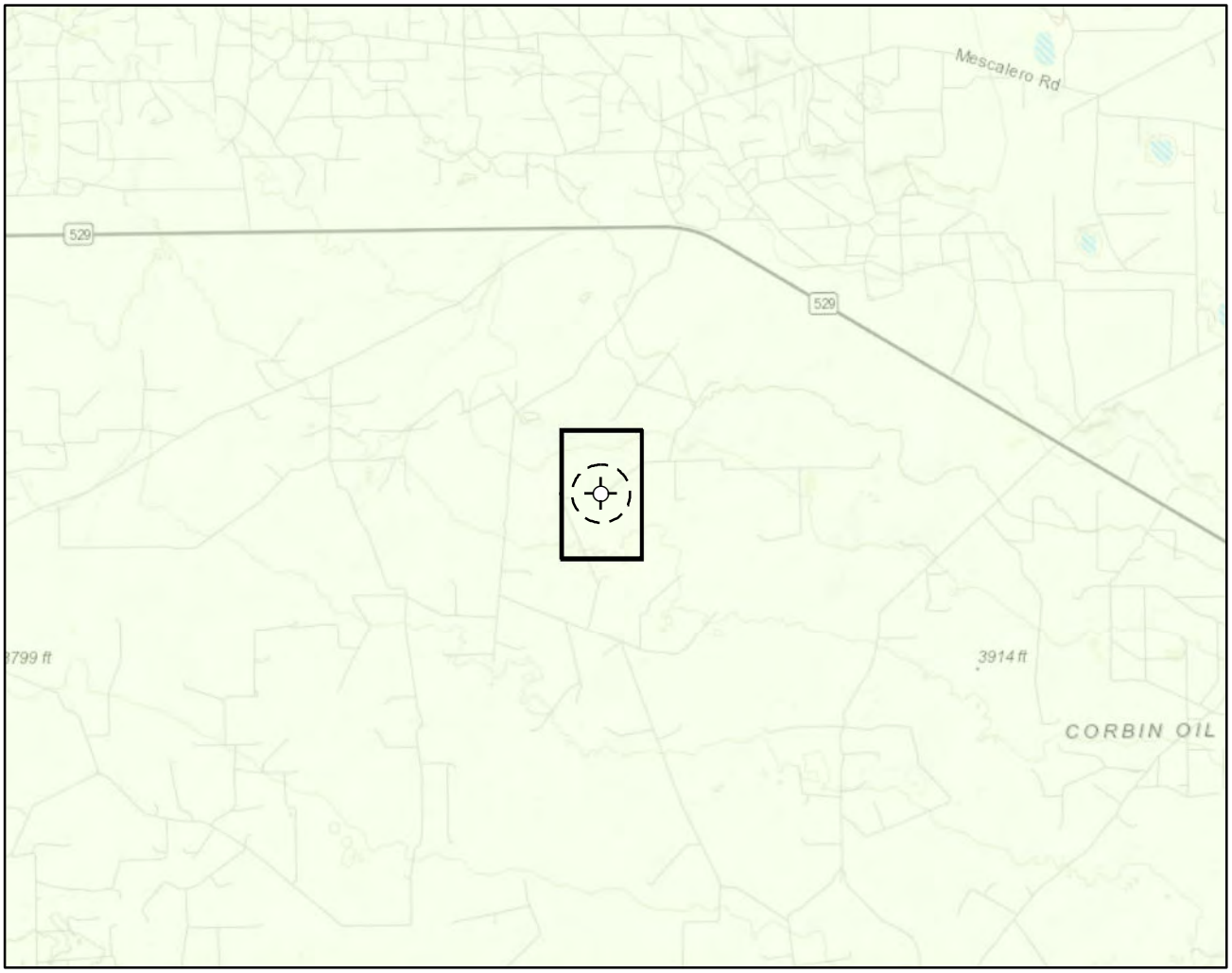
Kachina 8 Federal Com #002
Wetland 112 ft.

December 13, 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.



Karst Potential

- Critical
- High
- Medium
- Low

Site Location

Buffer Location (1,000 ft)

Overview Map

0 0.25 0.5 1 mi

Detail Map

0 150 300 600 ft

VERTEX

Map Center:
Lat/Long: 32.764771, -103.690362

NAD 1983 UTM Zone 13N
Date: Sep 21/23

N

Karst Potential Map
Devon - Kachina 8 Federal Com #002

FIGURE:
1

devon

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

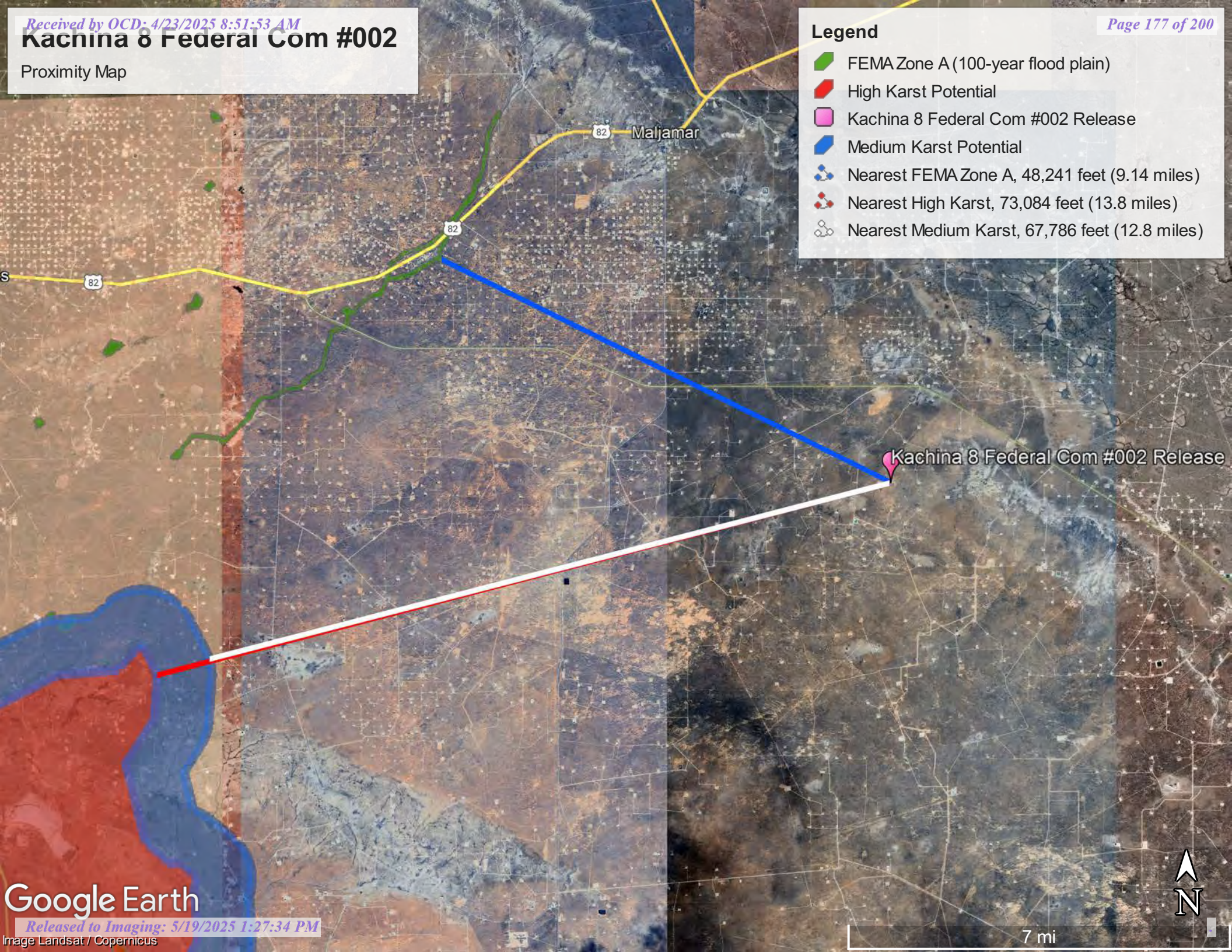
Note: Inset Map, Esri 2021; Overview Map: Esri World Topographic. Karst potential data sourced from Roswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management. (2018). Karst Potential.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\2023\23E-05198 - Devon-Kachina 8 Federal Com #002\ Figure 1 Karst Potential Map (23E-05198).mxd

Kachina 8 Federal Com #002

Proximity Map



National Flood Hazard Layer FIRMette

FEMA

103°41'49"W 32°46'6"N

103°41'12"W 32°45'36"N

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

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

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

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

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

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

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

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

N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/16/2023 at 9:58 AM 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 Lea County, New Mexico

September 16, 2023

Custom Soil Resource Report
Soil Map

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 19, Sep 8, 2022

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PY	Pyote soils and Dune land	1.4	100.0%
Totals for Area of Interest		**1.4**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

Lea County, New Mexico

PY—Pyote soils and Dune land

Map Unit Setting

National map unit symbol: dmqr
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 64 degrees F
Frost-free period: 190 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Pyote

Setting

Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

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

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Description of Dune Land

Setting

Landform: Dunes
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 6 inches: fine sand
C - 6 to 60 inches: fine sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 5 percent
Ecological site: R070BC022NM - Sandhills
Hydric soil rating: No

Maljamar, fine sand

Percent of map unit: 3 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Wink

Percent of map unit: 2 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

USDA Natural Resources Conservation Service

Ecological site R070BD003NM
Loamy Sand

Accessed: 12/13/2023

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.

Associated sites

R070BD004NM	**Sandy** Sandy
R070BD005NM	**Deep Sand** Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

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

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

Table 2. Representative physiographic features

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

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity-short duration thunderstorms.
Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes.

The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.
The average frost-free season is 207 to 220 days. The last killing frost being late March or early April and the first killing frost being in later October or early November.
Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Strong winds blow from the southwest from January through June, which accelerates soil drying during a critical period for cool season plant growth.

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

Table 3. Representative climatic features

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

Influencing water features

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

Soil features

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

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

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

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

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

Characteristic soils are:
Maljamar
Berino
Parjarito
Palomas
Wink
Pyote

Table 4. Representative soil features

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

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

Ecological dynamics

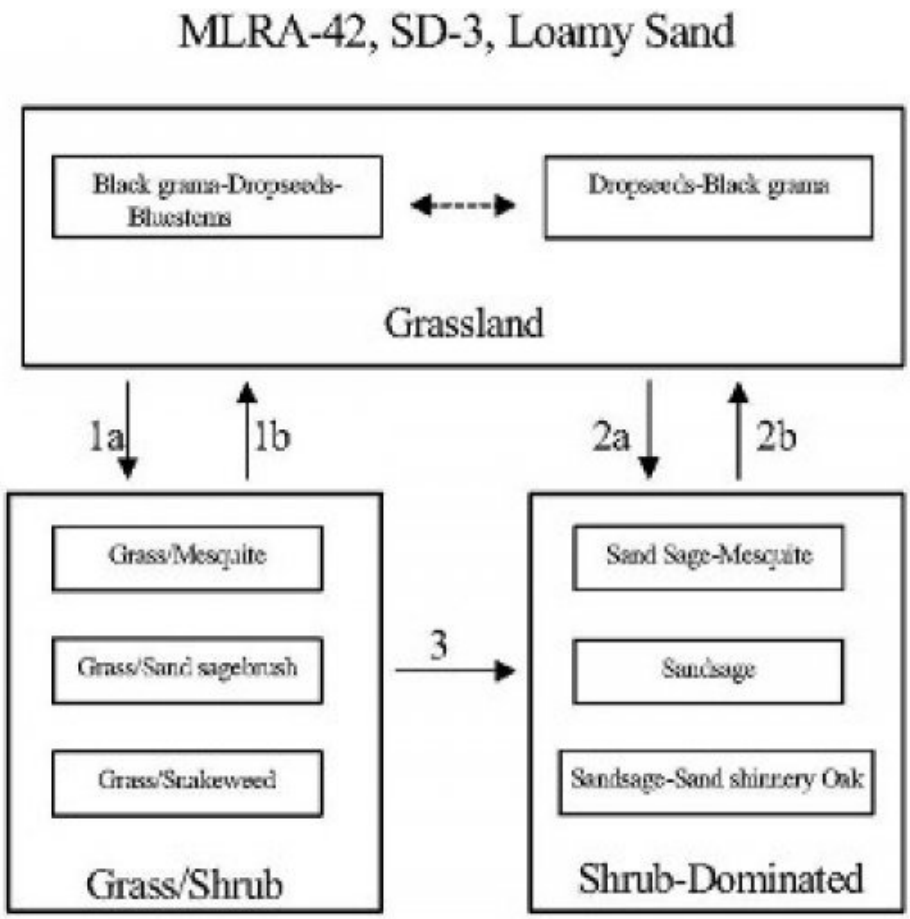
Overview

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

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

State and transition model

Plant Communities and Transitional Pathways (diagram):



1a. Drought, over grazing, fire suppression.
1b. Brush control, prescribed grazing

2.a Severe loss of grass cover, fire suppression, erosion.
2b. Brush control, seeding, prescribed grazing.

3. Continued loss of grass cover, erosion.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

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

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

Table 5. Annual production by plant type

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

Table 6. Ground cover

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

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

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

State 2
Grass/Shrub

Community 2.1
Grass/Shrub

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

State 3
Shrub Dominated

Community 3.1
Shrub Dominated

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

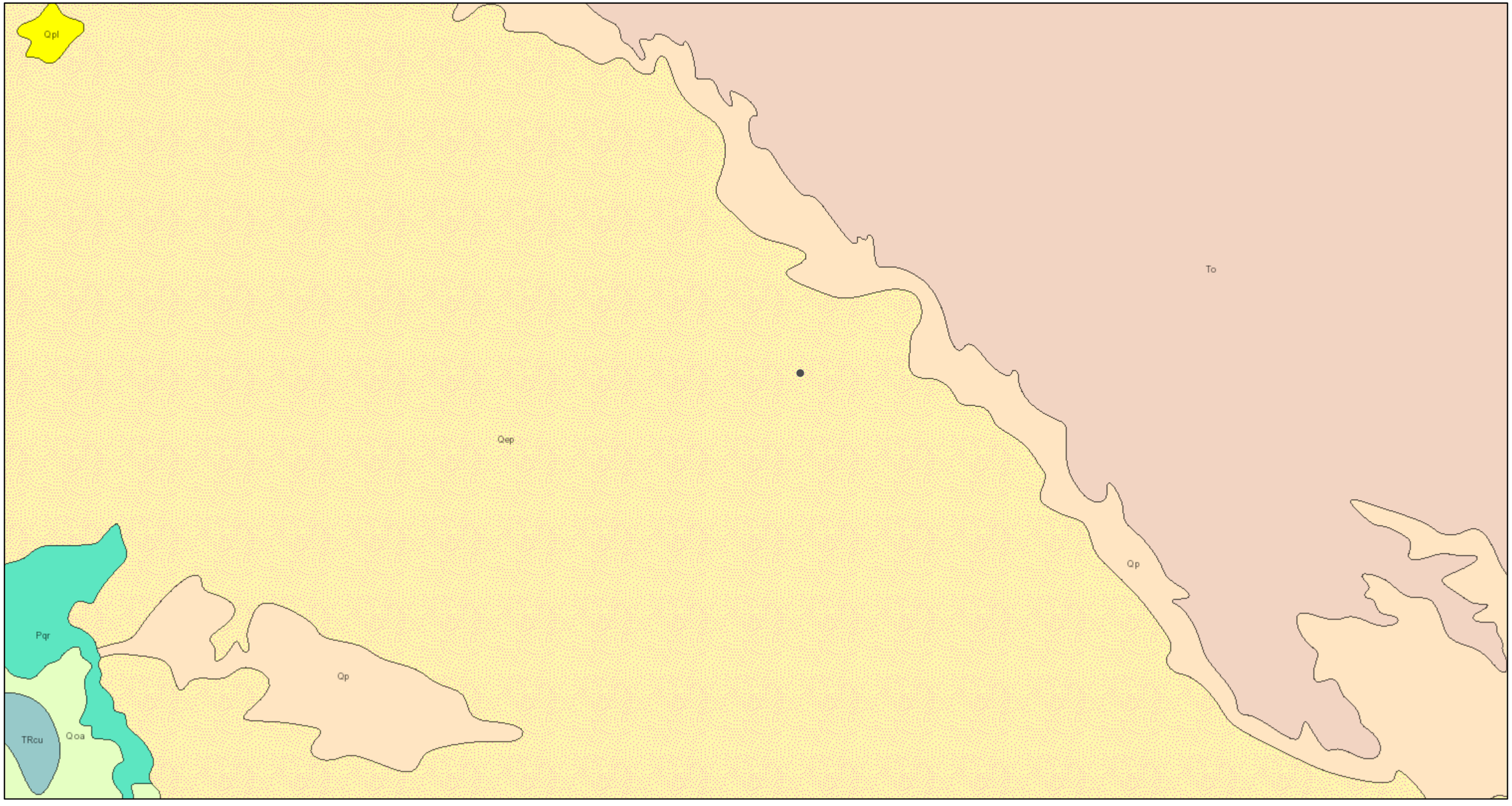
aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986). Transition to Shrub-Dominated (2a): Severe loss of grass species with increased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

Additional community tables

Table 7. Community 1.1 plant community composition

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

Kachina 8 Federal Com #002 Geology



9/16/2023, 2:57:34 PM

1:144,448

0 1.5 3 6 mi

0 2.25 4.5 9 km

STATEMAP (1993 to Present) [Publications]

- Mapping is Complete
- Mapping in Progress

Lithologic Units

- Playa—Alluvium and evaporite deposits (Holocene)
- Water—Perenial standing water
- Qa—Alluvium (Holocene to upper Pleistocene)
- Ql—Landslide deposits and colluvium (Holocene to Pleistocene) — Landslide deposits on western flanks of Socorro Mountains not shown for clarity

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

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 Ecosystems; U.S. Census Bureau TIGER/Line

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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Action 454619

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 454619
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nGRL0921757058**
Incident Name	**NGRL0921757058 KACHINA 8 FEDERAL COM #002 @ 30-025-31371**
Incident Type	**Oil Release**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-025-31371] KACHINA 8 FEDERAL COM #002**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	KACHINA 8 FEDERAL COM #002
Date Release Discovered	07/21/2009
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Corrosion | Treating Tower | Crude Oil | Released: 175 BBL | Recovered: 0 BBL | Lost: 175 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion | Treating Tower | Produced Water | Released: 175 BBL | Recovered: 0 BBL | Lost: 175 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 454619
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 04/23/2025

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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 454619
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 100 and 200 (ft.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1000 (ft.) and ½ (mi.)
Any other fresh water well or spring	Between 1000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 100 and 200 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan		
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.		
Requesting a remediation plan approval with this submission		Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.		
Have the lateral and vertical extents of contamination been fully delineated		Yes
Was this release entirely contained within a lined containment area		No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)		
Chloride	(EPA 300.0 or SM4500 Cl B)	2088
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	65
GRO+DRO	(EPA SW-846 Method 8015M)	14
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.		
On what estimated date will the remediation commence		05/01/2025
On what date will (or did) the final sampling or liner inspection occur		07/20/2025
On what date will (or was) the remediation complete(d)		07/20/2025
What is the estimated surface area (in square feet) that will be reclaimed		3226
What is the estimated volume (in cubic yards) that will be reclaimed		557
What is the estimated surface area (in square feet) that will be remediated		3226
What is the estimated volume (in cubic yards) that will be remediated		557
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.		
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.		

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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 454619
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 04/23/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 454619
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137
	Action Number: 454619
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	*{Unavailable.}*

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Action 454619

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 454619
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Remediation Plan is Conditionally Approved. Due to the lack of groundwater data within ½ mile of the release area, the site will need to be remediated to the strictest closure criteria from Table 1 of the OCD Spill Rule. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Sidewall/edge samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. All sidewall samples should be taken from the sidewall of the excavation. Please make sure that the edge of the release extent is accurately defined. Please collect confirmation samples, representing no more than 200 ft2. All off-pad areas must meet reclamation standards in the OCD Spill Rule. The work will need to be completed in 90 days after the report has been reviewed.	5/19/2025