

OSE POD Location Map



3/1/2024, 2:08:53 PM

- Override 1

GIS WATERS PODs

Active

Plugged
- OSE District Boundary

Water Right Regulations

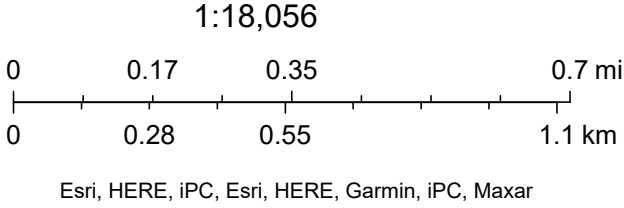
Artesian Planning Area

New Mexico State Trust Lands

Both Estates
- NHD Flowlines

Artificial Path

Stream River








# New Mexico Office of the State Engineer

## Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04498 POD1	2	1	3	25	25S	30E	609394	3552168 

**Driller License:** 1249 **Driller Company:** ATKINS ENGINEERING ASSOC. INC.

**Driller Name:** JAKCIE D ATKINS

**Drill Start Date:** 02/24/2021 **Drill Finish Date:** 02/24/2021 **Plug Date:** 03/02/2021

**Log File Date:** 03/11/2021 **PCW Rcv Date:** **Source:**

**Pump Type:** **Pipe Discharge Size:** **Estimated Yield:** 0 GPM

**Casing Size:** **Depth Well:** 109 feet **Depth Water:**

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

3/1/24 2:15 PM

Page 1 of 1

POD SUMMARY - C 04498 POD1



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">C 04498 POD1</a>	CUB	ED		2	1	3	25	25S	30E	609394	3552168	446	109		
<a href="#">C 04624 POD1</a>	CUB	ED		4	4	1	30	25S	31E	611501	3552305	2017	120	0	120
<a href="#">C 03781 POD1</a>	CUB	ED		3	3	3	13	25S	30E	609306	3554761	2170	720	325	395
<a href="#">C 01379</a>	C	ED		4	4	3	10	25S	30E	606571	3556355*	4764	400		

Average Depth to Water: **162 feet**

Minimum Depth: **0 feet**

Maximum Depth: **325 feet**

Record Count: 4

UTMNAD83 Radius Search (in meters):

**Easting (X):** 609504.76

**Northing (Y):** 3552601

**Radius:** 5000

\*UTM location was derived from PLSS - see Help

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Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (BH-01)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-4498			
	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32°	MINUTES 6'	SECONDS 1.96" N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE -103°	50'	26.19" W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NW SW NE Sec. 25 T25S R30E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 02/24/2021	DRILLING ENDED 02/24/2021	DEPTH OF COMPLETED WELL (FT) temporary well material		BORE HOLE DEPTH (FT) 109	DEPTH WATER FIRST ENCOUNTERED (FT) n/a		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	109	±6.5	Boring- HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4498

POD NO. 1


TRN NO. 682528

LOCATION 132 T25S R30E Sec 25

WELL TAG ID NO. NA

PAGE 1 OF 2



	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)	
	FROM	TO					
4. HYDROGEOLOGIC LOG OF WELL	0	34	34	Caliche, tan, no odor, no stain, gravel, dry	Y ✓ N		
	34	40	6	sand/ caliche, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N		
	40	56	16	sand, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N		
	56	72	16	sandstone, low consolidation, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N		
	72	79	7	sand, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N		
	79	109	30	sandstone, low - medium consolidation, tan, no odor, m-f grained, well sorted, m	Y ✓ N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
	METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm): 0.00	
	5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.				
MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist. <div style="text-align: right;">USE DIT MAR 11 2021 PM 4:26</div>							
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge							
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:						
	 SIGNATURE OF DRILLER / PRINT SIGNEE NAME			Jackie D. Atkins DATE			

FOR OSE INTERNAL USE

WR-20 WELL RECORD &amp; LOG (Version 06/30/2017)

FILE NO. C-4498	POD NO. 1	TRN NO. 682528
LOCATION 132 T255 R30E Sec 25	WELL TAG ID NO. NA	PAGE 2 OF 2

John R. D Antonio, Jr., P.E.  
State Engineer



Roswell Office  
1900 WEST SECOND STREET  
ROSWELL, NM 88201

**STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 682528  
File Nbr: C 04498  
Well File Nbr: C 04498 POD1

Mar. 11, 2021

TACOMA MORRISEY  
WSP USA  
3300 NORTH A STREET  
BLDG 1 #222  
MIDLAND, TX 79705

Greetings:

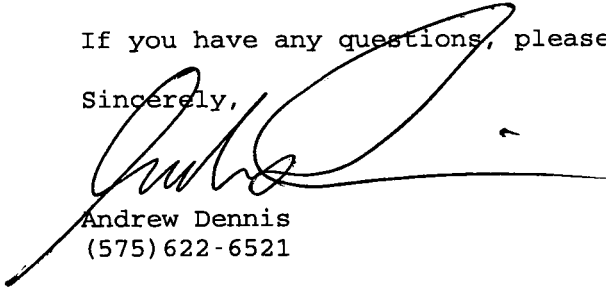
The above numbered permit was issued in your name on 12/01/2020.

The Well Record was received in this office on 03/11/2021, stating that it had been completed on 02/24/2021, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 12/01/2021.

If you have any questions, please feel free to contact us.

Sincerely,

  
Andrew Dennis  
(575) 622-6521

drywell





# PLUGGING RECORD



**NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC**

## **I. GENERAL / WELL OWNERSHIP:**

State Engineer Well Number: C-4498- POD1

Well owner: XTO ENERGY (Kyle Littrell)

Phone No.: 432.682.8873

Mailing address: 6401 Holiday Hill Dr.

City: Midland

State: Texas

Zip code: 79707

## **II. WELL PLUGGING INFORMATION:**

1) Name of well drilling company that plugged well: Jackie D. Atkins ( Atkins Engineering Associates Inc.)

2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/21

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge

4) Date well plugging began: 03/02/2021 Date well plugging concluded: 03/02/2021

5) GPS Well Location: Latitude: 32 deg, 6 min, 1.96 sec  
Longitude: -103 deg, 50 min, 26.19 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 109 ft below ground level (bgl),  
by the following manner: weighted tape

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 12/01/2020

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

USE DTI MAR 11 2021 PM 4:25

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

05E DTI MAR 11 2021 PM 4:27

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

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

Jack Atkins

03/11/2021

Date \_\_\_\_\_





**STATE OF NEW MEXICO**  
**OFFICE OF THE STATE ENGINEER**  
**ROSWELL**

**John R. D'Antonio , P.E.**  
State Engineer

**DISTRICT II**  
1900 West Second St.  
Roswell, NM 88201  
Phone: (575) 622-6521  
Fax: (575) 623-8559

April 12, 2021

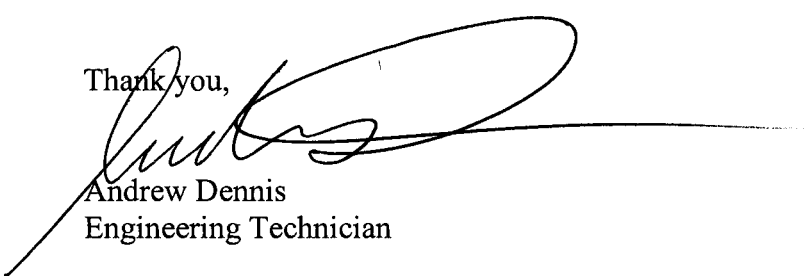
XTO Energy  
6401 Holiday Hill Dr.  
Midland, TX 79707

RE: Well Plugging Record for OSE File No. C-4498 POD1

Greetings:

Please find enclosed Well Plugging Record, received and filed in our office on 03/11/21

Thank you,

  
Andrew Dennis  
Engineering Technician






# 2020-03-10\_C-4498-POD1\_OSE\_Well Record and Log-forsign

Final Audit Report

2021-03-11

Created:	2021-03-11
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAq2m7g1wGV8cRoBzMuggPTk25-4ojFW8H

## "2020-03-10\_C-4498-POD1\_OSE\_Well Record and Log-forsign" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)  
2021-03-11 - 7:17:39 PM GMT- IP address: 69.21.248.123
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature  
2021-03-11 - 7:18:18 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)  
2021-03-11 - 7:29:33 PM GMT- IP address: 74.50.153.115
-  Document e-signed by Jack Atkins (jack@atkinseng.com)  
Signature Date: 2021-03-11 - 7:31:05 PM GMT - Time Source: server- IP address: 74.50.153.115
-  Agreement completed.  
2021-03-11 - 7:31:05 PM GMT

OSE DJT MAR 11 2021 PM 4:27





# PLU 25 Brushy Draw West Intermittent Stream 331ft



June 12, 2024

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

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





U.S. Fish and Wildlife Service

## National Wetlands Inventory

# PLU 25 Brushy Draw West

## Pond 3,612 feet



June 12, 2024

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine



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## PLU 25 Brushy Draw West

Nearest Residence:  
69,853 ft.

### Legend

-  32.104434, -103.839389
-  XTO Cowboy Central Delivery Point: (CDP)

32.104434, -103.839389

Residence

Google Earth

5 mi














# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)										(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)									
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 6416	q 4	Sec	Tws	Rng	X	Y	Distance	
<a href="#">C 04498</a>	CUB	MON		0 XTO ENERGY INC	ED	<a href="#">C 04498 POD1</a>	NA				2	1	3	25	25S	30E	609394	3552168 	446
<a href="#">LWD 01188</a>	CUB	PLS	89.2	BUCK & LARUE JACKSON TRUST	ED	<a href="#">LWD 01188 POD1</a>					1	1	3	24	25S	30E	609238	3553754* 	1183
<a href="#">C 04624</a>	CUB	MON		0 ENSOLUM LLC	ED	<a href="#">C 04624 POD1</a>	NA				4	4	1	30	25S	31E	611500	3552305 	2017
<a href="#">C 03781</a>	CUB	EXP		0 ATKINS ENGR ASSOC INC	ED	<a href="#">C 03781 POD1</a>				Artesian	3	3	3	13	25S	30E	609305	3554761 	2170
<a href="#">LWD 01210</a>	CUB	PLS	17	BUCK & LARUE JACKSON TRUST	ED	<a href="#">LWD 01210 POD1</a>					3	2	3	36	25S	30E	609665	3550314* 	2292
<a href="#">C 04730</a>	CUB	MON		0 ENSOLUM	ED	<a href="#">C 04730 POD1</a>	NA				3	3	1	27	25S	30E	606032	3552256 	3489
<a href="#">C 02441</a>	C	STK		0 BYRON W PASCHAL	ED	<a href="#">C 02441</a>								21	25S	30E	605077	3553783* 	4582
<a href="#">C 01379</a>	C	STK		3 BUCK JACKSON	ED	<a href="#">C 01379</a>					4	4	3	10	25S	30E	606571	3556355* 	4764
<a href="#">C 01831</a>	C	PRO		0 OXY PETROLEUM INC	ED	<a href="#">C 01831</a>					2	1	17	25S	31E		612972	3556126* 	4944

Record Count: 9

UTMNAD83 Radius Search (in meters):

Easting (X): 609504.76      Northing (Y): 3552601      Radius: 5000

Sorted by: Distance

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						(quarters are smallest to largest)		(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y		
	LWD 01188 POD1	1	1	3	24	25S	30E	609238	3553754*		

Driller License:		Driller Company:	
Driller Name:			
Drill Start Date:		Drill Finish Date:	
Log File Date:		PCW Rcv Date:	
Pump Type:		Pipe Discharge Size:	
Casing Size:		Depth Well:	
		Plug Date:	
		Source:	
		Estimated Yield:	
		Depth Water:	

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Water Right Summary


[get image list](#)

**WR File Number:** LWD 01188      **Subbasin:** CUB      **Cross Reference:** LWD-C-7  
**Primary Purpose:** PLS      NON 72-12-1 LIVESTOCK WATERING  
**Primary Status:** DCL      DECLARATION  
**Total Acres:** 34.7      **Subfile:** -      **Header:** -  
**Total Diversion:** 89.2      **Cause/Case:** -  
**Owner:** BUCK & LARUE JACKSON TRUST

### Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
<a href="#">get images</a>	631014	DCL	1992-03-16	DCL	PRC	LWD-C-7	T	34.7	89.2

### Current Points of Diversion

(NAD83 UTM in meters)									
POD Number	Well Tag	Source	Q			X		Y	Other Location Desc
<a href="#">LWD 01188 POD1</a>			64	Q16	Q4Sec	Tws	Rng		
			1	1	3	24	25S	30E	609238 3553754*

\*An (\*) after northing value indicates UTM location was derived from PLSS - see Help

### Priority Summary

Priority	Status	Acres	Diversion	Pod Number
12/31/1906	DCL	34.7	89.2	<a href="#">LWD 01188 POD1</a>

### Place of Use

Q		Q					Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
256	64	Q16	Q4Sec	Tws	Rng								
1	1	3	24	25S	30E		34.7	89.2		PLS	12/31/1906	DCL	

### Source

Acres	Diversion	CU	Use	Priority	Source Description
34.7	89.2		PLS	12/31/1906	SW

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6/12/24 4:54 PM

WATER RIGHT SUMMARY





U.S. Fish and Wildlife Service

## National Wetlands Inventory

PLU 25 Brushy Draw West  
Wetland 969 ft



March 1, 2024

## Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

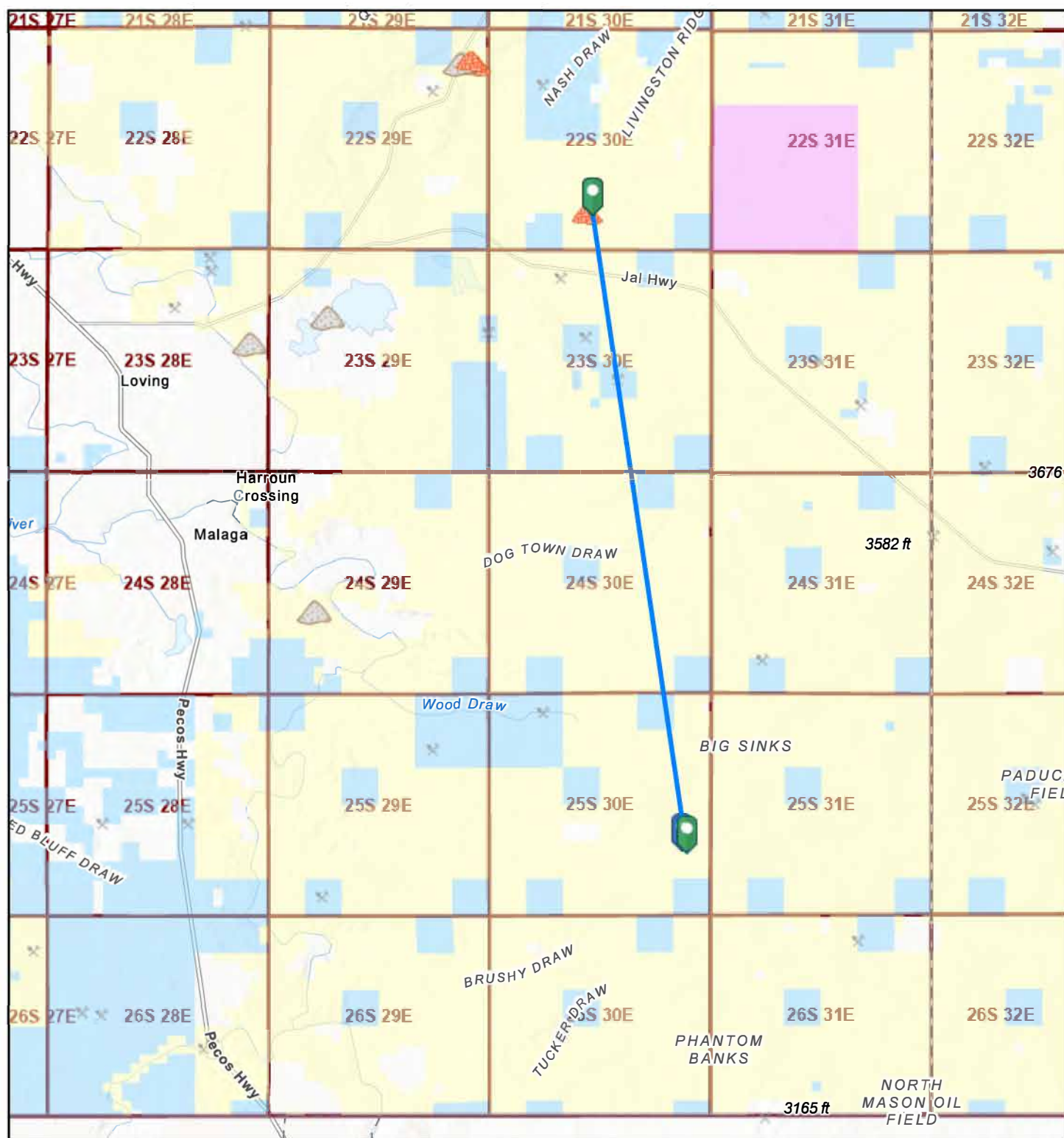
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

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# PLU 25 Brushy Draw West Mine 92,505ft

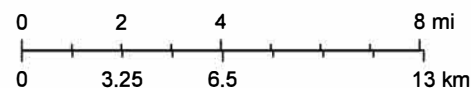


3/1/2024, 2:56:59 PM

1:288,895

## Registered Mines

## Land Ownership



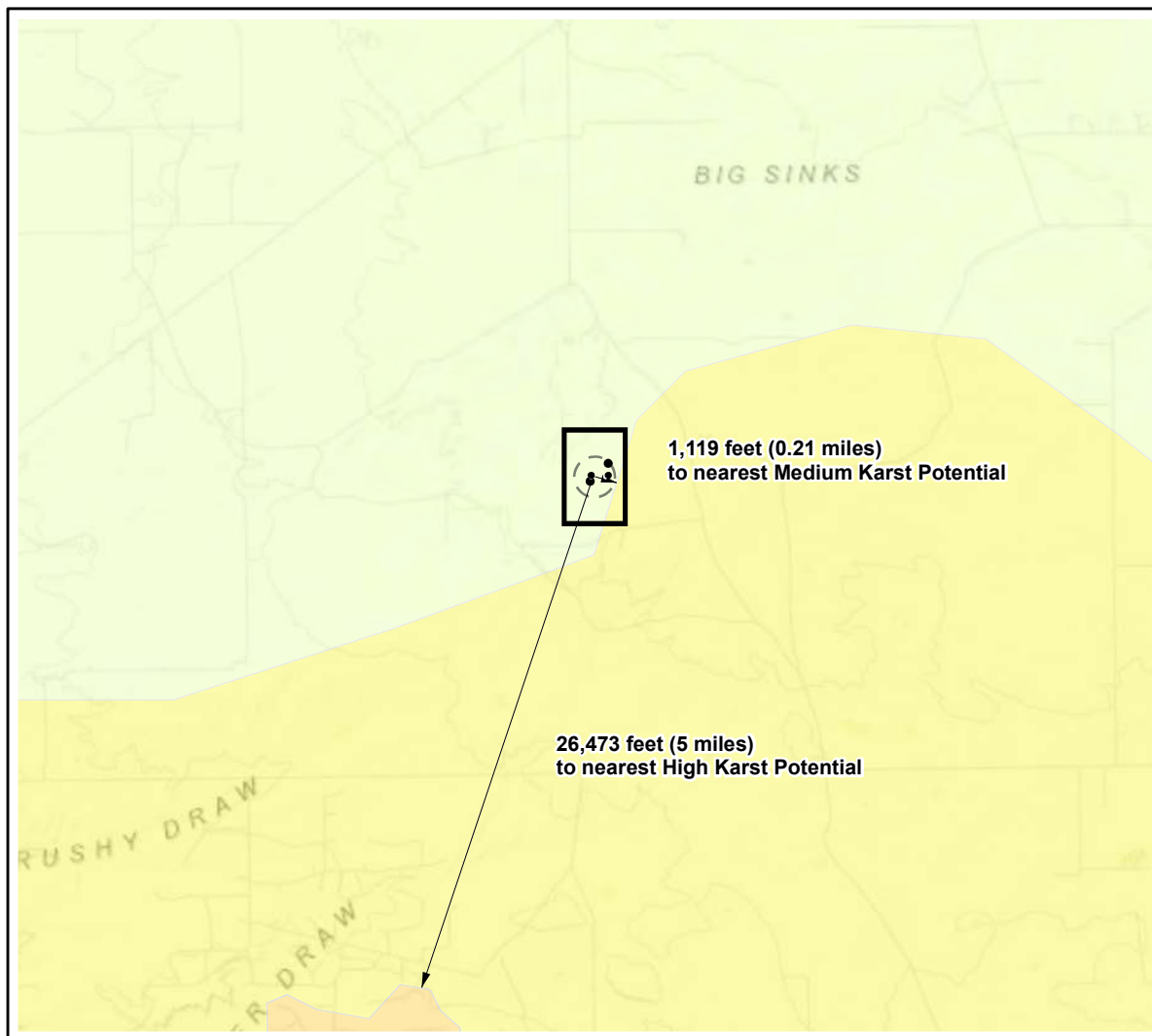
- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Potash
- Salt

- BLM
- DOE
- P
- S
- PLSS Townships

Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, METI/ NASA, USGS, EPA, NPS, USDA, USFWS, U.S. BLM, Esri, NASA, NGA, USGS, BLM

EMNRD MMD GIS Coordinator

Document Path: G:\1-Projects\US PROJECTS\XTO Energy\24E-00670 - PLU 25 Brushy Draw West\Project\24E-00670 - PLU 25 Brushy Draw West.aprx

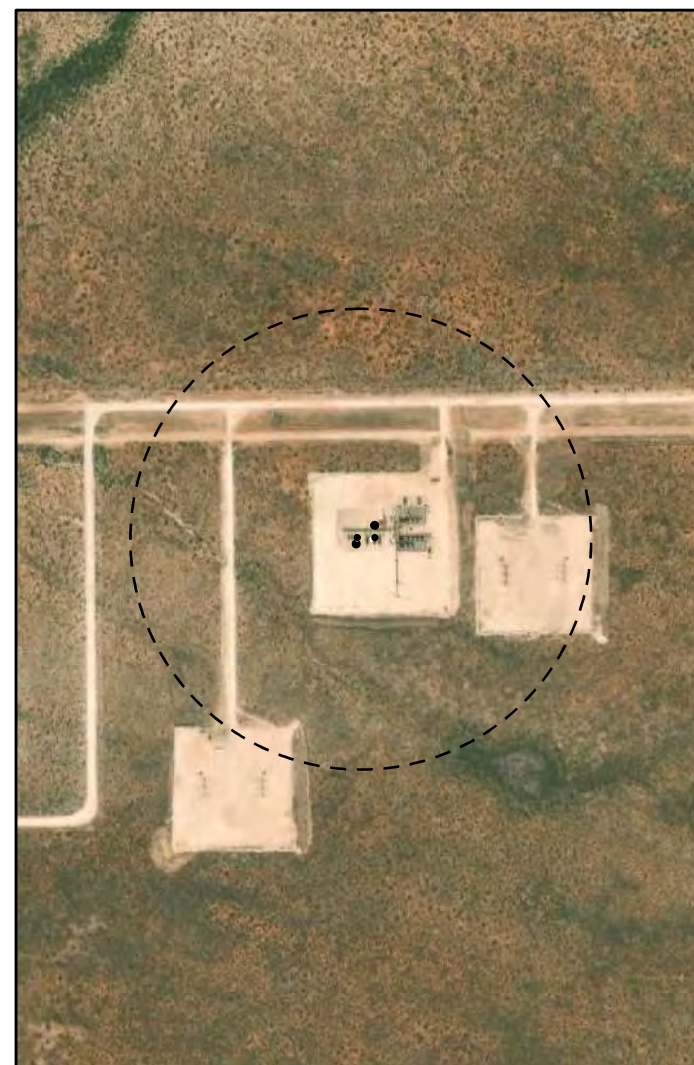


**Karst Potential**

- Critical
- High
- Medium
- Low

- Site Location
- Site Buffer (1000 ft.)

**Overview Map**  
0 0.5 1 2 mi



**Detail Map**  
0 150 300 600 ft



Map Center:  
-103.840731° 32.097917°

NAD 1983 UTM Zone 13N  
Date: Mar 05/24

**Karst Potential Map  
PLU 25 Brushy Draw West**

Figure:  
**X**



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

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



VERSATILITY. EXPERTISE.

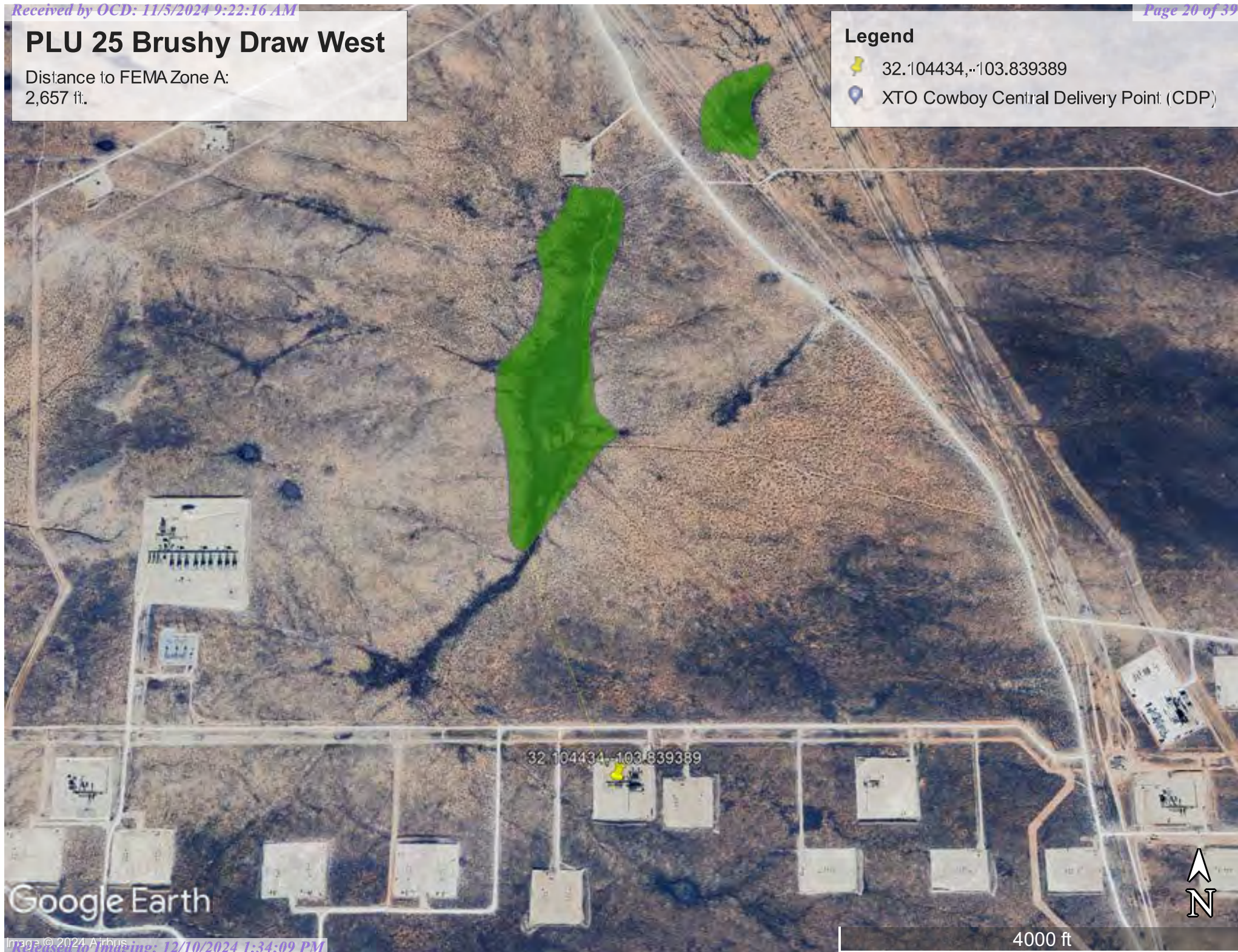


## PLU 25 Brushy Draw West

Distance to FEMA Zone A:  
2,657 ft.

### Legend

-  32.104434, -103.839389
-  XTO Cowboy Central Delivery Point: (CDP)

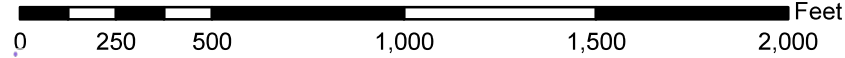




# National Flood Hazard Layer FIRMette



103°50'41"W 32°6'31"N



1:6,000

103°50'3"W 32°6'1"N

Basemap Imagery Source: USGS National Map 2023

### Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		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 <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone X</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		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

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **3/1/2024 at 5:20 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

Retrieved from Imaging: 12/10/2024 1:34:09 PM

Received by OCD: 1/29/2024 9:22:16 AM

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United States  
Department of  
Agriculture

NRCS

Natural  
Resources  
Conservation  
Service

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

# Custom Soil Resource Report for Eddy Area, New Mexico



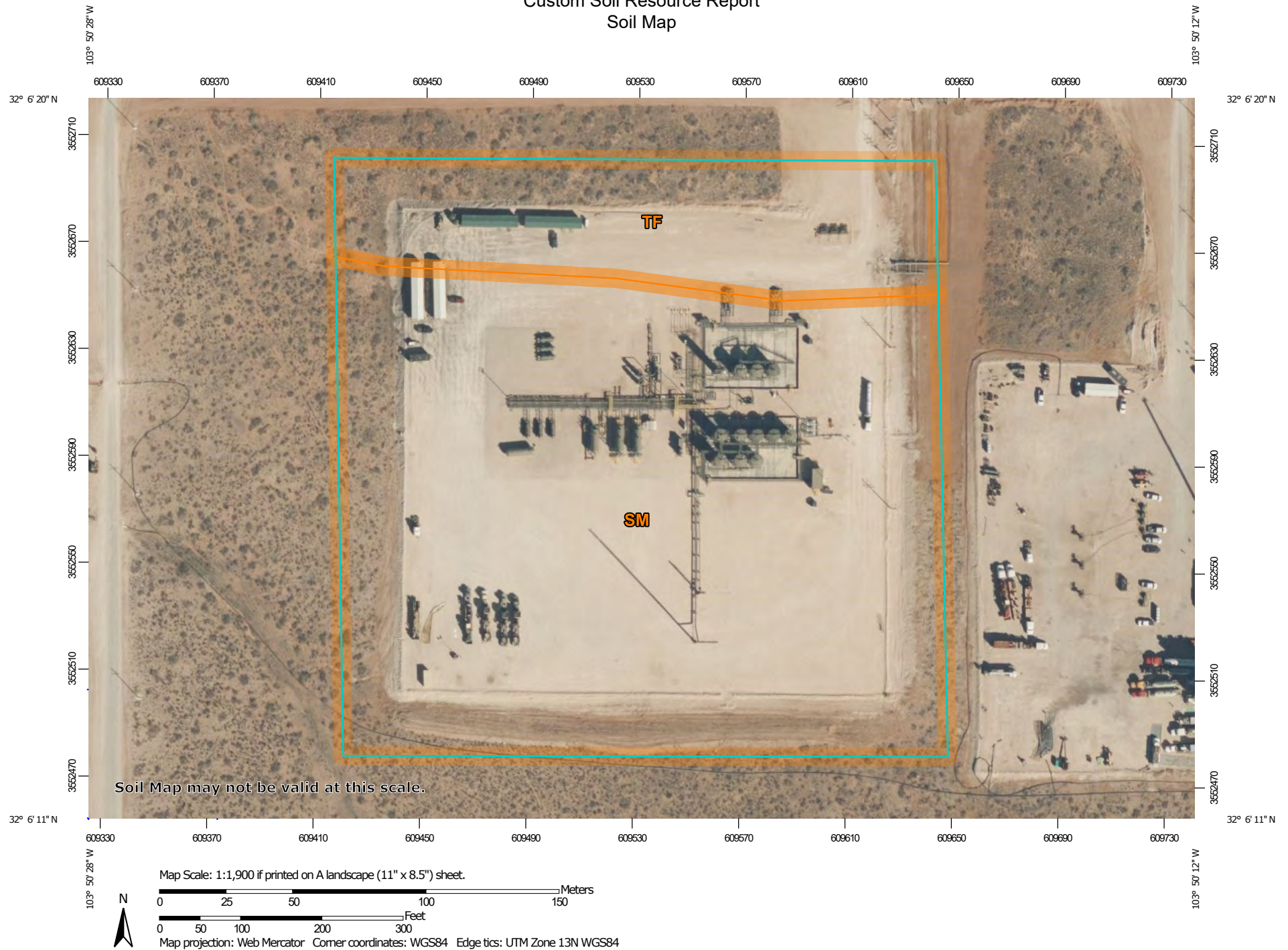
March 1, 2024

## Soil Map

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



Custom Soil Resource Report  
Soil Map



## Custom Soil Resource Report


## MAP LEGEND

## Area of Interest (AOI)

 Area of Interest (AOI)


## Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

## Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

## Water Features

 Streams and Canals


## Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

## Background

 Aerial Photography

## MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Eddy Area, New Mexico  
Survey Area Data: Version 19, Sep 7, 2023

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

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

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

## Custom Soil Resource Report

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SM	Simona-Bippus complex, 0 to 5 percent slopes	10.0	79.4%
TF	Tonuco loamy fine sand, 0 to 3 percent slopes	2.6	20.6%
<b>Totals for Area of Interest</b>		<b>12.6</b>	<b>100.0%</b>

## 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,

## Custom Soil Resource Report

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

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

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

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

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

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

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

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

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



## Custom Soil Resource Report

**Eddy Area, New Mexico****SM—Simona-Bippus complex, 0 to 5 percent slopes****Map Unit Setting**

*National map unit symbol:* 1w5x  
*Elevation:* 1,800 to 5,000 feet  
*Mean annual precipitation:* 8 to 24 inches  
*Mean annual air temperature:* 57 to 70 degrees F  
*Frost-free period:* 180 to 230 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Simona and similar soils:* 55 percent  
*Bippus and similar soils:* 30 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Simona****Setting**

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

**Typical profile**

*H1 - 0 to 19 inches:* gravelly fine sandy loam  
*H2 - 19 to 23 inches:* indurated

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* 7 to 20 inches to petrocalcic  
*Drainage class:* Well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 15 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water supply, 0 to 60 inches:* Very low (about 2.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* D  
*Ecological site:* R070BD002NM - Shallow Sandy  
*Hydric soil rating:* No

## Custom Soil Resource Report

**Description of Bippus****Setting**

*Landform:* Flood plains, alluvial fans  
*Landform position (three-dimensional):* Talf, rise  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium

**Typical profile**

*H1 - 0 to 37 inches:* silty clay loam  
*H2 - 37 to 60 inches:* clay loam

**Properties and qualities**

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* Occasional  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 40 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water supply, 0 to 60 inches:* Moderate (about 8.7 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* B  
*Ecological site:* R070BC017NM - Bottomland  
*Hydric soil rating:* No

**Minor Components****Simona**

*Percent of map unit:* 8 percent  
*Ecological site:* R070BD002NM - Shallow Sandy  
*Hydric soil rating:* No

**Bippus**

*Percent of map unit:* 7 percent  
*Ecological site:* R070BC017NM - Bottomland  
*Hydric soil rating:* No

## Custom Soil Resource Report

**TF—Tonuco loamy fine sand, 0 to 3 percent slopes****Map Unit Setting**

*National map unit symbol:* 1w61  
*Elevation:* 3,000 to 4,100 feet  
*Mean annual precipitation:* 10 to 14 inches  
*Mean annual air temperature:* 60 to 64 degrees F  
*Frost-free period:* 200 to 217 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Tonuco and similar soils:* 98 percent  
*Minor components:* 2 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Tonuco****Setting**

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

**Typical profile**

*H1 - 0 to 5 inches:* loamy fine sand  
*H2 - 5 to 15 inches:* loamy fine sand  
*H3 - 15 to 19 inches:* indurated

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* 6 to 20 inches to petrocalcic  
*Drainage class:* Excessively drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline (0.0 to 1.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water supply, 0 to 60 inches:* Very low (about 1.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* D  
*Ecological site:* R070BD004NM - Sandy  
*Hydric soil rating:* No



## Custom Soil Resource Report

### Minor Components

#### Dune land

*Percent of map unit:* 1 percent

*Hydric soil rating:* No

#### Tonuco

*Percent of map unit:* 1 percent

*Ecological site:* R070BD004NM - Sandy

*Hydric soil rating:* No



# Ecological site R070BD002NM

## Shallow Sandy

Accessed: 03/01/2024

### General information

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

Figure 1. Mapped extent

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

### Associated sites

R070BD004NM	<b>Sandy</b> Sandy sites often occur in association or in a complex with Shallow Sandy Sites.
-------------	--------------------------------------------------------------------------------------------------

### Similar sites

R070BD004NM	<b>Sandy</b> Sandy ecological sites are similar to Shallow Sandy sites in species composition and Transition pathways.
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Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

### Physiographic features

This site occurs on plains, alluvial fans, uplands, or fan piedmonts. The parent material consists of mixed loamy alluvium or eolian material derived from igneous and sedimentary bedrock. The petrocalcic layer is at a depth of 10 to 25 inches and undulating.

Slopes are nearly level to undulating, usually less than 9 percent. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Plain (2) Fan piedmont (3) Alluvial fan
Elevation	2,842–4,500 ft
Slope	1–9%
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 from 207 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November.

Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of the site. The vegetation of this site can take advantage of the moisture and the time it falls. Because of the soil profile, little moisture can be stored in the soil for any length of time. Moisture is readily available to the plants from the time it falls. Strong winds from the southwest blow from January through June which rapidly dries out the soil profile during a critical period for 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 very shallow to shallow, less than 20 inches in depth. Surface and subsurface textures are gravelly loamy sand, gravelly fine sandy loam or fine sandy loam.

An indurated calache layer occurs at depths of 6 to 25 inches and is at an average of 15 inches from the surface. Underlying material textures are very gravelly fine sandy loam, very gravelly sandy loam, gravelly fine sandy loam. Gravels are calcium carbonate concretions, calcium carbonate content ranges from 30 to 65 percent.

The indurated caliche layer typically holds water up in the profile for short periods within the root zone of plants. These soils will blow if left unprotected by vegetation.

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

Characteristic soils are:  
Simona  
Jerag

Table 4. Representative soil features

Surface texture	(1) Fine sandy loam (2) Loamy fine sand (3) Gravelly fine sandy loam
Family particle size	(1) Loamy
Drainage class	Well drained to moderately well drained
Permeability class	Moderately slow to moderate



Soil depth	7–24 in
Surface fragment cover <=3"	5–25%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	1–2 in
Calcium carbonate equivalent (0-40in)	5–15%
Electrical conductivity (0-40in)	0–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0
Soil reaction (1:1 water) (0-40in)	7.4–8
Subsurface fragment volume <=3" (Depth not specified)	5–25%
Subsurface fragment volume >3" (Depth not specified)	0%

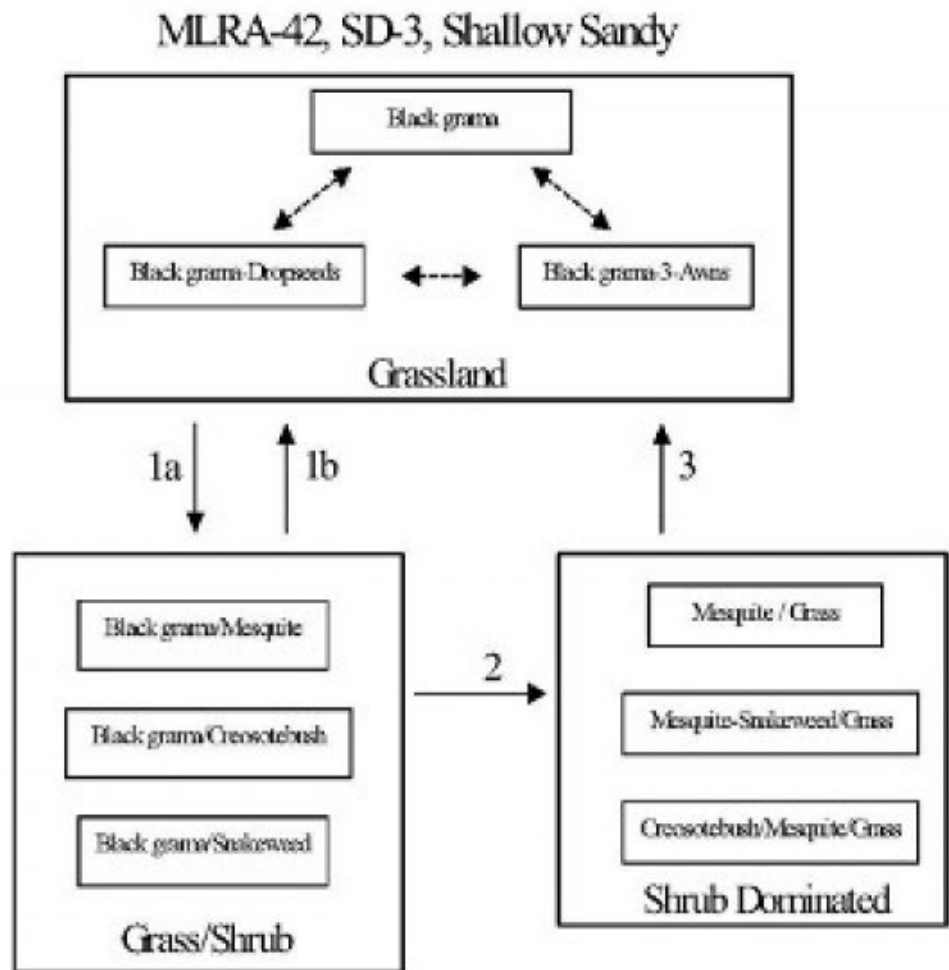
## Ecological dynamics

### Overview

The Shallow Sandy site occurs on upland plains, and tops of low ridges and mesas, associated with Sandy, Loamy Sand, and Shallow sites. Coarse to moderately coarse soil surface textures, shallow depth (<20 inches) to an indurated caliche layer (petrocalcic horizon), and an overwhelming dominance by black grama help to distinguish this site. The historic plant community of the Shallow Sandy site is a black grama dominated grassland sparsely dotted with shrubs. Shrubs, especially mesquite and creosotebush can increase or colonize due to the dispersal of shrub seeds by livestock or wildlife. This increase in mesquite and colonization of creosotebush may be enhanced by proximity to areas with existing high shrub densities. Fire suppression, and the loss of grass cover due to overgrazing or drought may facilitate the increase and encroachment of shrubs. Persistent loss of grass cover, competition for resources by shrubs, and periods of climate with increased winter precipitation and dry summers, may initiate the transition to a shrub-dominated state.

## State and transition model

## Plant Communities and Transitional Pathways (diagram)



1a. Seed dispersal, drought, overgrazing, fire suppression.

1b. Prescribed fire, brush control, prescribed grazing.

2. Persistent loss of grass cover, resource competition, increased winter precipitation.

3. Brush control, range seeding, prescribed grazing.

### State 1

#### Historic Climax Plant Community

#### Community 1.1

#### Historic Climax Plant Community

Grassland: This site responds well to management and is resistant to state change, due to the shallow depth to petrocalcic horizon and sandy surface textures. The sandy surface textures allow rapid water infiltration and the petrocalcic horizon helps to keep water perched and available to shallow rooted grasses. Black grama is the dominant species in the historic plant community, averaging 50 to 60 percent of the total production for this site. Bush muhly, blue grama, and dropseeds are present as sub-dominants. Typically, yucca, javalinabush, range ratany, prickly pear, and mesquite are sparsely dotted across the landscape. Leatherweed croton, cutleaf

happlopappus, wooly groundsel, and threadleaf groundsel are common forbs. Continuous heavy grazing or extended periods of drought will cause a loss of grass cover characterized by a decrease in black grama, bush muhly, blue and sideoats grama, plains bristlegrass, and Arizona cottontop. Dropseeds and or threeawns may increase and become sub-dominant to black grama. Continued loss of grass cover in conjunction with dispersal of shrub seeds and fire suppression is believed to cause the transition to a state with increased amounts of shrubs (Grass/Shrub state). Diagnosis: Black grama is the dominant grass species. Grass cover uniformly distributed. Shrubs are a minor component averaging only two to five percent canopy cover. Litter cover is high (40-50 percent of area), and litter movement is limited to smaller size class litter and short distances (<. 5m). Other grasses that could appear on this site would include: six-weeks grama, fluffgrass, false-buffalograss, hairy grama, little bluestem, bristle panicum, cane bluestem, Indian ricegrass, tridens spp., and red lovegrass. Other woody plants include: pricklypear, cholla, fourwing saltbush, catclaw mimosa, winterfat, American tarbush and mesquite. Other forbs include: globemallow, verbena, desert holly, senna, plains blackfoot, trailing fleabane, fiddleneck, deerstongue, wooly Indianwheat, and locoweed.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	474	652	830
Forb	78	107	136
Shrub/Vine	48	66	84
Total	600	825	1050

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	30-35%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	40-50%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	15-25%

Figure 5. Plant community growth curve (percent production by month). NM2802, R042XC002NM-Shallow Sandy-HCPC. SD-3 Shallow Sandy - 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: This state is characterized by the notable presence of shrubs, especially mesquite, broom snakeweed, and/or creosotebush, however grasses remain as the dominant species. Black grama is the dominant



grass species. Threeawns and or dropseeds are sub-dominant. The susceptibility of the Shallow Sandy site to shrub encroachment may be higher when located adjacent to other sites with high densities of mesquite or creosotebush. Retrogression within this site is characterized by decreases in grass cover and increasing densities of shrubs. Diagnosis: Black grama remains as the dominant grass species. Grass cover varies in response to the amount of shrub increase, ranging from uniform to patchy. Shrubs are found at increased densities relative to the grassland state, especially mesquite, creosotebush, or broom snakeweed. Transition to Grass/Shrub (1a) Historically fire may have kept mesquite and other shrubs in check by completely killing some species and disrupting seed production cycles and suppressing the establishment of shrub seedlings in others. Fire suppression combined with seed dispersal by livestock and wildlife is believed to be the factors responsible for the establishment and increase in shrubs.1, 3 Loss of grass cover due to overgrazing, prolonged periods of drought, or their combination, reduces fire fuel loads and increases the susceptibility of the site to shrub establishment. Key indicators of approach to transition: Increase in the relative abundance of dropseeds and threeawns Presence of shrub seedlings Loss of organic matter—evidenced by an increase in physical soil crusts 8 Transition back to Grassland (1b) Brush control is necessary to initiate the transition back to the grassland state. If adequate fuel loads remain, possibly the reintroduction of fire as a management tool will assist in the transition back, however, mixed results have been observed concerning the effects of fire on black grama grasslands.6 Prescribed grazing will help ensure adequate rest following brush control and will assist in the establishment and maintenance of grass cover capable of sustaining fire.

State 3  
Shrub Dominated

Community 3.1  
Shrub Dominated

Shrub-Dominated: Across the range of soil types included in the Shallow Sandy site, mesquite is typically the dominant shrub, but it does occur as a co-dominant or sub-dominant species with creosotebush or broom snakeweed. Mesquite tends to dominate when the Shallow Sandy site occurs as part of a complex or in association with Sandy or Loamy Sand sites. Creosotebush tends to dominate on Shallow Sandy sites that occur as part of, or adjacent to Shallow Sites. Broom snakeweed increases in response to heavy grazing, but tends to cycle in and out depending on timing of rainfall. However, once the site is dominated by shrubs and snakeweed becomes well established, it tends to remain as a major component in the shrub dominated state. Diagnosis: Mesquite, creosotebush, or snakeweed cover is high, exceeding that of grasses. Grass cover is patchy with large connected bare areas present. Black grama, threeawns, or dropseeds may be the dominant grass. Evidence of accelerated wind erosion in the form of pedestalling of plants, and soil deposition around shrub bases may be common. Transition to Shrub-Dominated (2) Persistent loss of grass cover and the resulting increased competition between shrubs and remaining grasses for dwindling resources (especially soil moisture) may drive this transition.5 Additionally periods of increased winter precipitation may facilitate periodic episodes of shrub expansion and establishment. 4 Key indicators of approach to transition: Increase in size and frequency of bare patches. Loss of grass cover in shrub interspaces. Increased signs of erosion, evidenced by pedestalling of plants, and soil and litter deposition on leeward side of plants. 7 Transition back to Grassland (3) Brush control is necessary to reduce competition from shrubs and reestablish grasses. Range seeding may be necessary if insufficient grasses remain, The benefits, and costs, will vary depending upon the degree of site degradation, and adequate precipitation following seeding.

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			413–495	
	black grama	BOER4	<i>Bouteloua eriopoda</i>	413–495	–
2	Warm Season			41–83	
	bush muhly	MUPO2	<i>Muhlenbergia porteri</i>	41–83	–
3	Warm Season			41–83	

# PLU 25 Brushy Draw West Geology

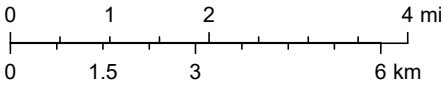


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Lithologic Units

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



Esri, NASA, NGA, USGS, NMBGMR, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS

ArcGIS Web AppBuilder



Incident Number: nAPP2403657069,  
nAPP2408553359

## Release Assessment and Deferral

PLU 25 Brushy Draw West

fAPP2126355953

Unit E, Section 25, Township 25 South, Range 30 East  
County: Eddy

Vertex File Number: 24E-00670

**Prepared for:**

XTO Energy, Inc.

**Prepared by:**

Vertex Resource Services Inc.

**Date:**

October 2024



**XTO Energy, Inc.**  
PLU 25 Brushy Draw West

**Release Assessment and Deferral**  
October 2024

**Release Assessment and Deferral**  
**PLU 25 Brushy Draw West**  
**Unit E, Section 25, Township 25 South, Range 30 East**  
**County: Eddy**

Prepared for:

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3104 East Greene Street  
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**New Mexico Oil Conservation Division – District 2**  
508 West Texas Avenue  
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Prepared by:

**Vertex Resource Services Inc.**  
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Carlsbad, New Mexico 88220

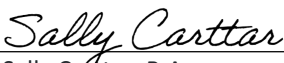


John Rewis, B.Sc.

ENVIRONMENTAL TECHNICIAN, REPORTING

October 30, 2024

Date



Sally Carttar, B.A.

PROJECT MANAGER, REPORT REVIEW

October 30, 2024

Date

XTO Energy, Inc.  
PLU 25 Brushy Draw West

Release Assessment and Deferral  
October 2024

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XTO Energy, Inc.  
PLU 25 Brushy Draw West

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XTO Energy, Inc.  
PLU 25 Brushy Draw West

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## 1.0 Introduction

XTO Energy, Inc. (XTO) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Deferral for two produced water releases that occurred at PLU 25 Brushy Draw West, facility ID fAPP2126355953 (hereafter referred to as “site”). The first release occurred on January 22, 2024, and was assigned the Incident ID number nAPP2403657069. A remediation plan for the site was submitted and approved by the New Mexico Oil Conservation Division (NMOCD) on August 5, 2024. The second release occurred on March 11, 2024, and was assigned the Incident ID number nAPP2408553359.

This report describes the release assessment and remediation activities associated with the site. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of the *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) related to NMOCD have been met in all areas not directly needed for production and all applicable regulations are being followed. This document is intended to serve as a report to obtain approval from NMOCD for deferral of this release, with the understanding that remediation and restoration of the release site will be deferred until all oil and gas activities are terminated and the site is reclaimed as per NMAC 19.15.29.13.

## 2.0 Incident Description

The nAPP2403657069 release occurred on January 22, 2024, due to corrosion in a production flow line. The incident was reported on January 23, 2024, and involved the release of approximately 40 barrels (bbl) of produced water around and under equipment on the facility pad. Approximately 35 bbl of free fluid was removed during initial clean-up. Additional details relevant to the release are presented in the C-141 Report (Appendix A).

The nAPP2408553359 release occurred on March 11, 2024, due to corrosion on a 6” flowline. This incident was reported on March 25, 2024 and involved the release of approximately 15 bbl of produced water to the west and under equipment on the facility pad. Approximately 13 bbl of free fluid was removed during initial clean-up. Additional details relevant to the release are presented in the C-141 Report (Appendix A).

## 3.0 Site Characteristics

The site is located approximately 16 miles southeast of Malaga, New Mexico. The legal location for the site is Unit E, Section 25, Township 25 South and Range 30 East in Eddy County, New Mexico. The release area is located on Bureau of Land Management property. An aerial photograph and site schematic are presented on Figure 1.

The location is typical of oil and gas exploration and production sites in the Permian Basin and is currently used for oil and gas production and storage. The following sections specifically describe the release area under the equipment east of the tank battery on or in proximity to the constructed pad (Figure 1).

The *Geological Map of New Mexico* (New Mexico Bureau of Geology and Mineral Resources, 2024) indicates the site’s surface geology primarily comprises Qep - Eolian and Piedmont deposits (New Mexico Bureau of Geology and Mineral Resources, 2024). The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018). The surrounding landscape is associated with plains, alluvial fans, and flood plains with

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elevations ranging between 1,800 and 5,000 feet. The climate is semiarid with average annual precipitation ranging between 8 and 24 inches. Predominant soil textures around the site are gravelly fine sandy loam and silty clay loam, resulting in well-drained soils with runoff classes ranging from very low to very high. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be grasses interspersed with shrubs (United States Department of Agriculture, Natural Resources Conservation Service, 2024). Limited to no vegetation is allowed to grow on the compacted facility pad.

#### **4.0 Closure Criteria Determination**

The depth to groundwater was determined by a monitoring well (C-04498 POD 1) within 0.5 miles to the south of the site (New Mexico Office of the State Engineer, 2024). There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, as defined in Subsection P of 19.15.17.7 NMAC, is an intermittent stream located approximately 331 feet southwest of the site (United States Fish and Wildlife Service, 2024). At the site, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. Closure Criteria documentation is included in Appendix B.

XTO Energy, Inc.  
PLU 25 Brushy Draw West

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<b>Table 1. Closure Criteria Determination</b>			
<b>Site Name: PLU 25 Brushy Draw West CTB</b>			
<b>Spill Coordinates: 32.104434, -103.839389</b>		<b>X: 609505</b>	<b>Y: 3552601</b>
<b>Site Specific Conditions</b>		<b>Value</b>	<b>Unit</b>
1	Depth to Groundwater (nearest reference)	109	feet
	Distance between release and nearest DTGW reference	1,458	feet
		0.27	miles
	Date of nearest DTGW reference measurement	February 24, 2021	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	331	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	3,612	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	69,853	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, <b>or</b>	3,881	feet
	ii) Within 1000 feet of any fresh water well or spring	3,881	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	969	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	92,505	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	26,473	feet
10	Within a 100-year Floodplain	>500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	2,656	feet
11	Soil Type	Gravelly fine sandy loam, indurated	
12	Ecological Classification	Shallow Sandy	
13	Geology	Eolian and piedmont deposits	
	<b>NMAC 19.15.29.12 E (Table 1) Closure Criteria</b>	>100'	<50' 51-100' >100'



The depth to groundwater reference was within 0.5 miles from the release area; therefore, the closure criteria for remediation and reclamation of the site was determined to be associated with the following constituent concentration limits as presented in Table 2.

Table 2. Closure Criteria for Soils Impacted by a Release		
Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
> 100 feet	Chloride	20,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

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

5.0 Remedial Actions Taken

Inspection and site characterization of the release around the infrastructure were completed by Vertex between March 18 and October 26, 2024. Horizontal delineation was completed, and the total affected area was determined to be approximately 9,980 square feet. Daily Field Reports (DFRs) associated with the site visits are included in Appendix C. Vertical delineation with hand tools was not possible due to caliche refusal. Depth to groundwater at this site exceeds greater than 100 fee, therefore vertical delineation is not required for standard remediation. Characterization sample locations and approximate release areas are presented on Figure 1. Characterization field screening and laboratory results are summarized in Table 3.

On April 18, 2024, a Remediation Closure Report Extension was approved by NMOCD for the incident, which is included in Appendix D. Remediation efforts began on September 3, 2024, and were finalized on September 18, 2024. Vertex personnel supervised the removal of impacted soils around the production equipment. During this time, delineation efforts were conducted for release nAPP2408553359 between September 5 and 6, 2024. Field screening was completed on a total of 44 sample points and consisted of analysis using a Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and Silver Nitrate titrations (chlorides). Field screening results were used to identify areas requiring further remediation. These materials were removed to a depth of 0.5 feet below ground surface. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. The DFRs documenting various phases of the remediation along with photographs of the remediated site prior to backfill are presented in Appendix C.

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Notifications that confirmatory samples were being collected were provided to the NMOCD and are included in Appendix D. Confirmatory composite samples, each representative of no more than 200 square feet, were collected from the base and walls of the excavation. A total of 66 base and wall samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Cardinal Laboratories in Hobbs, NM, under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Confirmation sampling laboratory results are presented in Table 4, and the laboratory data reports are included in Appendix E.

All confirmatory samples collected and analyzed outside the deferral area were below closure criteria for the site. Laboratory results for confirmation wall excavation samples WS24-04 exceeded NMOCD strictest criteria for chloride. Laboratory results for confirmation base sample BS24-44 exceeded NMOCD greater than 100 feet depth to ground water bgs criteria for combined gas range organics and diesel range organics. Confirmation samples WS24-04 and BS24-44 and the surrounding area will be deferred until the reclamation of the pad. Vertical delineation of the deferral area at BH24-04 and BH24-29 was completed with heavy equipment on October 26, 2024 as close as safely possible to the pipe rack and infrastructure that the deferral area represents. The laboratory results for the sample collected from BH24-29 at 4 feet bgs exceeded NMOCD thresholds for combined gas range organics and diesel range organics at depth to groundwater greater than 100 feet bgs. At time of facility decommissioning and deconstruction, the remediation depth is estimated to be 6 feet bgs to meet NMOCD requirements for closure.

## 6.0 Deferral Request

Vertex recommends no additional remedial action at this time to address the releases at PLU 25 Brushy Draw West until the equipment on-site is decommissioned and removed. Laboratory analyses of the final confirmatory samples collected outside the deferral area showed constituent of concern concentration levels below NMOCD closure criteria for areas where depth to groundwater is greater than 100 feet below ground surface as shown in Table 2. Areas of release were remediated and backfilled with local soils. There are no anticipated or imminent risks to human, ecological, or hydrological receptors associated with the release site including the deferral area.

On behalf of XTO Energy, Inc., Vertex requests deferral of the portions of the release that are designated in proximity to equipment, specifically characterization borehole BH24-29 and confirmation sample areas BS24-44 and WS24-04. The release and deferral areas have been delineated with the understanding that remediation and restoration of this portion of the release will be deferred until such time as all oil and gas activities are terminated as per NMAC 19.15.29.12 and 19.15.29.13. The proposed deferral area consists of 3,208 square feet immediately under the pipe rack and associated infrastructure supporting production equipment, as presented on Figure 2. To meet NMOCD reclamation requirements, this area will be excavated to a depth of 4 feet bgs, requiring the removal of approximately 500 cubic yards of soil following equipment removal. The total release volume was 55 bbl and was localized to the pad in immediate proximity of production equipment and infrastructure. Site deconstruction will be required to complete remediation of the releases.

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PLU 25 Brushy Draw West

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Vertex respectfully requests that incidents nAPP2403657069 and nAPP2408553359 be deferred until the production equipment is retired and removed prior to reclamation. XTO certifies that all information in this report and the attachments is correct, and that they have complied with all applicable requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain deferral on the January 22 and March 11, 2024, releases at PLU 25 Brushy Draw West.

Should you have any questions or concerns, please do not hesitate to contact Sally Carttar at 575.361.3561 or [SCarttar@vertexresource.com](mailto:SCarttar@vertexresource.com).



XTO Energy, Inc.  
PLU 25 Brushy Draw West

Release Assessment and Deferral  
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## 7.0 References

- New Mexico Bureau of Geology and Mineral Resources. (2024). *Interactive Geologic Map*. Retrieved from <https://maps.nmt.edu/>
- New Mexico Office of the State Engineer. (2024). *Point of Diversion Location Report - New Mexico Water Rights Reporting System*. Retrieved from <http://nmwrrs.ose.state.nm.us/nmwrrs/wellSurfaceDiversion.html>
- New Mexico Oil Conservation Division. (2018). *New Mexico Administrative Code – Natural Resources and Wildlife Oil and Gas Releases*. Santa Fe, New Mexico.
- United States Department of Agriculture, Natural Resources Conservation Service. (2024). *Web Soil Survey*. Retrieved from <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>
- United States Department of the Interior, Bureau of Land Management. (2018). *New Mexico Cave/Karst*. Retrieved from [https://www.nm.blm.gov/shapeFiles/cfo/carlsbad\\_spatial\\_data.html](https://www.nm.blm.gov/shapeFiles/cfo/carlsbad_spatial_data.html)
- United States Fish and Wildlife Service. (2024). *National Wetland Inventory - Surface Waters and Wetlands*. Retrieved from <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>

**XTO Energy, Inc.**  
PLU 25 Brushy Draw West

**Release Assessment and Deferral**  
October 2024

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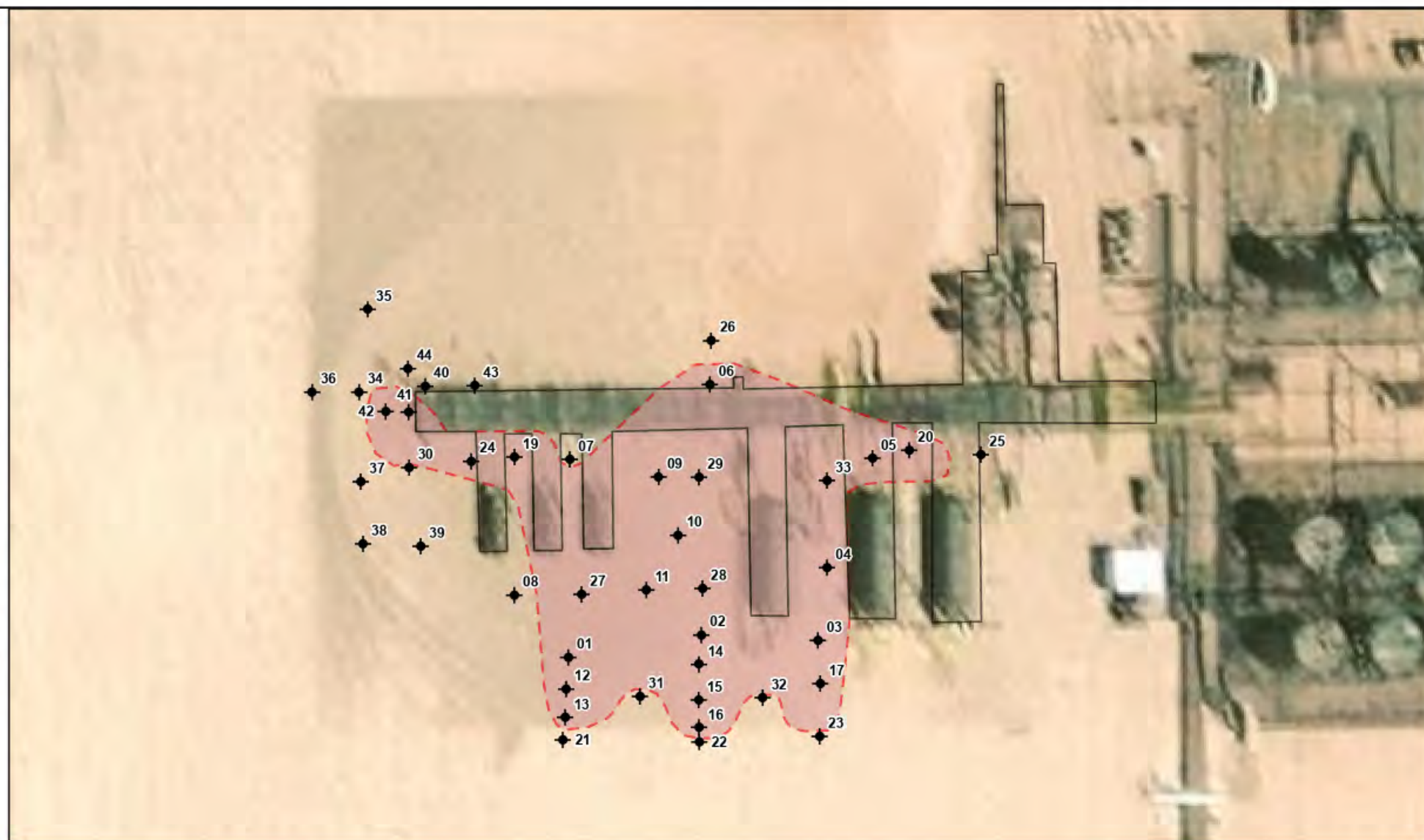
## 8.0 Limitations

This report has been prepared for the sole benefit of XTO Energy, Inc. This document may not be used by any other person or entity, except for the New Mexico Oil Conservation Division and the Bureau of Land Management, without the express written consent of Vertex Resource Services Inc. (Vertex) and XTO Energy, Inc. Any use of this report by a third party, or any reliance on decisions made based on it, or damage suffered because of the use of this report are the sole responsibility of the user.

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

## **FIGURES**

Document Path: S:\04\_Geomatics\Projects\US PROJECTS\XTO Energy\2024\24E-00670 - PLU 25 Brushy Draw West Project\24E-00670 - PLU 25 Brushy Draw West.aprx



◆ Borehole (Prefixed by "BH24-")    □ Production Equipment    ■ Release Area (~9,980 sq. ft.)



0 20 40 ft  
Map Center:  
Lat/Long: 32.104512°N, 103.839335°W

NAD 1983 UTM Zone 13N FT  
Date: Oct 29/24



### Characterization Sampling Site Schematic PLU 25 Brushy Draw West

FIGURE:

1

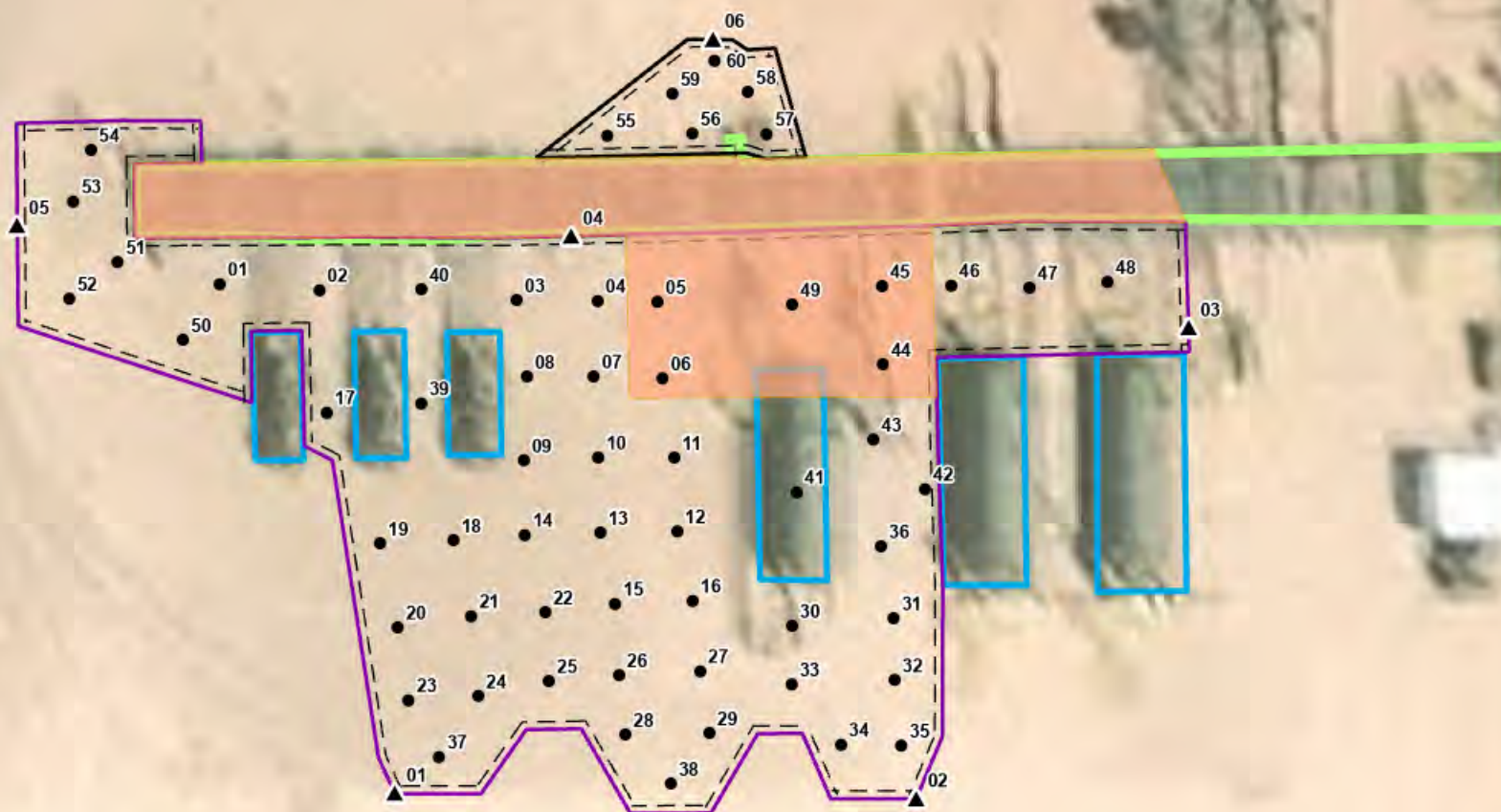


Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2023. Site features from GPS, Vertex, 2024.

VERSATILITY. EXPERTISE.





- Base Sample (Prefixed by "BS24-")
- ▲ Wall Sample (Prefixed by "WS24-")
- Deferral Area (~3,208 sq.ft. | 407 ft.)
- North Excavation to 0.5' bgs (~508 sq.ft. | 105 ft.)
- South Excavation to 0.5' bgs (~10,405 sq.ft. | 635 ft.)
- Infrastructure (Separator)
- Infrastructure (Pipe Rack)
- Area of North Excavation Wall 0.5' bgs (~53 sq.ft.)
- Area of South Excavation Wall 0.5' bgs (~318 sq.ft.)



0 15 30 ft  
Map Center:  
Lat/Long: 32.10444°N, 103.839341°W

NAD 1983 UTM Zone 13N FT  
Date: Oct 29/24



### Confirmation Sampling Site Schematic PLU 25 Brushy Draw West

FIGURE:

2



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

Note: Georeferenced image from Esri, 2023. Site features from GPS, Vertex, 2024.

VERSATILITY. EXPERTISE.

## **TABLES**

Client Name: XTO Energy, Inc.

Site Name: PLU 25 Brushy Draw West

NMOCD Tracking #: nAPP2403657069, nAPP2408553359

Project #: 24E-00670

Lab Reports: 885-1706-1, 885-1922-1, 885-2016-1, 885-6878-1, H245516, H245518, H245374, and H246537

Table 3. Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs												
Sample Description			Field Screening		Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Extractable Organic Compounds (Petroflag)	Chloride Concentration	Volatile		Extractable					
					Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH24-01	0	March 18, 2024	-	5,525	-	-	-	-	-	-	-	-
BH24-02	0	March 18, 2024	-	13,500	-	-	-	-	-	-	-	-
BH24-03	0	March 18, 2024	-	10,800	-	-	-	-	-	-	-	-
BH24-04	0	March 19, 2024	-	10,228	-	-	-	-	-	-	-	-
	1.5	March 19, 2024	-	5,962	-	-	-	-	-	-	-	-
	3.5	October 26, 2024	16	650	ND	ND	ND	ND	ND	ND	ND	32
	5	October 26, 2024	15	438	ND	ND	ND	ND	ND	ND	ND	64
BH24-05	0	June 24, 2024	-	10,105	ND	ND	ND	ND	ND	ND	ND	11,000
BH24-06	0	March 19, 2024	-	8,005	-	-	-	-	-	-	-	-
	2	March 19, 2024	-	2,237	-	-	-	-	-	-	-	-
BH24-07	0	June 24, 2024	-	505	ND	ND	ND	ND	ND	ND	ND	370
	1.5	June 24, 2024	-	165	ND	ND	ND	ND	ND	ND	ND	95
BH24-08	0	March 18, 2024	81	450	-	-	-	-	-	-	-	-
	2	March 22, 2024	0	223	ND	ND	ND	ND	ND	ND	ND	120
BH24-09	0	June 24, 2024	-	10,353	ND	ND	ND	ND	ND	ND	ND	10,000
BH24-10	0	June 24, 2024	-	15,658	ND	ND	ND	23	ND	23	23	17,000
	1	September 6, 2024	36	14,897	ND	ND	ND	ND	ND	ND	ND	18,400
	2	September 6, 2024	32	13,266	ND	ND	ND	ND	ND	ND	ND	10,300
	3	September 6, 2024	31	6,281	ND	ND	ND	ND	ND	ND	ND	4,160
	4	September 6, 2024	32	4,910	ND	ND	ND	ND	ND	ND	ND	3,440
BH24-11	0	June 24, 2024	-	7,148	ND	ND	ND	ND	ND	ND	ND	6,700
	1.5	June 24, 2024	-	638	ND	ND	ND	ND	ND	ND	ND	280
BH24-12	0	March 19, 2024	-	799	-	-	-	-	-	-	-	-
BH24-13	0	March 20, 2024	-	635	-	-	-	-	-	-	-	-
	1.5	March 20, 2024	-	982	-	-	-	-	-	-	-	-
BH24-14	0	March 20, 2024	-	1,451	-	-	-	-	-	-	-	-
BH24-15	0	March 20, 2024	-	1,502	-	-	-	-	-	-	-	-
BH24-16	0	March 20, 2024	-	1,501	-	-	-	-	-	-	-	-
BH24-17	0	March 20, 2024	-	7,311	-	-	-	-	-	-	-	-
BH24-18	0	March 20, 2024	-	1,336	-	-	-	-	-	-	-	-
BH24-19	0	March 20, 2024	-	4,995	-	-	-	-	-	-	-	-
BH24-20	0	March 20, 2024	-	809	-	-	-	-	-	-	-	-
BH24-21	0	March 21, 2024	-	165	ND	ND	ND	ND	ND	ND	ND	270
	2	March 22, 2024	35	225	ND	ND	ND	ND	ND	ND	ND	50
BH24-22	0	March 21, 2024	0	483	ND	ND	ND	ND	ND	ND	ND	370
	2	March 22, 2024	25	188	ND	ND	ND	ND	ND	ND	ND	31
BH24-23	0	March 21, 2024	0	248	ND	ND	ND	ND	ND	ND	ND	76
	2	March 22, 2024	36	200	ND	ND	ND	ND	ND	ND	ND	29
BH24-24	0	March 21, 2024	0	3,125	-	-	-	-	-	-	-	-
BH24-25	0	March 21, 2024	0	250	ND	ND	ND	ND	ND	ND	ND	92
	1	March 22, 2024	46	175	ND	ND	ND	ND	ND	ND	ND	120
BH24-26	0	March 21, 2024	0	238	ND	ND	ND	ND	ND	ND	ND	130
	2	March 22, 2024	43	208	ND	ND	ND	ND	ND	ND	ND	96

Client Name: XTO Energy, Inc.

Site Name: PLU 25 Brushy Draw West

NMOCD Tracking #: nAPP2403657069, nAPP2408553359

Project #: 24E-00670

Lab Reports: 885-1706-1, 885-1922-1, 885-2016-1, 885-6878-1, H245516, H245518, H245374, and H246537

Table 3. Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs												
Sample Description			Field Screening		Petroleum Hydrocarbons							Inorganic Chloride Concentration
Sample ID	Depth (ft)	Sample Date	Extractable Organic Compounds (Petroflag)	Chloride Concentration	Volatile		Extractable					
					Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH24-27	0	March 22, 2024	-	10,923	-	-	-	-	-	-	-	-
	2	March 22, 2024	-	2,763	-	-	-	-	-	-	-	-
BH24-28	0	March 22, 2024	-	10,773	-	-	-	-	-	-	-	-
	1.5	March 22, 2024	-	898	-	-	-	-	-	-	-	-
BH24-29	0	March 22, 2024	-	12,400	-	-	-	-	-	-	-	-
	1.5	March 22, 2024	-	2,763	-	-	-	-	-	-	-	-
	4	October 26, 2024	-	1,815	ND	3.26	150	1380	151	1530	1681	1,010
	6	October 26, 2024	-	1,558	ND	ND	ND	ND	ND	ND	ND	864
	8	October 26, 2024	33	350	ND	ND	ND	ND	ND	ND	ND	144
BH24-30	0	March 22, 2024	39	140	ND	ND	ND	ND	ND	ND	ND	120
	2	March 26, 2024	3	265	ND	ND	ND	ND	ND	ND	ND	ND
BH24-31	0	June 24, 2024	-	355	ND	ND	ND	ND	ND	ND	ND	180
BH24-32	0	June 24, 2024	-	278	ND	ND	ND	ND	ND	ND	ND	130
	1	June 24, 2024	-	188	ND	ND	ND	ND	ND	ND	ND	60
BH24-33	0	June 24, 2024	-	8,080	ND	ND	ND	ND	ND	ND	ND	8,300
	2	June 24, 2024	-	703	ND	ND	ND	ND	ND	ND	ND	620
BH24-34	0	September 4, 2024	41	578	ND	ND	ND	ND	ND	ND	ND	176
	1	September 4, 2024	23	455	ND	ND	ND	ND	ND	ND	ND	128
	1.5	September 4, 2024	34	325	ND	ND	ND	ND	ND	ND	ND	64
BH24-35	0	September 4, 2024	26	300	ND	ND	ND	ND	ND	ND	ND	96
	1	September 4, 2024	36	375	ND	ND	ND	ND	ND	ND	ND	96
BH24-36	0	September 4, 2024	30	365	ND	ND	ND	ND	ND	ND	ND	80
	1	September 4, 2024	24	350	ND	ND	ND	ND	ND	ND	ND	64
BH24-37	0	September 4, 2024	25	240	ND	ND	ND	ND	ND	ND	ND	64
	1	September 4, 2024	22	388	ND	ND	ND	ND	ND	ND	ND	80
	1.5	September 4, 2024	23	340	ND	ND	ND	ND	ND	ND	ND	80
BH24-38	0	September 5, 2024	19	365	ND	ND	ND	ND	ND	ND	ND	128
	1	September 5, 2024	40	485	ND	ND	ND	ND	ND	ND	ND	160
BH24-39	0	September 5, 2024	21	208	ND	ND	ND	ND	ND	ND	ND	48
	1	September 5, 2024	28	248	ND	ND	ND	ND	ND	ND	ND	80
BH24-40	0	September 5, 2024	43	598	ND	ND	ND	ND	ND	ND	ND	192
	1	September 5, 2024	54	1,053	ND	ND	ND	ND	ND	ND	ND	496
BH24-41	0	September 5, 2024	365	7,075	ND	ND	ND	51.7	ND	51.7	51.7	5,040
	1	September 5, 2024	55	1,213	ND	ND	ND	ND	ND	ND	ND	416
	1.5	September 5, 2024	66	1,183	ND	ND	ND	ND	ND	ND	ND	384
BH24-42	0	September 5, 2024	110	9,715	ND	ND	ND	ND	ND	ND	ND	7,280
	1	September 5, 2024	52	2,740	ND	ND	ND	ND	ND	ND	ND	1,550
	2	September 5, 2024	31	453	ND	ND	ND	ND	ND	ND	ND	112
	3	September 5, 2024	33	250	ND	ND	ND	ND	ND	ND	ND	48
BH24-43	0	September 5, 2024	43	195	ND	ND	ND	ND	ND	ND	ND	16
	1	September 5, 2024	24	250	ND	ND	ND	ND	ND	ND	ND	48
BH24-44	0	September 5, 2024	23	325	ND	ND	ND	ND	ND	ND	ND	112
	1	September 5, 2024	32	483	ND	ND	ND	ND	ND	ND	ND	144

"ND" Not Detected at the Reporting Limit

"." indicates not analyzed/assessed

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



Client Name: XTO Energy, Inc.

Site Name: PLU 25 Brushy Draw West

NMOCD Tracking #: nAPP2403657069, nAPP2408553359

Project #: 24E-00670

Lab Reports: H245377, H245515, H245517, H245635 and H245697

Table 4. Confirmation Sample Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs												
Sample Description			Field Screening		Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Extractable Organic Compounds (Petroflag)	Chloride Concentration	Volatile		Extractable					
					Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BS24-01	0.5	September 3, 2024	90	5,250	ND	ND	ND	ND	ND	ND	ND	4,160
BS24-02	0.5	September 3, 2024	96	5,193	ND	ND	ND	ND	ND	ND	ND	3,920
BS24-03	0.5	September 4, 2024	53	12,355	ND	ND	ND	ND	ND	ND	ND	7,600
BS24-04	0.5	September 4, 2024	56	13,135	ND	ND	ND	ND	ND	ND	ND	8,420
BS24-05	0.5	September 4, 2024	32	11,245	ND	ND	ND	ND	ND	ND	ND	6,500
BS24-06	0.5	September 4, 2024	51	12,380	ND	ND	ND	ND	ND	ND	ND	7,500
BS24-07	0.5	September 4, 2024	54	9,925	ND	ND	ND	ND	ND	ND	ND	6,400
BS24-08	0.5	September 5, 2024	58	16,605	ND	ND	ND	ND	ND	ND	ND	9,400
BS24-09	0.5	September 5, 2024	62	15,768	ND	ND	ND	ND	ND	ND	ND	9,460
BS24-10	0.5	September 5, 2024	57	11,365	ND	ND	ND	ND	ND	ND	ND	7,120
BS24-11	0.5	September 5, 2024	63	13,978	ND	ND	ND	ND	ND	ND	ND	9,860
BS24-12	0.5	September 5, 2024	69	11,390	ND	ND	ND	ND	ND	ND	ND	6,000
BS24-13	0.5	September 5, 2024	56	11,217	ND	ND	ND	ND	ND	ND	ND	5,200
BS24-14	0.5	September 5, 2024	70	9,427	ND	ND	ND	ND	ND	ND	ND	4,400
BS24-15	0.5	September 5, 2024	60	5,732	ND	ND	ND	ND	ND	ND	ND	3,560
BS24-16	0.5	September 5, 2024	63	3,971	ND	ND	ND	ND	ND	ND	ND	1,070
BS24-17	0.5	September 6, 2024	74	4,534	ND	ND	ND	ND	ND	ND	ND	1,230
BS24-18	0.5	September 6, 2024	35	4,751	ND	ND	ND	ND	ND	ND	ND	1,810
BS24-19	0.5	September 6, 2024	42	3,654	ND	ND	ND	ND	ND	ND	ND	672
BS24-20	0.5	September 6, 2024	51	2,672	ND	ND	ND	ND	ND	ND	ND	368
BS24-21	0.5	September 6, 2024	56	3,365	ND	ND	ND	ND	ND	ND	ND	528
BS24-22	0.5	September 6, 2024	38	5,646	ND	ND	ND	ND	ND	ND	ND	1,840
BS24-23	0.5	September 6, 2024	170	1,951	ND	ND	ND	ND	ND	ND	ND	272
BS24-24	0.5	September 6, 2024	44	3,308	ND	ND	ND	ND	ND	ND	ND	512
BS24-25	0.5	September 6, 2024	20	2,485	ND	ND	ND	ND	ND	ND	ND	224
BS24-26	0.5	September 6, 2024	65	5,141	ND	ND	ND	ND	ND	ND	ND	1,500
BS24-27	0.5	September 6, 2024	49	3,870	ND	ND	ND	ND	ND	ND	ND	896
BS24-28	0.5	September 6, 2024	18	1,475	ND	ND	ND	ND	ND	ND	ND	80
BS24-29	0.5	September 6, 2024	25	2,312	ND	ND	ND	ND	ND	ND	ND	208
BS24-30	0.5	September 6, 2024	64	5,703	ND	ND	ND	ND	ND	ND	ND	2,240
BS24-31	0.5	September 6, 2024	37	8,908	ND	ND	ND	ND	ND	ND	ND	5,280
BS24-32	0.5	September 6, 2024	39	3,192	ND	ND	ND	ND	ND	ND	ND	496
BS24-33	0.5	September 6, 2024	54	3,741	ND	ND	ND	ND	ND	ND	ND	672
BS24-34	0.5	September 6, 2024	41	2,182	ND	ND	ND	ND	ND	ND	ND	272
BS24-35	0.5	September 6, 2024	37	1,705	ND	ND	ND	ND	ND	ND	ND	176
BS24-36	0.5	September 6, 2024	38	10,178	ND	ND	ND	ND	ND	ND	ND	6,130
BS24-37	0.5	September 6, 2024	34	2,268	ND	ND	ND	ND	ND	ND	ND	176
BS24-38	0.5	September 6, 2024	30	2,239	ND	ND	ND	ND	ND	ND	ND	256
BS24-39	0.5	September 6, 2024	40	5,848	ND	ND	ND	ND	ND	ND	ND	1,600
BS24-40	0.5	September 9, 2024	47	2,993	ND	ND	ND	ND	ND	ND	ND	688
BS24-41	0.5	September 11, 2024	56	10,521	ND	ND	ND	ND	ND	ND	ND	12,200
BS24-42	0.5	September 11, 2024	45	5,962	ND	ND	ND	ND	ND	ND	ND	5,860
BS24-43	0.5	September 11, 2024	127	10,573	ND	ND	ND	133	23	133	156	13,300
BS24-44	0.5	September 12, 2024	617	13,017	ND	ND	ND	1,530	295	1,530	1,825	9,800
BS24-45	0.5	September 12, 2024	539	11,682	ND	ND	ND	ND	ND	ND	ND	10,100
BS24-46	0.5	September 13, 2024	281	6,542	ND	ND	ND	92	ND	92	92	4,500
BS24-47	0.5	September 13, 2024	34	1,125	ND	ND	ND	ND	ND	ND	ND	176
BS24-48	0.5	September 13, 2024	893	4,059	ND	ND	ND	801	182	801	983	2,520

Client Name: XTO Energy, Inc.

Site Name: PLU 25 Brushy Draw West

NMOCD Tracking #: nAPP2403657069, nAPP2408553359

Project #: 24E-00670

Lab Reports: H245377, H245515, H245517, H245635 and H245697

Table 4. Confirmation Sample Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs												
Sample Description			Field Screening		Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					
					Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BS24-49	0.5	September 17, 2024	59	11,153	ND	ND	ND	ND	ND	ND	ND	16,400
BS24-50	0.5	September 18, 2024	22	2,696	ND	ND	ND	ND	ND	ND	ND	1,420
BS24-51	0.5	September 18, 2024	61	6,403	ND	ND	ND	ND	ND	ND	ND	4,280
BS24-52	0.5	September 18, 2024	58	2,918	ND	ND	ND	ND	ND	ND	ND	1,200
BS24-53	0.5	September 18, 2024	82	3,417	ND	ND	ND	ND	ND	ND	ND	1,840
BS24-54	0.5	September 18, 2024	25	1,883	ND	ND	ND	ND	ND	ND	ND	592
BS24-55	0.5	September 18, 2024	124	4,505	ND	ND	ND	50.5	ND	50.5	50.5	3,920
BS24-56	0.5	September 18, 2024	617	4,780	ND	ND	ND	975	138	975	1,113	3,920
BS24-57	0.5	September 18, 2024	55	1,519	ND	ND	ND	ND	ND	ND	ND	1,120
BS24-58	0.5	September 18, 2024	64	1,502	ND	ND	ND	ND	ND	ND	ND	704
BS24-59	0.5	September 18, 2024	35	1,208	ND	ND	ND	ND	ND	ND	ND	256
BS24-60	0.5	September 18, 2024	39	1,336	ND	ND	ND	ND	ND	ND	ND	768
WS24-01	0-0.5	September 6, 2024	64	548	ND	ND	ND	ND	ND	ND	ND	272
WS24-02	0-0.5	September 6, 2024	22	275	ND	ND	ND	ND	ND	ND	ND	80
WS24-03	0-0.5	September 17, 2024	94	195	ND	ND	ND	ND	ND	ND	ND	192
WS24-04	0-0.5	September 17, 2024	91	6,943	ND	ND	ND	ND	ND	ND	ND	5,600
WS24-05	0-0.5	September 17, 2024	25	423	ND	ND	ND	ND	ND	ND	ND	272
WS24-06	0-0.5	September 18, 2024	46	470	ND	ND	ND	ND	ND	ND	ND	304

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

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

## **APPENDIX A - NMOCD C-141 Report**

<b>Location:</b>	<b>PLU 25 Brushy Draw West</b>	
<b>Spill Date:</b>	<b>1/22/2024</b>	
<b>Area 1</b>		
Approximate Area =	5247.10	sq. ft.
Average Saturation (or depth) of spill =	2.25	inches
Average Porosity Factor =	0.03	
<b>VOLUME OF LEAK</b>		
Total Crude Oil =		bbls
Total Produced Water =	40.26	bbls

<b>TOTAL VOLUME OF LEAK</b>		
Total Crude Oil =		bbls
Total Produced Water =	40.26	bbls
<b>TOTAL VOLUME RECOVERED</b>		
Total Crude Oil =		bbls
Total Produced Water =	35.00	bbls



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**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
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**District IV**  
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State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 311511

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 311511
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Received

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion   Flow Line - Production   Produced Water   Released: 40 BBL   Recovered: 35 BBL   Lost: 5 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 311511

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 311511
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

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: Garrett Green Title: SHE Coordinator Email: garrett.green@exxonmobil.com Date: 02/05/2024
----------------------------------------------------	----------------------------------------------------------------------------------------------------------

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Energy, Minerals and Natural Resources  
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QUESTIONS, Page 3  
  
Action 311511

QUESTIONS (continued)

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  311511
	Action Type:  [C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

<b>Site Characterization</b> <i>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.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Not answered.
What method was used to determine the depth to ground water	Not answered.
Did this release impact groundwater or surface water	Not answered.
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Not answered.
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Not answered.
An occupied permanent residence, school, hospital, institution, or church	Not answered.
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Not answered.
Any other fresh water well or spring	Not answered.
Incorporated municipal boundaries or a defined municipal fresh water well field	Not answered.
A wetland	Not answered.
A subsurface mine	Not answered.
An (non-karst) unstable area	Not answered.
Categorize the risk of this well / site being in a karst geology	Not answered.
A 100-year floodplain	Not answered.
Did the release impact areas not on an exploration, development, production, or storage site	Not answered.

<b>Remediation Plan</b> <i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	No
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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CONDITIONS  
  
Action 311511

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 311511
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	2/6/2024



<b>Location:</b>	<b>PLU 25 CTB</b>	
<b>Spill Date:</b>	<b>3/11/2024</b>	
<b>Area 1</b>		
Approximate Area =	853.00	sq. ft.
Average Saturation (or depth) of spill =	1.50	inches
Average Porosity Factor =	0.10	
<b>VOLUME OF LEAK</b>		
Total Crude Oil =		bbls
Total Produced Water =	1.90	bbls

<b>TOTAL VOLUME OF LEAK</b>		
Total Crude Oil =	0.00	bbls
Total Produced Water =	14.90	bbls
<b>TOTAL VOLUME RECOVERED</b>		
Total Crude Oil =		bbls
Total Produced Water =	13.00	bbls

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QUESTIONS  
  
Action 326513

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 326513
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Received

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Normal Operations   Other (Specify)   Produced Water   Released: 15 BBL   Recovered: 13 BBL   Lost: 2 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)	Leak occurred due to corrosion on 6" CS line

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**District III**  
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**District IV**  
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Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 2  
  
Action 326513

QUESTIONS (continued)

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number:
	326513
Action Type:	
[C-141] Initial C-141 (C-141-v-Initial)	

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	Unavailable.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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

I hereby agree and sign off to the above statement	Name: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 03/25/2024
----------------------------------------------------	----------------------------------------------------------------------------------------------------------

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

QUESTIONS, Page 3  
  
Action 326513

QUESTIONS (continued)

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  326513
	Action Type:  [C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

<b>Site Characterization</b> <i>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.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Not answered.
What method was used to determine the depth to ground water	Not answered.
Did this release impact groundwater or surface water	Not answered.
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Not answered.
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Not answered.
An occupied permanent residence, school, hospital, institution, or church	Not answered.
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Not answered.
Any other fresh water well or spring	Not answered.
Incorporated municipal boundaries or a defined municipal fresh water well field	Not answered.
A wetland	Not answered.
A subsurface mine	Not answered.
An (non-karst) unstable area	Not answered.
Categorize the risk of this well / site being in a karst geology	Not answered.
A 100-year floodplain	Not answered.
Did the release impact areas not on an exploration, development, production, or storage site	Not answered.

<b>Remediation Plan</b> <i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	No
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	



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Santa Fe, NM 87505

CONDITIONS

Action 326513

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 326513
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	3/26/2024

## **APPENDIX B – Closure Criteria Research Documentation**

## **APPENDIX C – Daily Field Reports**



## Daily Site Visit Report

Client:	<u>XTO Energy Inc. (US)</u>	Inspection Date:	<u>3/19/2024</u>
Site Location Name:	<u>PLU 25 Brushy Draw West</u>	Report Run Date:	<u>3/20/2024 12:08 AM</u>
Client Contact Name:	<u>Garrett Green</u>	API #:	<u></u>
Client Contact Phone #:	<u>575-200-0729</u>		
Unique Project ID	<u></u>	Project Owner:	<u></u>
Project Reference #	<u></u>	Project Manager:	<u></u>

### Summary of Times

Arrived at Site	<u>3/19/2024 8:57 AM</u>
Departed Site	<u>3/19/2024 3:38 PM</u>

### Field Notes

- 9:21** Arrived on site and filled out paperwork for Vertex and XTO.
- 10:02** Obtained BH24-06 @ 0'
- 10:25** Obtained BH24-06 @ 2'
- 12:33** Obtained BH24-04 @ 0' and 1.5 where it hit refusal
- 13:07** All four samples screened high on chlorides.
- 13:39** Obtained BH24-05 @ 0'.
- 15:12** Stepped out BH24-01 and obtained BH24-12 @ 0'
- 15:23** Hit refusal at 8" but will revisit later.

### Next Steps & Recommendations

1

# Daily Site Visit Report



## Site Photos

Viewing Direction: East



BH24-06 facing East

Viewing Direction: Northeast



BH24-04 facing northeast

Viewing Direction: North



BH24-12 facing north



## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Angela Mohle

**Signature:**

  
Signature



## Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	9/5/2024
Site Location Name:	PLU 25 Brushy Draw West	Report Run Date:	9/6/2024 2:13 AM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

### Summary of Times

Arrived at Site	9/5/2024 5:57 AM
Departed Site	9/5/2024 5:54 PM

### Field Notes

- 6:40** Completed XTO and Vertex JSAs and safety meeting on arrival. Focused on excavation, line of fire, mobile equipment, and ignition sources. Swept work areas with magnetic locator prior to ground disturbance. On site to continue excavation to 0.5 feet bgs with hand tools and backhoe.
- 6:42** Submitted permit request for following week in the event that the project is not completed.
- 19:53** Advanced boreholes BH24-38 through BH24-44 around west end of pipe rack to complete horizontal and vertical delineation of additional release. Delineation completed pending laboratory results.
- 19:56** Standard Safety continued hand excavation under the pipes between separators and pipe rack. Back hoe continued removal material in large space between large and medium separators.
- 20:01** Collected confirmation base samples BS24-08 through BS24-16 from large open excavation between large and medium separators. Field screening results of chloride and TPH were below DTGW>100 feet bgs criteria for base samples.

### Next Steps & Recommendations

- 1 Continue excavation.
- 2 Continue collecting confirmation samples.



# Daily Site Visit Report

## Site Photos

**Viewing Direction: North**



Southwest of pipe rack facing north. Advanced BH24-38 south of BH24-37.

**Viewing Direction: North**



South of pipe rack facing north. Advanced BH24-39 between separator and BH24-38.

**Viewing Direction: South**



North of pipe rack facing south. Advanced BH24-40 immediately north of pipe rack.

**Viewing Direction: East**



West of pipe rack facing east. Advanced BH24-41 at release point of second incident at end of pipe rack.



## Daily Site Visit Report

**Viewing Direction: East**



West of pipe rack facing east. Advanced BH24-42 west of BH24-41.

**Viewing Direction: South**



North of pipe rack facing south. Advanced BH24-43 east of BH24-40.

**Viewing Direction: South**



Northwest of pipe rack facing south. Advanced BH24-44 northwest of BH24-40.

**Viewing Direction: North**



South of separators facing north. Completed southwest corner of excavation to 0.5 feet bgs.





## Daily Site Visit Report

**Viewing Direction: Northeast**



South of separators facing northeast.  
Excavation to 0.5 feet bgs.

**Viewing Direction: West**



Immediately west of large separators facing west. Collected confirmation samples BS24-08 through BS24-16 from excavation to 0.5 feet bgs.



## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Lakin Pullman

**Signature:**

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

Signature



## Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	9/18/2024
Site Location Name:	PLU 25 Brushy Draw West	Report Run Date:	9/18/2024 11:58 PM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

### Summary of Times

Arrived at Site 9/18/2024 8:05 AM

Departed Site 9/18/2024 3:52 PM

### Field Notes

**14:17** On site at ~8:05 am. Assessed site, filled out JSA and reviewed LSRAs for today.

On site to continue collecting confirmation samples from the western and north portion of excavation.

I measured the western portion of main excavation and the north excavation.

**14:13** Collected 5-point composite samples BS24-50 through -54 at 0.5 ft bgs from areas no greater than 200 square feet from western portion of excavation.

**14:14** BS24-50 through -54 field screening results were below NMOCD criteria for depth to groundwater greater than 100 feet bgs.

**14:14** Collected 5-point composite samples BS24-55 through -60 at 0.5 ft bgs and WS24-06 at 0-0.5 ft bgs from areas no greater than 200 square feet from western portion of excavation.

**14:14** BS24-55 through -60 field screening results were below NMOCD criteria for depth to groundwater greater than 100 feet bgs.

**14:15** WS24-06 passed strictest field screening criteria for chlorides and TPH.

**17:26** All samples jarred and will be sent in to laboratory for analysis.

### Next Steps & Recommendations

## Daily Site Visit Report

1 Send samples to lab.



# Daily Site Visit Report



## Site Photos

Viewing Direction: South



Site placard.

Viewing Direction: North



Southwest corner of excavation facing north.

Viewing Direction: Northeast



Southwest corner of excavation facing northeast.

Viewing Direction: East



Northwest corner of excavation facing east.



## Daily Site Visit Report

Viewing Direction: North



South side of excavation facing north.

Viewing Direction: Northwest



Southeast corner of excavation facing northwest.

Viewing Direction: North



Southeast corner of excavation facing north.

Viewing Direction: South



North, central excavation (just south of pipe rack) facing south.





## Daily Site Visit Report

Viewing Direction: West



North, central excavation (just south of pipe rack) facing west.

Viewing Direction: East



North, central excavation (just south of pipe rack) facing east.

Viewing Direction: West



Photo of northeast corner of excavation.

Viewing Direction: East



Western edge of excavation facing east. Area where BS24-50 through -52 were collected at 0.5 ft bgs.



## Daily Site Visit Report

**Viewing Direction: East**



Western edge of excavation facing east. Area where BS24-53 and -54 were collected at 0.5 ft bgs.

**Viewing Direction: South**



North excavation (north of pipe rack) where BS24-55, -56, -59, and -60 were collected at 0.5 ft bgs.

**Viewing Direction: Southeast**



North excavation (north of pipe rack) where BS24-57 and -58 were collected at 0.5 ft bgs.

**Viewing Direction: West**



North excavation (north of pipe rack) where WS24-06 was collected at 0.5 ft bgs.



## Daily Site Visit Report

Viewing Direction: West



North excavation (north of pipe rack) where WS24-06 was collected at 0.5 ft bgs

Viewing Direction: West



Removed material/soil placed on liner.



## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Andrew Ludvik

**Signature:**

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



## Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	10/26/2024
Site Location Name:	PLU 25 Brushy Draw West	Report Run Date:	10/26/2024 9:33 PM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

### Summary of Times

Arrived at Site 10/26/2024 6:48 AM

Departed Site 10/26/2024 12:34 PM

### Field Notes

- 8:17** Completed JSA on arrival. Conducted safety meeting with Standard Safety work crew focusing on excavation, mobile equipment, and line of fire. Received variance for using combustion engines near petroleum-containing equipment. On site to increase depths of boreholes BH24-04 and BH24-29 for vertical delineation.
- 11:26** Marked borehole locations and swept with magnetic locator prior to ground disturbance. Boreholes were located as close to equipment as was considered safe.
- 11:22** Work crew excavated BH24-04 to 5 feet bgs. Samples were collected at 3.5 and 5 feet bgs. Field screening results for the sample collected at 5 feet bgs were below NMOCD strictest criteria for chloride and TPH.
- 12:10** Work crew excavated BH24-29 to 8 feet bgs. Samples were collected at 4, 6, and 8 feet bgs. Field screening results for the sample collected at 8 feet bgs were below NMOCD strictest criteria for chloride and TPH.
- 12:10** Standard Safety crew filled the excavations back in once sampling was completed.
- 12:10** Vertical delineation complete pending laboratory results.

### Next Steps & Recommendations

1



# Daily Site Visit Report



## Site Photos

**Viewing Direction: Southwest**



Descriptive Photo - 1  
Viewing Direction: Southwest  
Desc: South of pipe rack between large separators facing southwest. Re-advanced BH24-04 to 5 feet bgs.  
Created: 10/26/2024 8:59:01 AM  
Lat:32.104286, Long:-103.530136

South of pipe rack between large separators facing southwest. Re-advanced BH24-04 to 5 feet bgs.

**Viewing Direction: Northeast**



Descriptive Photo - 2  
Viewing Direction: Northeast  
Desc: South of western large separator facing northeast. Re-advanced BH24-04 to 5 feet bgs.  
Created: 10/26/2024 9:00:33 AM  
Lat:32.104348, Long:-103.530295

South of western large separator facing northeast. Re-advanced BH24-04 to 5 feet bgs.

**Viewing Direction: Southwest**



Descriptive Photo - 3  
Viewing Direction: Southwest  
Desc: At pad entrance facing southwest.  
Created: 10/26/2024 9:08:02 AM  
Lat:32.105124, Long:-103.530136

At pad entrance facing southwest.

**Viewing Direction: North**



Descriptive Photo - 4  
Viewing Direction: North  
Desc: South of separator facing north. Filled in BH24-04.  
Created: 10/26/2024 9:09:37 AM  
Lat:32.104286, Long:-103.530111

South of separators facing north. Filled in BH24-04.



## Daily Site Visit Report

**Viewing Direction: Northwest**



South of western large separator facing northwest. Re-advanced BH24-29 to 8 feet bgs.

**Viewing Direction: Southwest**



South of pipe rack facing southwest. Re-advanced BH24-29 to 8 feet bgs.

**Viewing Direction: Northwest**



West of western large separator facing northwest. Work crew filled excavation in.

## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Lakin Pullman

**Signature:**

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

Signature

## **APPENDIX D – Notifications**

**XTO - Extension Request - PLU 25 Brushy Draw West**

Hamlet, Robert, EMNRD &lt;Robert.Hamlet@emnrd.nm.gov&gt;

Thu 4/18/2024 9:22 AM

To: Romero, Alan &lt;alan.romero1@exxonmobil.com&gt;

Cc: Ruth, Amy &lt;amy.ruth@exxonmobil.com&gt;; Garcia, Amanda &lt;amanda.garcia@exxonmobil.com&gt;; Sally Carttar &lt;SCarttar@vertexresource.com&gt;; Bratcher, Michael, EMNRD &lt;mike.bratcher@emnrd.nm.gov&gt;; Wells, Shelly, EMNRD &lt;Shelly.Wells@emnrd.nm.gov&gt;; Velez, Nelson, EMNRD &lt;Nelson.Velez@emnrd.nm.gov&gt;

RE: Incident **#NAPP2403657069****Alan,**

Your request for a 90-day extension to **July 16th, 2024**, is approved. Please include this e-mail correspondence in the remediation and/or closure report.

**Robert Hamlet** • Environmental Specialist - Advanced

Environmental Bureau

EMNRD - Oil Conservation Division

506 W. Texas Ave. | Artesia, NM 88210

575.909.0302 | [robert.hamlet@state.nm.us](mailto:robert.hamlet@state.nm.us)<http://www.emnrd.state.nm.us/OCD/>

---

**From:** Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>**Sent:** Wednesday, April 17, 2024 3:56 PM**To:** Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>**Cc:** Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>**Subject:** FW: [EXTERNAL] XTO Extension Request - PLU 25 Brushy Draw West - nAPP2403657069

---

**From:** Romero, Alan <[alan.romero1@exxonmobil.com](mailto:alan.romero1@exxonmobil.com)>**Sent:** Wednesday, April 17, 2024 3:26 PM**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>**Cc:** Ruth, Amy <[amy.ruth@exxonmobil.com](mailto:amy.ruth@exxonmobil.com)>; Garcia, Amanda <[amanda.garcia@exxonmobil.com](mailto:amanda.garcia@exxonmobil.com)>; Sally Carttar <[SCarttar@vertex.ca](mailto:SCarttar@vertex.ca)>**Subject:** [EXTERNAL] XTO Extension Request - PLU 25 Brushy Draw West - nAPP2403657069

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

Good afternoon,

XTO is requesting an extension for the current deadline of April 22, 2024, to complete remedial activities and submitting a report required in 19.15.29.12.B.(1) NMAC at the PLU 25 Brushy Draw West (nAPP2403657069). In order to complete all remedial activities and submit a report, XTO requests an extension until July 21, 2024.



Respectfully,

**Alan Romero**

Environmental Advisor

Permian BU – New Mexico-Delaware

ExxonMobil Upstream Oil & Gas Unconventional

Direct: (575) 988-3383

[alan.romero1@exxonmobil.com](mailto:alan.romero1@exxonmobil.com)

**XTO ENERGY, INC. – An ExxonMobil Subsidiary**

3104 E. Greene Street | Carlsbad, New Mexico 88220



**ExxonMobil**

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Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS  
  
Action 374571

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 374571
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	08/21/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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

CONDITIONS

Action 374571

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 374571
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
cbrown1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/16/2024

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
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State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 374572

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 374572
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	08/22/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
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**District II**  
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Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 374572

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 374572
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
cbrown1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/16/2024



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

QUESTIONS  
  
Action 374573

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 374573
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	08/23/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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State of New Mexico  
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Oil Conservation Division  
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Santa Fe, NM 87505

CONDITIONS  
  
Action 374573

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  374573
	Action Type:  [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
cbrown1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/16/2024

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

QUESTIONS  
  
Action 376121

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 376121
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	08/26/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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

CONDITIONS  
  
Action 376121

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 376121
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
cbrown1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/21/2024

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**Oil Conservation Division**  
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**Santa Fe, NM 87505**

QUESTIONS

Action 376128

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 376128
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

**Location of Release Source**

Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	08/27/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.



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

CONDITIONS

Action 376128

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 376128
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
cbrown1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/21/2024

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**Oil Conservation Division**  
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**Santa Fe, NM 87505**

QUESTIONS

Action 376129

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 376129
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

**Location of Release Source**

Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	08/28/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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State of New Mexico  
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Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS  
  
Action 376129

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  376129
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
cbrown1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/21/2024

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

QUESTIONS  
  
Action 376131

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 376131
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	08/29/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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

CONDITIONS  
  
Action 376131

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 376131
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
cbrown1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/21/2024



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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS

Action 376132

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 376132
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

**Location of Release Source**

Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	08/30/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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

CONDITIONS

Action 376132

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 376132
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
cbrown1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/21/2024

**District I**  
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State of New Mexico  
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Santa Fe, NM 87505

QUESTIONS  
  
Action 379098

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 379098
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/03/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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State of New Mexico  
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Oil Conservation Division  
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Santa Fe, NM 87505

CONDITIONS  
  
Action 379098

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 379098
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/29/2024

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

QUESTIONS  
  
Action 379101

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 379101
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/04/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.



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CONDITIONS

Action 379101

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 379101
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/29/2024

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

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Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 379104

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 379104
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

**Location of Release Source**

Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/05/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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State of New Mexico  
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CONDITIONS  
  
Action 379104

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 379104
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/29/2024

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

QUESTIONS  
  
Action 379107

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 379107
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/06/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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CONDITIONS  
  
Action 379107

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  379107
	Action Type:  [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	8/29/2024



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State of New Mexico  
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Santa Fe, NM 87505

QUESTIONS  
  
Action 380442

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380442
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/09/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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CONDITIONS  
  
Action 380442

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380442
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

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Santa Fe, NM 87505

QUESTIONS

Action 380444

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380444
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/10/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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State of New Mexico  
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Santa Fe, NM 87505

CONDITIONS  
  
Action 380444

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  380444
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

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State of New Mexico  
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Santa Fe, NM 87505

QUESTIONS  
  
Action 380445

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380445
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/11/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.



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State of New Mexico  
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Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS  
  
Action 380445

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  380445
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

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

QUESTIONS

Action 380447

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380447
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

**Location of Release Source**

Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/12/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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State of New Mexico  
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CONDITIONS  
  
Action 380447

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380447
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

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State of New Mexico  
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Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 380449

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380449
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/13/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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

CONDITIONS

Action 380449

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380449
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024



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State of New Mexico  
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Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 383202

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383202
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/17/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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State of New Mexico  
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Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS  
  
Action 383202

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383202
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/12/2024

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**State of New Mexico**  
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**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS

Action 383204

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383204
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

**Location of Release Source**

Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/18/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

**District I**  
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**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 383204

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383204
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/12/2024

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

QUESTIONS  
  
Action 383206

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383206
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

<b>Location of Release Source</b>	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

<b>Sampling Event General Information</b>	
<i>Please answer all the questions in this group.</i>	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/19/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.



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State of New Mexico  
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Santa Fe, NM 87505

CONDITIONS  
  
Action 383206

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  383206
	Action Type:  [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/12/2024

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Santa Fe, NM 87505

QUESTIONS  
  
Action 383207

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383207
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved

Location of Release Source	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	9,000
What is the estimated number of samples that will be gathered	45
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/20/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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CONDITIONS  
  
Action 383207

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383207
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/12/2024

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

QUESTIONS

Action 380431

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380431
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

**Location of Release Source**

Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/06/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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Santa Fe, NM 87505

CONDITIONS  
  
Action 380431

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  380431
	Action Type:  [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

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QUESTIONS  
  
Action 380434

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380434
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/09/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.



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

CONDITIONS  
  
Action 380434

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380434
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

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State of New Mexico  
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Oil Conservation Division  
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Santa Fe, NM 87505

QUESTIONS  
  
Action 380435

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380435
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/10/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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**Santa Fe, NM 87505**

CONDITIONS  
  
Action 380435

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  380435
	Action Type:  [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

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**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS

Action 380436

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380436
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

**Location of Release Source**

Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/11/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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State of New Mexico  
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CONDITIONS  
  
Action 380436

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380436
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

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QUESTIONS  
  
Action 380438

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380438
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/12/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.



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CONDITIONS  
  
Action 380438

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380438
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

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QUESTIONS  
  
Action 380440

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 380440
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/13/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 380440

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  380440
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/4/2024

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

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Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS

Action 383193

**QUESTIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383193
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

**Location of Release Source**

Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/17/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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

CONDITIONS  
  
Action 383193

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383193
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/12/2024

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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS  
  
Action 383195

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383195
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/18/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.



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CONDITIONS  
  
Action 383195

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383195
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/12/2024

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Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 383198

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383198
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/19/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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CONDITIONS  
  
Action 383198

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383198
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/12/2024

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QUESTIONS  
  
Action 383199

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383199
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2408553359
Incident Name	NAPP2408553359 PLU 25 CTB @ 0
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Location of Release Source	
Site Name	PLU 25 CTB
Date Release Discovered	03/11/2024
Surface Owner	Federal

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	1,800
What is the estimated number of samples that will be gathered	9
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/20/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Sally Carttar (575) 361-3561
Please provide any information necessary for navigation to sampling site	Take Twin Wells Rd south for 12 miles from NM-128, turn right onto Buck Jackson Rd and drive for 4.3 miles. Turn right onto Buckthorn Rd and the site will be on the left in 0.86 miles.

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CONDITIONS  
  
Action 383199

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 383199
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
kasmith	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	9/12/2024

## **APPENDIX E – Laboratory Data Reports and Chain of Custody Forms**





Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Ms. Sally Carttar  
Vertex

3101 Boyd Dr

Carlsbad, New Mexico 88220

Generated 10/17/2024 8:27:21 AM Revision 1

## JOB DESCRIPTION

PLU 25 Brushy Draw West

## JOB NUMBER

885-1706-1

Eurofins Albuquerque  
4901 Hawkins NE  
Albuquerque NM 87109

# Eurofins Albuquerque

## Job Notes

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

## Authorization



Authorized for release by  
Cheyenne Cason, Project Manager  
[cheyenne.cason@et.eurofinsus.com](mailto:cheyenne.cason@et.eurofinsus.com)  
(505)345-3975

Generated  
10/17/2024 8:27:21 AM  
Revision 1

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Laboratory Job ID: 885-1706-1

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Definitions/Glossary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

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

Glossary

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

**Case Narrative**

Client: Vertex  
Project: PLU 25 Brushy Draw West

Job ID: 885-1706-1

**Job ID: 885-1706-1****Eurofins Albuquerque****Job Narrative  
885-1706-1****REVISION**

The report being provided is a revision of the original report sent on 3/29/2024. The report (revision 1) is being revised due to COC had Additional non client coc attached.

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 3/23/2024 10:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C.

**GC VOA**

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH24-08 2ft (885-1706-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

**Diesel Range Organics**

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-76734 and analytical batch 880-76669 was outside the upper control limits.

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

**HPLC/IC**

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

Eurofins Albuquerque

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

Client Sample ID: BH24-08 2ft      Lab Sample ID: 885-1706-1  
Date Collected: 03/21/24 12:00      Matrix: Solid  
Date Received: 03/23/24 10:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 18:34	1	
Toluene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 18:34	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 18:34	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/27/24 09:11	03/27/24 18:34	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	69	S1-	70 - 130			03/27/24 09:11	03/27/24 18:34	1	
1,4-Difluorobenzene (Surr)	101		70 - 130			03/27/24 09:11	03/27/24 18:34	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/27/24 12:12	03/27/24 18:44	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 18:44	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 18:44	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	104		70 - 130			03/27/24 12:12	03/27/24 18:44	1	
o-Terphenyl	87		70 - 130			03/27/24 12:12	03/27/24 18:44	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	120		5.0	mg/Kg			03/27/24 23:45	1	



Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

Client Sample ID: BH24-21 0ft      Lab Sample ID: 885-1706-2  
Date Collected: 03/21/24 12:15      Matrix: Solid  
Date Received: 03/23/24 10:40

Method: SW846 8021B - Volatile Organic Compounds (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 18:55	1
Toluene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 18:55	1
Ethylbenzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 18:55	1
Xylenes, Total	ND		0.0040	mg/Kg		03/27/24 09:11	03/27/24 18:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130			03/27/24 09:11	03/27/24 18:55	1
1,4-Difluorobenzene (Surr)	103		70 - 130			03/27/24 09:11	03/27/24 18:55	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/27/24 12:12	03/27/24 19:48	1
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 19:48	1
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 19:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130			03/27/24 12:12	03/27/24 19:48	1
o-Terphenyl	80		70 - 130			03/27/24 12:12	03/27/24 19:48	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		5.0	mg/Kg			03/28/24 00:14	1

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

Client Sample ID: BH24-22 0ft      Lab Sample ID: 885-1706-3  
Date Collected: 03/21/24 12:30      Matrix: Solid  
Date Received: 03/23/24 10:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 19:15	1	
Toluene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 19:15	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 19:15	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/27/24 09:11	03/27/24 19:15	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	73		70 - 130			03/27/24 09:11	03/27/24 19:15	1	
1,4-Difluorobenzene (Surr)	102		70 - 130			03/27/24 09:11	03/27/24 19:15	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/27/24 12:12	03/27/24 20:10	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 20:10	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 20:10	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	115		70 - 130			03/27/24 12:12	03/27/24 20:10	1	
o-Terphenyl	91		70 - 130			03/27/24 12:12	03/27/24 20:10	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	370		5.0	mg/Kg			03/28/24 00:29	1	

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

Client Sample ID: BH24-23 0ft      Lab Sample ID: 885-1706-4  
Date Collected: 03/21/24 12:45      Matrix: Solid  
Date Received: 03/23/24 10:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 19:36	1	
Toluene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 19:36	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 19:36	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/27/24 09:11	03/27/24 19:36	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	75		70 - 130			03/27/24 09:11	03/27/24 19:36	1	
1,4-Difluorobenzene (Surr)	102		70 - 130			03/27/24 09:11	03/27/24 19:36	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/27/24 12:12	03/27/24 20:32	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 20:32	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 20:32	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	103		70 - 130			03/27/24 12:12	03/27/24 20:32	1	
o-Terphenyl	84		70 - 130			03/27/24 12:12	03/27/24 20:32	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	76		5.0	mg/Kg			03/28/24 00:34	1	

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

Client Sample ID: BH24-25 0ft      Lab Sample ID: 885-1706-5  
Date Collected: 03/21/24 13:00      Matrix: Solid  
Date Received: 03/23/24 10:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 19:57	1	
Toluene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 19:57	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 19:57	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/27/24 09:11	03/27/24 19:57	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	70		70 - 130			03/27/24 09:11	03/27/24 19:57	1	
1,4-Difluorobenzene (Surr)	102		70 - 130			03/27/24 09:11	03/27/24 19:57	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/27/24 12:12	03/27/24 20:53	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 20:53	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 20:53	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	92		70 - 130			03/27/24 12:12	03/27/24 20:53	1	
o-Terphenyl	72		70 - 130			03/27/24 12:12	03/27/24 20:53	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	92		5.0	mg/Kg			03/28/24 00:38	1	

## Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

Client Sample ID: BH24-26 0ft

Lab Sample ID: 885-1706-6

Date Collected: 03/21/24 13:15

Matrix: Solid

Date Received: 03/23/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 20:17	1
Toluene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 20:17	1
Ethylbenzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 20:17	1
Xylenes, Total	ND		0.0040	mg/Kg		03/27/24 09:11	03/27/24 20:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		70 - 130	03/27/24 09:11	03/27/24 20:17	1
1,4-Difluorobenzene (Surr)	105		70 - 130	03/27/24 09:11	03/27/24 20:17	1

## Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/27/24 12:12	03/27/24 21:15	1
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 21:15	1
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 21:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	03/27/24 12:12	03/27/24 21:15	1
o-Terphenyl	82		70 - 130	03/27/24 12:12	03/27/24 21:15	1

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		5.0	mg/Kg			03/28/24 00:43	1

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## QC Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

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

Lab Sample ID: MB 880-76689/5-A

Matrix: Solid

Analysis Batch: 76683

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76689

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 13:40	1
Toluene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 13:40	1
Ethylbenzene	ND		0.0020	mg/Kg		03/27/24 09:11	03/27/24 13:40	1
Xylenes, Total	ND		0.0040	mg/Kg		03/27/24 09:11	03/27/24 13:40	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130			03/27/24 09:11	03/27/24 13:40	1
1,4-Difluorobenzene (Surr)	107		70 - 130			03/27/24 09:11	03/27/24 13:40	1

Lab Sample ID: LCS 880-76689/1-A

Matrix: Solid

Analysis Batch: 76683

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 76689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.107		mg/Kg		107	70 - 130
Toluene	0.100	0.103		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.0921		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	0.200	0.182		mg/Kg		91	70 - 130
o-Xylene	0.100	0.0880		mg/Kg		88	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	80		70 - 130				
1,4-Difluorobenzene (Surr)	119		70 - 130				

Lab Sample ID: LCSD 880-76689/2-A

Matrix: Solid

Analysis Batch: 76683

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 76689

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.105		mg/Kg		105	70 - 130	2	35
Toluene	0.100	0.101		mg/Kg		101	70 - 130	1	35
Ethylbenzene	0.100	0.0929		mg/Kg		93	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.183		mg/Kg		92	70 - 130	1	35
o-Xylene	0.100	0.0893		mg/Kg		89	70 - 130	1	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	81		70 - 130						
1,4-Difluorobenzene (Surr)	117		70 - 130						

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-76734/1-A

Matrix: Solid

Analysis Batch: 76669

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76734

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/27/24 12:12	03/27/24 17:39	1

Eurofins Albuquerque

## QC Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

## Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-76734/1-A

Matrix: Solid

Analysis Batch: 76669

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76734

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 17:39	1
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/27/24 12:12	03/27/24 17:39	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	161	S1+	70 - 130			03/27/24 12:12	03/27/24 17:39	1
o-Terphenyl	149	S1+	70 - 130			03/27/24 12:12	03/27/24 17:39	1

Lab Sample ID: LCS 880-76734/2-A

Matrix: Solid

Analysis Batch: 76669

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 76734

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	956		mg/Kg		96	70 - 130
Diesel Range Organics (Over C10-C28)	1000	910		mg/Kg		91	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	105		70 - 130				
o-Terphenyl	106		70 - 130				

Lab Sample ID: LCSD 880-76734/3-A

Matrix: Solid

Analysis Batch: 76669

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 76734

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	972		mg/Kg		97	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	942		mg/Kg		94	70 - 130	3	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	109		70 - 130						
o-Terphenyl	107		70 - 130						

Lab Sample ID: 885-1706-1 MS

Matrix: Solid

Analysis Batch: 76669

Client Sample ID: BH24-08 2ft

Prep Type: Total/NA

Prep Batch: 76734

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	ND		1000	795		mg/Kg		78	70 - 130
Diesel Range Organics (Over C10-C28)	ND		1000	885		mg/Kg		89	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	101		70 - 130						
o-Terphenyl	82		70 - 130						

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## QC Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

## Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: 885-1706-1 MSD**

**Matrix: Solid**

**Analysis Batch: 76669**

**Client Sample ID: BH24-08 2ft**

Prep Type: Total/NA

**Prep Batch: 76734**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limits
Gasoline Range Organics (GRO)-C6-C10	ND		1000	810		mg/Kg		79	70 - 130	2	20 - 120
Diesel Range Organics (Over C10-C28)	ND		1000	909		mg/Kg		91	70 - 130	3	20 - 120
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	105		70 - 130								
o-Terphenyl	84		70 - 130								

### Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 880-76738/1-A**

**Matrix: Solid**

**Analysis Batch: 76756**

**Client Sample ID: Method Blank**

**Prep Type: Soluble**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0	mg/Kg			03/27/24 23:31	1

**Lab Sample ID: LCS 880-76738/2-A**

**Matrix: Solid**

**Analysis Batch: 76756**

**Client Sample ID: Lab Control Sample**

**Prep Type: Soluble**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	234		mg/Kg		94	90 - 110

**Lab Sample ID: LCSD 880-76738/3-A**

**Matrix: Solid**

**Analysis Batch: 76756**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Soluble**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limits
Chloride	250	235		mg/Kg		94	90 - 110	0	20

**Lab Sample ID: 885-1706-1 MS**

**Matrix: Solid**

**Analysis Batch: 76756**

**Client Sample ID: BH24-08 2ft**

**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	120		252	362		mg/Kg		96	90 - 110		

**Lab Sample ID: 885-1706-1 MSD**

**Matrix: Solid**

**Analysis Batch: 76756**

**Client Sample ID: BH24-08 2ft**

**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limits
Chloride	120		252	361		mg/Kg		96	90 - 110	0	20

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QC Association Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

GC VOA

Analysis Batch: 76683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1706-1	BH24-08 2ft	Total/NA	Solid	8021B	76689
885-1706-2	BH24-21 0ft	Total/NA	Solid	8021B	76689
885-1706-3	BH24-22 0ft	Total/NA	Solid	8021B	76689
885-1706-4	BH24-23 0ft	Total/NA	Solid	8021B	76689
885-1706-5	BH24-25 0ft	Total/NA	Solid	8021B	76689
885-1706-6	BH24-26 0ft	Total/NA	Solid	8021B	76689
MB 880-76689/5-A	Method Blank	Total/NA	Solid	8021B	76689
LCS 880-76689/1-A	Lab Control Sample	Total/NA	Solid	8021B	76689
LCSD 880-76689/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	76689

Prep Batch: 76689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1706-1	BH24-08 2ft	Total/NA	Solid	5035	
885-1706-2	BH24-21 0ft	Total/NA	Solid	5035	
885-1706-3	BH24-22 0ft	Total/NA	Solid	5035	
885-1706-4	BH24-23 0ft	Total/NA	Solid	5035	
885-1706-5	BH24-25 0ft	Total/NA	Solid	5035	
885-1706-6	BH24-26 0ft	Total/NA	Solid	5035	
MB 880-76689/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-76689/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-76689/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 76669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1706-1	BH24-08 2ft	Total/NA	Solid	8015B NM	76734
885-1706-2	BH24-21 0ft	Total/NA	Solid	8015B NM	76734
885-1706-3	BH24-22 0ft	Total/NA	Solid	8015B NM	76734
885-1706-4	BH24-23 0ft	Total/NA	Solid	8015B NM	76734
885-1706-5	BH24-25 0ft	Total/NA	Solid	8015B NM	76734
885-1706-6	BH24-26 0ft	Total/NA	Solid	8015B NM	76734
MB 880-76734/1-A	Method Blank	Total/NA	Solid	8015B NM	76734
LCS 880-76734/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	76734
LCSD 880-76734/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	76734
885-1706-1 MS	BH24-08 2ft	Total/NA	Solid	8015B NM	76734
885-1706-1 MSD	BH24-08 2ft	Total/NA	Solid	8015B NM	76734

Prep Batch: 76734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1706-1	BH24-08 2ft	Total/NA	Solid	8015NM Prep	
885-1706-2	BH24-21 0ft	Total/NA	Solid	8015NM Prep	
885-1706-3	BH24-22 0ft	Total/NA	Solid	8015NM Prep	
885-1706-4	BH24-23 0ft	Total/NA	Solid	8015NM Prep	
885-1706-5	BH24-25 0ft	Total/NA	Solid	8015NM Prep	
885-1706-6	BH24-26 0ft	Total/NA	Solid	8015NM Prep	
MB 880-76734/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-76734/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-76734/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
885-1706-1 MS	BH24-08 2ft	Total/NA	Solid	8015NM Prep	
885-1706-1 MSD	BH24-08 2ft	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

HPLC/IC

Leach Batch: 76738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1706-1	BH24-08 2ft	Soluble	Solid	DI Leach	
885-1706-2	BH24-21 0ft	Soluble	Solid	DI Leach	
885-1706-3	BH24-22 0ft	Soluble	Solid	DI Leach	
885-1706-4	BH24-23 0ft	Soluble	Solid	DI Leach	
885-1706-5	BH24-25 0ft	Soluble	Solid	DI Leach	
885-1706-6	BH24-26 0ft	Soluble	Solid	DI Leach	
MB 880-76738/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-76738/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-76738/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
885-1706-1 MS	BH24-08 2ft	Soluble	Solid	DI Leach	
885-1706-1 MSD	BH24-08 2ft	Soluble	Solid	DI Leach	

Analysis Batch: 76756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1706-1	BH24-08 2ft	Soluble	Solid	300.0	76738
885-1706-2	BH24-21 0ft	Soluble	Solid	300.0	76738
885-1706-3	BH24-22 0ft	Soluble	Solid	300.0	76738
885-1706-4	BH24-23 0ft	Soluble	Solid	300.0	76738
885-1706-5	BH24-25 0ft	Soluble	Solid	300.0	76738
885-1706-6	BH24-26 0ft	Soluble	Solid	300.0	76738
MB 880-76738/1-A	Method Blank	Soluble	Solid	300.0	76738
LCS 880-76738/2-A	Lab Control Sample	Soluble	Solid	300.0	76738
LCSD 880-76738/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	76738
885-1706-1 MS	BH24-08 2ft	Soluble	Solid	300.0	76738
885-1706-1 MSD	BH24-08 2ft	Soluble	Solid	300.0	76738

Lab Chronicle

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

**Client Sample ID: BH24-08 2ft**  
**Date Collected: 03/21/24 12:00**  
**Date Received: 03/23/24 10:40**

**Lab Sample ID: 885-1706-1**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76689	EL	EET MID	03/27/24 09:11
Total/NA	Analysis	8021B		1	76683	MNR	EET MID	03/27/24 18:34
Total/NA	Prep	8015NM Prep			76734	EL	EET MID	03/27/24 12:12
Total/NA	Analysis	8015B NM		1	76669	SM	EET MID	03/27/24 18:44
Soluble	Leach	DI Leach			76738	SA	EET MID	03/27/24 12:17
Soluble	Analysis	300.0		1	76756	SMC	EET MID	03/27/24 23:45

**Client Sample ID: BH24-21 0ft**  
**Date Collected: 03/21/24 12:15**  
**Date Received: 03/23/24 10:40**

**Lab Sample ID: 885-1706-2**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76689	EL	EET MID	03/27/24 09:11
Total/NA	Analysis	8021B		1	76683	MNR	EET MID	03/27/24 18:55
Total/NA	Prep	8015NM Prep			76734	EL	EET MID	03/27/24 12:12
Total/NA	Analysis	8015B NM		1	76669	SM	EET MID	03/27/24 19:48
Soluble	Leach	DI Leach			76738	SA	EET MID	03/27/24 12:17
Soluble	Analysis	300.0		1	76756	SMC	EET MID	03/28/24 00:14

**Client Sample ID: BH24-22 0ft**  
**Date Collected: 03/21/24 12:30**  
**Date Received: 03/23/24 10:40**

**Lab Sample ID: 885-1706-3**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76689	EL	EET MID	03/27/24 09:11
Total/NA	Analysis	8021B		1	76683	MNR	EET MID	03/27/24 19:15
Total/NA	Prep	8015NM Prep			76734	EL	EET MID	03/27/24 12:12
Total/NA	Analysis	8015B NM		1	76669	SM	EET MID	03/27/24 20:10
Soluble	Leach	DI Leach			76738	SA	EET MID	03/27/24 12:17
Soluble	Analysis	300.0		1	76756	SMC	EET MID	03/28/24 00:29

**Client Sample ID: BH24-23 0ft**  
**Date Collected: 03/21/24 12:45**  
**Date Received: 03/23/24 10:40**

**Lab Sample ID: 885-1706-4**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76689	EL	EET MID	03/27/24 09:11
Total/NA	Analysis	8021B		1	76683	MNR	EET MID	03/27/24 19:36
Total/NA	Prep	8015NM Prep			76734	EL	EET MID	03/27/24 12:12
Total/NA	Analysis	8015B NM		1	76669	SM	EET MID	03/27/24 20:32
Soluble	Leach	DI Leach			76738	SA	EET MID	03/27/24 12:17
Soluble	Analysis	300.0		1	76756	SMC	EET MID	03/28/24 00:34

Lab Chronicle

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

**Client Sample ID: BH24-25 0ft**  
**Date Collected: 03/21/24 13:00**  
**Date Received: 03/23/24 10:40**

**Lab Sample ID: 885-1706-5**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76689	EL	EET MID	03/27/24 09:11
Total/NA	Analysis	8021B		1	76683	MNR	EET MID	03/27/24 19:57
Total/NA	Prep	8015NM Prep			76734	EL	EET MID	03/27/24 12:12
Total/NA	Analysis	8015B NM		1	76669	SM	EET MID	03/27/24 20:53
Soluble	Leach	DI Leach			76738	SA	EET MID	03/27/24 12:17
Soluble	Analysis	300.0		1	76756	SMC	EET MID	03/28/24 00:38

**Client Sample ID: BH24-26 0ft**  
**Date Collected: 03/21/24 13:15**  
**Date Received: 03/23/24 10:40**

**Lab Sample ID: 885-1706-6**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76689	EL	EET MID	03/27/24 09:11
Total/NA	Analysis	8021B		1	76683	MNR	EET MID	03/27/24 20:17
Total/NA	Prep	8015NM Prep			76734	EL	EET MID	03/27/24 12:12
Total/NA	Analysis	8015B NM		1	76669	SM	EET MID	03/27/24 21:15
Soluble	Leach	DI Leach			76738	SA	EET MID	03/27/24 12:17
Soluble	Analysis	300.0		1	76756	SMC	EET MID	03/28/24 00:43

**Laboratory References:**  
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1706-1

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11





Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-1706-1

Login Number: 1706  
List Number: 1  
Creator: Casarrubias, Tracy

List Source: Eurofins Albuquerque

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

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-1706-1

Login Number: 1706  
List Number: 2  
Creator: Rodriguez, Leticia

List Source: Eurofins Midland  
List Creation: 03/27/24 11:39 AM

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



Environment Testing

- 1
- 2
- 3
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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Ms. Sally Carttar  
Vertex

3101 Boyd Dr

Carlsbad, New Mexico 88220

Generated 10/15/2024 1:40:29 PM Revision 1

## JOB DESCRIPTION

PLU 25 Brushy Draw West

## JOB NUMBER

885-1922-1

Eurofins Albuquerque  
4901 Hawkins NE  
Albuquerque NM 87109

# Eurofins Albuquerque

## Job Notes

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

## Authorization



Authorized for release by  
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[cheyenne.cason@et.eurofinsus.com](mailto:cheyenne.cason@et.eurofinsus.com)  
(505)345-3975

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Revision 1

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Laboratory Job ID: 885-1922-1



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Definitions/Glossary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

Qualifiers

GC Semi VOA

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

Glossary

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

## Case Narrative

Client: Vertex  
Project: PLU 25 Brushy Draw West

Job ID: 885-1922-1

**Job ID: 885-1922-1**

**Eurofins Albuquerque**

**Job Narrative  
885-1922-1**

### REVISION

The report being provided is a revision of the original report sent on 4/3/2024. The report (revision 1) is being revised due to Changed BH24-23 0' to BH24-23 2'.

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 3/28/2024 8:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.7°C.

### **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 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-76919 and analytical batch 880-76887 was outside the upper control limits.

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

### **HPLC/IC**

Method 300\_ORGFM\_28D - Soluble: The Chloride matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-77127 and analytical batch 880-77142 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

BH24-21 2ft (885-1922-1), BH24-22 2ft (885-1922-2), BH24-23 2ft (885-1922-3), BH24-30 0ft (885-1922-4), BH24-25 1ft (885-1922-5) and BH24-26 2ft (885-1922-6)

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

Eurofins Albuquerque



Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

Client Sample ID: BH24-21 2ft

Lab Sample ID: 885-1922-1

Date Collected: 03/22/24 10:00

Matrix: Solid

Date Received: 03/28/24 08:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 16:01	1	
Toluene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 16:01	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 16:01	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/29/24 12:05	03/29/24 16:01	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	80		70 - 130			03/29/24 12:05	03/29/24 16:01	1	
1,4-Difluorobenzene (Surr)	102		70 - 130			03/29/24 12:05	03/29/24 16:01	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/29/24 12:09	03/29/24 13:47	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 13:47	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 13:47	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	99		70 - 130			03/29/24 12:09	03/29/24 13:47	1	
o-Terphenyl	83		70 - 130			03/29/24 12:09	03/29/24 13:47	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	50		5.0	mg/Kg			04/02/24 18:55	1	

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

Client Sample ID: BH24-22 2ft      Lab Sample ID: 885-1922-2  
Date Collected: 03/22/24 10:30      Matrix: Solid  
Date Received: 03/28/24 08:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 16:21	1	
Toluene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 16:21	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 16:21	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/29/24 12:05	03/29/24 16:21	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	96		70 - 130			03/29/24 12:05	03/29/24 16:21	1	
1,4-Difluorobenzene (Surr)	90		70 - 130			03/29/24 12:05	03/29/24 16:21	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/29/24 12:09	03/29/24 14:08	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 14:08	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 14:08	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	93		70 - 130			03/29/24 12:09	03/29/24 14:08	1	
o-Terphenyl	80		70 - 130			03/29/24 12:09	03/29/24 14:08	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	31		5.1	mg/Kg			04/02/24 19:01	1	

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

Client Sample ID: BH24-23 2ft

Lab Sample ID: 885-1922-3

Date Collected: 03/22/24 11:00

Matrix: Solid

Date Received: 03/28/24 08:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 17:45	1	
Toluene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 17:45	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 17:45	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/29/24 12:05	03/29/24 17:45	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	77		70 - 130			03/29/24 12:05	03/29/24 17:45	1	
1,4-Difluorobenzene (Surr)	104		70 - 130			03/29/24 12:05	03/29/24 17:45	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/29/24 12:09	03/29/24 14:30	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 14:30	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 14:30	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	100		70 - 130			03/29/24 12:09	03/29/24 14:30	1	
o-Terphenyl	84		70 - 130			03/29/24 12:09	03/29/24 14:30	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	29		5.0	mg/Kg			04/02/24 19:20	1	

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

Client Sample ID: BH24-30 0ft      Lab Sample ID: 885-1922-4  
Date Collected: 03/22/24 14:00      Matrix: Solid  
Date Received: 03/28/24 08:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 18:06	1	
Toluene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 18:06	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 18:06	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/29/24 12:05	03/29/24 18:06	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	80		70 - 130			03/29/24 12:05	03/29/24 18:06	1	
1,4-Difluorobenzene (Surr)	102		70 - 130			03/29/24 12:05	03/29/24 18:06	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/29/24 12:09	03/29/24 14:52	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 14:52	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 14:52	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	90		70 - 130			03/29/24 12:09	03/29/24 14:52	1	
o-Terphenyl	75		70 - 130			03/29/24 12:09	03/29/24 14:52	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	120		5.0	mg/Kg			04/02/24 19:26	1	

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

Client Sample ID: BH24-25 1ft      Lab Sample ID: 885-1922-5  
Date Collected: 03/22/24 11:00      Matrix: Solid  
Date Received: 03/28/24 08:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 18:26	1	
Toluene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 18:26	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 18:26	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/29/24 12:05	03/29/24 18:26	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		70 - 130			03/29/24 12:05	03/29/24 18:26	1	
1,4-Difluorobenzene (Surr)	87		70 - 130			03/29/24 12:05	03/29/24 18:26	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/29/24 12:09	03/29/24 15:14	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 15:14	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 15:14	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	113		70 - 130			03/29/24 12:09	03/29/24 15:14	1	
o-Terphenyl	96		70 - 130			03/29/24 12:09	03/29/24 15:14	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	120		5.0	mg/Kg			04/02/24 19:32	1	

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

Client Sample ID: BH24-26 2ft      Lab Sample ID: 885-1922-6  
Date Collected: 03/22/24 12:00      Matrix: Solid  
Date Received: 03/28/24 08:40

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 18:46	1	
Toluene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 18:46	1	
Ethylbenzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 18:46	1	
Xylenes, Total	ND		0.0040	mg/Kg		03/29/24 12:05	03/29/24 18:46	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	85		70 - 130			03/29/24 12:05	03/29/24 18:46	1	
1,4-Difluorobenzene (Surr)	90		70 - 130			03/29/24 12:05	03/29/24 18:46	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/29/24 12:09	03/29/24 15:35	1	
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 15:35	1	
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/29/24 12:09	03/29/24 15:35	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	103		70 - 130			03/29/24 12:09	03/29/24 15:35	1	
o-Terphenyl	86		70 - 130			03/29/24 12:09	03/29/24 15:35	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	96		5.0	mg/Kg			04/02/24 19:39	1	

## QC Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

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

Lab Sample ID: MB 880-76918/5-A

Matrix: Solid

Analysis Batch: 76894

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76918

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 12:54	1
Toluene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 12:54	1
Ethylbenzene	ND		0.0020	mg/Kg		03/29/24 12:05	03/29/24 12:54	1
Xylenes, Total	ND		0.0040	mg/Kg		03/29/24 12:05	03/29/24 12:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	03/29/24 12:05	03/29/24 12:54	1
1,4-Difluorobenzene (Surr)	100		70 - 130	03/29/24 12:05	03/29/24 12:54	1

Lab Sample ID: LCS 880-76918/1-A

Matrix: Solid

Analysis Batch: 76894

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 76918

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.112		mg/Kg		112	70 - 130
Toluene	0.100	0.109		mg/Kg		109	70 - 130
Ethylbenzene	0.100	0.104		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	0.200	0.201		mg/Kg		101	70 - 130
o-Xylene	0.100	0.0989		mg/Kg		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		70 - 130
1,4-Difluorobenzene (Surr)	120		70 - 130

Lab Sample ID: LCSD 880-76918/2-A

Matrix: Solid

Analysis Batch: 76894

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 76918

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.105		mg/Kg		105	70 - 130	6	35
Toluene	0.100	0.100		mg/Kg		100	70 - 130	9	35
Ethylbenzene	0.100	0.0941		mg/Kg		94	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.188		mg/Kg		94	70 - 130	7	35
o-Xylene	0.100	0.0916		mg/Kg		92	70 - 130	8	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	120		70 - 130

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-76919/1-A

Matrix: Solid

Analysis Batch: 76887

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76919

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		50	mg/Kg		03/29/24 09:00	03/29/24 09:33	1

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## QC Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

## Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-76919/1-A

Matrix: Solid

Analysis Batch: 76887

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 76919

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	ND		50	mg/Kg		03/29/24 09:00	03/29/24 09:33	1
Oil Range Organics (Over C28-C36)	ND		50	mg/Kg		03/29/24 09:00	03/29/24 09:33	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	182	S1+	70 - 130			03/29/24 09:00	03/29/24 09:33	1
o-Terphenyl	168	S1+	70 - 130			03/29/24 09:00	03/29/24 09:33	1

Lab Sample ID: LCS 880-76919/2-A

Matrix: Solid

Analysis Batch: 76887

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 76919

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	912		mg/Kg		91	70 - 130
Diesel Range Organics (Over C10-C28)	1000	915		mg/Kg		91	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	105		70 - 130				
o-Terphenyl	105		70 - 130				

Lab Sample ID: LCSD 880-76919/3-A

Matrix: Solid

Analysis Batch: 76887

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 76919

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	959		mg/Kg		96	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	923		mg/Kg		92	70 - 130	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	104		70 - 130						
o-Terphenyl	105		70 - 130						

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-77127/1-A

Matrix: Solid

Analysis Batch: 77142

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0	mg/Kg			04/02/24 18:05	1

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QC Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-77127/2-A

Matrix: Solid

Analysis Batch: 77142

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	251		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-77127/3-A

Matrix: Solid

Analysis Batch: 77142

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	251		mg/Kg		100	90 - 110	0	20

## QC Association Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

## GC VOA

## Analysis Batch: 76894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1922-1	BH24-21 2ft	Total/NA	Solid	8021B	76918
885-1922-2	BH24-22 2ft	Total/NA	Solid	8021B	76918
885-1922-3	BH24-23 2ft	Total/NA	Solid	8021B	76918
885-1922-4	BH24-30 0ft	Total/NA	Solid	8021B	76918
885-1922-5	BH24-25 1ft	Total/NA	Solid	8021B	76918
885-1922-6	BH24-26 2ft	Total/NA	Solid	8021B	76918
MB 880-76918/5-A	Method Blank	Total/NA	Solid	8021B	76918
LCS 880-76918/1-A	Lab Control Sample	Total/NA	Solid	8021B	76918
LCSD 880-76918/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	76918

## Prep Batch: 76918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1922-1	BH24-21 2ft	Total/NA	Solid	5035	
885-1922-2	BH24-22 2ft	Total/NA	Solid	5035	
885-1922-3	BH24-23 2ft	Total/NA	Solid	5035	
885-1922-4	BH24-30 0ft	Total/NA	Solid	5035	
885-1922-5	BH24-25 1ft	Total/NA	Solid	5035	
885-1922-6	BH24-26 2ft	Total/NA	Solid	5035	
MB 880-76918/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-76918/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-76918/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

## GC Semi VOA

## Analysis Batch: 76887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1922-1	BH24-21 2ft	Total/NA	Solid	8015B NM	76919
885-1922-2	BH24-22 2ft	Total/NA	Solid	8015B NM	76919
885-1922-3	BH24-23 2ft	Total/NA	Solid	8015B NM	76919
885-1922-4	BH24-30 0ft	Total/NA	Solid	8015B NM	76919
885-1922-5	BH24-25 1ft	Total/NA	Solid	8015B NM	76919
885-1922-6	BH24-26 2ft	Total/NA	Solid	8015B NM	76919
MB 880-76919/1-A	Method Blank	Total/NA	Solid	8015B NM	76919
LCS 880-76919/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	76919
LCSD 880-76919/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	76919

## Prep Batch: 76919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1922-1	BH24-21 2ft	Total/NA	Solid	8015NM Prep	
885-1922-2	BH24-22 2ft	Total/NA	Solid	8015NM Prep	
885-1922-3	BH24-23 2ft	Total/NA	Solid	8015NM Prep	
885-1922-4	BH24-30 0ft	Total/NA	Solid	8015NM Prep	
885-1922-5	BH24-25 1ft	Total/NA	Solid	8015NM Prep	
885-1922-6	BH24-26 2ft	Total/NA	Solid	8015NM Prep	
MB 880-76919/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-76919/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-76919/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

HPLC/IC

Leach Batch: 77127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1922-1	BH24-21 2ft	Soluble	Solid	DI Leach	
885-1922-2	BH24-22 2ft	Soluble	Solid	DI Leach	
885-1922-3	BH24-23 2ft	Soluble	Solid	DI Leach	
885-1922-4	BH24-30 0ft	Soluble	Solid	DI Leach	
885-1922-5	BH24-25 1ft	Soluble	Solid	DI Leach	
885-1922-6	BH24-26 2ft	Soluble	Solid	DI Leach	
MB 880-77127/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-77127/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-77127/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 77142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1922-1	BH24-21 2ft	Soluble	Solid	300.0	77127
885-1922-2	BH24-22 2ft	Soluble	Solid	300.0	77127
885-1922-3	BH24-23 2ft	Soluble	Solid	300.0	77127
885-1922-4	BH24-30 0ft	Soluble	Solid	300.0	77127
885-1922-5	BH24-25 1ft	Soluble	Solid	300.0	77127
885-1922-6	BH24-26 2ft	Soluble	Solid	300.0	77127
MB 880-77127/1-A	Method Blank	Soluble	Solid	300.0	77127
LCS 880-77127/2-A	Lab Control Sample	Soluble	Solid	300.0	77127
LCSD 880-77127/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	77127

Lab Chronicle

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

**Client Sample ID: BH24-21 2ft**  
**Date Collected: 03/22/24 10:00**  
**Date Received: 03/28/24 08:40**

**Lab Sample ID: 885-1922-1**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76918	EL	EET MID	03/29/24 12:05
Total/NA	Analysis	8021B		1	76894	MNR	EET MID	03/29/24 16:01
Total/NA	Prep	8015NM Prep			76919	EL	EET MID	03/29/24 12:09
Total/NA	Analysis	8015B NM		1	76887	SM	EET MID	03/29/24 13:47
Soluble	Leach	DI Leach			77127	SA	EET MID	04/02/24 13:45
Soluble	Analysis	300.0		1	77142	SMC	EET MID	04/02/24 18:55

**Client Sample ID: BH24-22 2ft**  
**Date Collected: 03/22/24 10:30**  
**Date Received: 03/28/24 08:40**

**Lab Sample ID: 885-1922-2**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76918	EL	EET MID	03/29/24 12:05
Total/NA	Analysis	8021B		1	76894	MNR	EET MID	03/29/24 16:21
Total/NA	Prep	8015NM Prep			76919	EL	EET MID	03/29/24 12:09
Total/NA	Analysis	8015B NM		1	76887	SM	EET MID	03/29/24 14:08
Soluble	Leach	DI Leach			77127	SA	EET MID	04/02/24 13:45
Soluble	Analysis	300.0		1	77142	SMC	EET MID	04/02/24 19:01

**Client Sample ID: BH24-23 2ft**  
**Date Collected: 03/22/24 11:00**  
**Date Received: 03/28/24 08:40**

**Lab Sample ID: 885-1922-3**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76918	EL	EET MID	03/29/24 12:05
Total/NA	Analysis	8021B		1	76894	MNR	EET MID	03/29/24 17:45
Total/NA	Prep	8015NM Prep			76919	EL	EET MID	03/29/24 12:09
Total/NA	Analysis	8015B NM		1	76887	SM	EET MID	03/29/24 14:30
Soluble	Leach	DI Leach			77127	SA	EET MID	04/02/24 13:45
Soluble	Analysis	300.0		1	77142	SMC	EET MID	04/02/24 19:20

**Client Sample ID: BH24-30 0ft**  
**Date Collected: 03/22/24 14:00**  
**Date Received: 03/28/24 08:40**

**Lab Sample ID: 885-1922-4**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76918	EL	EET MID	03/29/24 12:05
Total/NA	Analysis	8021B		1	76894	MNR	EET MID	03/29/24 18:06
Total/NA	Prep	8015NM Prep			76919	EL	EET MID	03/29/24 12:09
Total/NA	Analysis	8015B NM		1	76887	SM	EET MID	03/29/24 14:52
Soluble	Leach	DI Leach			77127	SA	EET MID	04/02/24 13:45
Soluble	Analysis	300.0		1	77142	SMC	EET MID	04/02/24 19:26

Lab Chronicle

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

**Client Sample ID: BH24-25 1ft**  
**Date Collected: 03/22/24 11:00**  
**Date Received: 03/28/24 08:40**

**Lab Sample ID: 885-1922-5**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76918	EL	EET MID	03/29/24 12:05
Total/NA	Analysis	8021B		1	76894	MNR	EET MID	03/29/24 18:26
Total/NA	Prep	8015NM Prep			76919	EL	EET MID	03/29/24 12:09
Total/NA	Analysis	8015B NM		1	76887	SM	EET MID	03/29/24 15:14
Soluble	Leach	DI Leach			77127	SA	EET MID	04/02/24 13:45
Soluble	Analysis	300.0		1	77142	SMC	EET MID	04/02/24 19:32

**Client Sample ID: BH24-26 2ft**  
**Date Collected: 03/22/24 12:00**  
**Date Received: 03/28/24 08:40**

**Lab Sample ID: 885-1922-6**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			76918	EL	EET MID	03/29/24 12:05
Total/NA	Analysis	8021B		1	76894	MNR	EET MID	03/29/24 18:46
Total/NA	Prep	8015NM Prep			76919	EL	EET MID	03/29/24 12:09
Total/NA	Analysis	8015B NM		1	76887	SM	EET MID	03/29/24 15:35
Soluble	Leach	DI Leach			77127	SA	EET MID	04/02/24 13:45
Soluble	Analysis	300.0		1	77142	SMC	EET MID	04/02/24 19:39

**Laboratory References:**  
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-1922-1

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11





Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-1922-1

Login Number: 1922  
List Number: 1  
Creator: Lowman, Nick

List Source: Eurofins Albuquerque

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

## Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-1922-1

Login Number: 1922

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 03/29/24 10:53 AM

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



Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 4/9/2024 4:01:11 PM

## JOB DESCRIPTION

PLU 25 Brushy Draw West

## JOB NUMBER

885-2016-1

Eurofins Albuquerque  
4901 Hawkins NE  
Albuquerque NM 87109

# Eurofins Albuquerque

## Job Notes

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

## Authorization



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

Generated  
4/9/2024 4:01:11 PM

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Laboratory Job ID: 885-2016-1



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Definitions/Glossary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-2016-1

Glossary

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



Case Narrative

Client: Vertex  
Project: PLU 25 Brushy Draw West

Job ID: 885-2016-1

Job ID: 885-2016-1Eurofins Albuquerque

Job Narrative  
885-2016-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

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

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

Receipt

The sample was received on 3/29/2024 7:55 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.3°C.

Gasoline Range Organics

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

GC VOA

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

Diesel Range Organics

Method 8015D\_DRO: The continuing calibration verification (CCV) associated with batch 885-2722 recovered above the upper control limit for Di-n-octyl phthalate (Surr). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

HPLC/IC

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

Eurofins Albuquerque

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-2016-1

Client Sample ID: BH24-30 2ft  
Date Collected: 03/26/24 10:30  
Date Received: 03/29/24 07:55

Lab Sample ID: 885-2016-1  
Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		03/29/24 15:54	04/03/24 08:12		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	111		15 - 244			03/29/24 15:54	04/03/24 08:12		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		03/29/24 15:54	04/03/24 08:12		1
Ethylbenzene	ND		0.050	mg/Kg		03/29/24 15:54	04/03/24 08:12		1
Toluene	ND		0.050	mg/Kg		03/29/24 15:54	04/03/24 08:12		1
Xylenes, Total	ND		0.10	mg/Kg		03/29/24 15:54	04/03/24 08:12		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		39 - 146			03/29/24 15:54	04/03/24 08:12		1
Method: SW846 8015D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.2	mg/Kg		04/01/24 16:29	04/03/24 11:54		1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		04/01/24 16:29	04/03/24 11:54		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	96		62 - 134			04/01/24 16:29	04/03/24 11:54		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		04/02/24 09:41	04/02/24 13:50		20

## QC Sample Results

Client: Vertex

Job ID: 885-2016-1

Project/Site: PLU 25 Brushy Draw West

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

Lab Sample ID: MB 885-2523/1-A

Matrix: Solid

Analysis Batch: 2726

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2523

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		03/29/24 15:54	04/02/24 23:51	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		15 - 244			03/29/24 15:54	04/02/24 23:51	1

Lab Sample ID: LCS 885-2523/2-A

Matrix: Solid

Analysis Batch: 2726

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 2523

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics [C6 - C10]	25.0	24.6		mg/Kg		99	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)	221		15 - 244					

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

Lab Sample ID: MB 885-2518/1-A

Matrix: Solid

Analysis Batch: 2731

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2518

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		03/29/24 14:08	04/02/24 12:57	1
Ethylbenzene	ND		0.050	mg/Kg		03/29/24 14:08	04/02/24 12:57	1
Toluene	ND		0.050	mg/Kg		03/29/24 14:08	04/02/24 12:57	1
Xylenes, Total	ND		0.10	mg/Kg		03/29/24 14:08	04/02/24 12:57	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		39 - 146			03/29/24 14:08	04/02/24 12:57	1

Lab Sample ID: MB 885-2523/1-A

Matrix: Solid

Analysis Batch: 2731

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2523

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		03/29/24 15:54	04/02/24 23:51	1
Ethylbenzene	ND		0.050	mg/Kg		03/29/24 15:54	04/02/24 23:51	1
Toluene	ND		0.050	mg/Kg		03/29/24 15:54	04/02/24 23:51	1
Xylenes, Total	ND		0.10	mg/Kg		03/29/24 15:54	04/02/24 23:51	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		39 - 146			03/29/24 15:54	04/02/24 23:51	1

Eurofins Albuquerque

## QC Sample Results

Client: Vertex

Job ID: 885-2016-1

Project/Site: PLU 25 Brushy Draw West

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

Lab Sample ID: LCS 885-2523/3-A

Matrix: Solid

Analysis Batch: 2731

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 2523

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.932		mg/Kg		93	70 - 130
Ethylbenzene	1.00	0.935		mg/Kg		93	70 - 130
m,p-Xylene	2.00	1.89		mg/Kg		95	70 - 130
o-Xylene	1.00	0.942		mg/Kg		94	70 - 130
Toluene	1.00	0.968		mg/Kg		97	70 - 130
Xylenes, Total	3.00	2.83		mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		39 - 146

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

Lab Sample ID: MB 885-2574/1-A

Matrix: Solid

Analysis Batch: 2722

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2574

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		04/01/24 16:29	04/03/24 11:30	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		04/01/24 16:29	04/03/24 11:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	106		62 - 134	04/01/24 16:29	04/03/24 11:30	1

Lab Sample ID: LCS 885-2574/2-A

Matrix: Solid

Analysis Batch: 2722

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 2574

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	49.3		mg/Kg		99	60 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	128		62 - 134

Lab Sample ID: 885-2016-1 MS

Matrix: Solid

Analysis Batch: 2722

Client Sample ID: BH24-30 2ft

Prep Type: Total/NA

Prep Batch: 2574

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	ND		45.0	42.8		mg/Kg		95	44 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
Di-n-octyl phthalate (Surr)	105		62 - 134

Eurofins Albuquerque

## QC Sample Results

Client: Vertex

Job ID: 885-2016-1

Project/Site: PLU 25 Brushy Draw West

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

Lab Sample ID: 885-2016-1 MSD

Matrix: Solid

Analysis Batch: 2722

Client Sample ID: BH24-30 2ft

Prep Type: Total/NA

Prep Batch: 2574

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		46.4	41.9		mg/Kg		90	44 - 136	2	32
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Di-n-octyl phthalate (Surr)	110		62 - 134								

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-2604/1-A

Matrix: Solid

Analysis Batch: 2667

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2604

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		04/02/24 09:41	04/02/24 10:37	1

Lab Sample ID: LCS 885-2604/2-A

Matrix: Solid

Analysis Batch: 2667

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 2604

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	28.0		mg/Kg		93	90 - 110

Lab Sample ID: 885-2016-1 MS

Matrix: Solid

Analysis Batch: 2667

Client Sample ID: BH24-30 2ft

Prep Type: Total/NA

Prep Batch: 2604

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	ND		29.7	84.7		mg/Kg		NC	50 - 150

Lab Sample ID: 885-2016-1 MSD

Matrix: Solid

Analysis Batch: 2667

Client Sample ID: BH24-30 2ft

Prep Type: Total/NA

Prep Batch: 2604

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	ND		29.8	83.1		mg/Kg		NC	50 - 150	2	20

Eurofins Albuquerque

QC Association Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-2016-1

GC VOA

Prep Batch: 2518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-2518/1-A	Method Blank	Total/NA	Solid	5030C	

Prep Batch: 2523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2016-1	BH24-30 2ft	Total/NA	Solid	5030C	
MB 885-2523/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-2523/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-2523/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 2726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2016-1	BH24-30 2ft	Total/NA	Solid	8015D	2523
MB 885-2523/1-A	Method Blank	Total/NA	Solid	8015D	2523
LCS 885-2523/2-A	Lab Control Sample	Total/NA	Solid	8015D	2523

Analysis Batch: 2731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2016-1	BH24-30 2ft	Total/NA	Solid	8021B	2523
MB 885-2518/1-A	Method Blank	Total/NA	Solid	8021B	2518
MB 885-2523/1-A	Method Blank	Total/NA	Solid	8021B	2523
LCS 885-2523/3-A	Lab Control Sample	Total/NA	Solid	8021B	2523

GC Semi VOA

Prep Batch: 2574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2016-1	BH24-30 2ft	Total/NA	Solid	SHAKE	
MB 885-2574/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-2574/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-2016-1 MS	BH24-30 2ft	Total/NA	Solid	SHAKE	
885-2016-1 MSD	BH24-30 2ft	Total/NA	Solid	SHAKE	

Analysis Batch: 2722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2016-1	BH24-30 2ft	Total/NA	Solid	8015D	2574
MB 885-2574/1-A	Method Blank	Total/NA	Solid	8015D	2574
LCS 885-2574/2-A	Lab Control Sample	Total/NA	Solid	8015D	2574
885-2016-1 MS	BH24-30 2ft	Total/NA	Solid	8015D	2574
885-2016-1 MSD	BH24-30 2ft	Total/NA	Solid	8015D	2574

HPLC/IC

Prep Batch: 2604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2016-1	BH24-30 2ft	Total/NA	Solid	300_Prep	
MB 885-2604/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-2604/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-2016-1 MS	BH24-30 2ft	Total/NA	Solid	300_Prep	
885-2016-1 MSD	BH24-30 2ft	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-2016-1

HPLC/IC

Analysis Batch: 2667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-2016-1	BH24-30 2ft	Total/NA	Solid	300.0	2604
MB 885-2604/1-A	Method Blank	Total/NA	Solid	300.0	2604
LCS 885-2604/2-A	Lab Control Sample	Total/NA	Solid	300.0	2604
885-2016-1 MS	BH24-30 2ft	Total/NA	Solid	300.0	2604
885-2016-1 MSD	BH24-30 2ft	Total/NA	Solid	300.0	2604



Lab Chronicle

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-2016-1

Client Sample ID: BH24-30 2ft

Lab Sample ID: 885-2016-1

Date Collected: 03/26/24 10:30

Matrix: Solid

Date Received: 03/29/24 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			2523	IMR	EET ALB	03/29/24 15:54
Total/NA	Analysis	8015D		1	2726	RA	EET ALB	04/03/24 08:12
Total/NA	Prep	5030C			2523	IMR	EET ALB	03/29/24 15:54
Total/NA	Analysis	8021B		1	2731	RA	EET ALB	04/03/24 08:12
Total/NA	Prep	SHAKE			2574	JU	EET ALB	04/01/24 16:29
Total/NA	Analysis	8015D		1	2722	JU	EET ALB	04/03/24 11:54
Total/NA	Prep	300_Prep			2604	JT	EET ALB	04/02/24 09:41
Total/NA	Analysis	300.0		20	2667	JT	EET ALB	04/02/24 13:50

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

Accreditation/Certification Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-2016-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25

## Chain-of-Custody Record

**Client: Vertex (XTO)**

☒ Standard    ☒ Rush    5 Days

**Mailing Address: On File**

Phone #: On File

**Email or Fax#: [Scatter@vertex.ca](mailto:Scatter@vertex.ca)**

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ Other \_\_\_\_\_  
☐ NELAC

☐ EDD (Type) .

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 871

885-2016 COC

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

## Analysis Request

[illegible]

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

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-2016-1

Login Number: 2016  
List Number: 1  
Creator: Dominguez, Desiree

List Source: Eurofins Albuquerque

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



Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 7/12/2024 10:24:37 AM

## JOB DESCRIPTION

PLU 25 Brushy Draw West

## JOB NUMBER

885-6878-1

Eurofins Albuquerque  
4901 Hawkins NE  
Albuquerque NM 87109

# Eurofins Albuquerque

## Job Notes

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

## Authorization



Authorized for release by  
Cheyenne Cason, Project Manager  
[cheyenne.cason@et.eurofinsus.com](mailto:cheyenne.cason@et.eurofinsus.com)  
(505)345-3975

Generated  
7/12/2024 10:24:37 AM

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Laboratory Job ID: 885-6878-1



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Definitions/Glossary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Qualifiers

GC VOA

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

Glossary

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

## Case Narrative

Client: Vertex  
Project: PLU 25 Brushy Draw West

Job ID: 885-6878-1

**Job ID: 885-6878-1**

**Eurofins Albuquerque**

### Job Narrative 885-6878-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

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

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

#### Receipt

The samples were received on 6/26/2024 7:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.4°C.

#### Gasoline Range Organics

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

#### GC VOA

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

#### Diesel Range Organics

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

#### HPLC/IC

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

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## Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-05 0.0'

Lab Sample ID: 885-6878-1

Date Collected: 06/24/24 10:00

Matrix: Solid

Date Received: 06/26/24 07:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.8	mg/Kg		06/26/24 11:16	07/03/24 16:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		35 - 166			06/26/24 11:16	07/03/24 16:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		06/26/24 11:16	07/03/24 16:29	1
Ethylbenzene	ND		0.048	mg/Kg		06/26/24 11:16	07/03/24 16:29	1
Toluene	ND		0.048	mg/Kg		06/26/24 11:16	07/03/24 16:29	1
Xylenes, Total	ND		0.096	mg/Kg		06/26/24 11:16	07/03/24 16:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		48 - 145			06/26/24 11:16	07/03/24 16:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.2	mg/Kg		06/26/24 13:39	06/27/24 07:11	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		06/26/24 13:39	06/27/24 07:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	122		62 - 134			06/26/24 13:39	06/27/24 07:11	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11000		600	mg/Kg		06/27/24 10:14	06/28/24 22:13	200

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## Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-07 0.0'

Lab Sample ID: 885-6878-2

Date Collected: 06/24/24 10:05

Matrix: Solid

Date Received: 06/26/24 07:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.9	mg/Kg		06/26/24 11:16	07/03/24 16:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		35 - 166			06/26/24 11:16	07/03/24 16:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		06/26/24 11:16	07/03/24 16:53	1
Ethylbenzene	ND		0.049	mg/Kg		06/26/24 11:16	07/03/24 16:53	1
Toluene	ND		0.049	mg/Kg		06/26/24 11:16	07/03/24 16:53	1
Xylenes, Total	ND		0.098	mg/Kg		06/26/24 11:16	07/03/24 16:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		48 - 145			06/26/24 11:16	07/03/24 16:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.8	mg/Kg		06/26/24 13:39	06/27/24 07:23	1
Motor Oil Range Organics [C28-C40]	ND		44	mg/Kg		06/26/24 13:39	06/27/24 07:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	103		62 - 134			06/26/24 13:39	06/27/24 07:23	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	370		60	mg/Kg		06/27/24 10:14	06/27/24 22:57	20

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## Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-07 1.5'

Lab Sample ID: 885-6878-3

Date Collected: 06/24/24 10:20

Matrix: Solid

Date Received: 06/26/24 07:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 11:16	07/03/24 17:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		35 - 166			06/26/24 11:16	07/03/24 17:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		06/26/24 11:16	07/03/24 17:17	1
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 11:16	07/03/24 17:17	1
Toluene	ND		0.050	mg/Kg		06/26/24 11:16	07/03/24 17:17	1
Xylenes, Total	ND		0.10	mg/Kg		06/26/24 11:16	07/03/24 17:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		48 - 145			06/26/24 11:16	07/03/24 17:17	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		8.9	mg/Kg		06/26/24 13:39	06/27/24 07:36	1
Motor Oil Range Organics [C28-C40]	ND		44	mg/Kg		06/26/24 13:39	06/27/24 07:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	98		62 - 134			06/26/24 13:39	06/27/24 07:36	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	95		60	mg/Kg		06/27/24 10:14	06/27/24 23:10	20

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## Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-09 0.0'

Lab Sample ID: 885-6878-4

Date Collected: 06/24/24 10:25

Matrix: Solid

Date Received: 06/26/24 07:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 11:16	07/03/24 18:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		35 - 166			06/26/24 11:16	07/03/24 18:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		06/26/24 11:16	07/03/24 18:04	1
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 11:16	07/03/24 18:04	1
Toluene	ND		0.050	mg/Kg		06/26/24 11:16	07/03/24 18:04	1
Xylenes, Total	ND		0.099	mg/Kg		06/26/24 11:16	07/03/24 18:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		48 - 145			06/26/24 11:16	07/03/24 18:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3	mg/Kg		06/26/24 13:39	06/27/24 07:48	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		06/26/24 13:39	06/27/24 07:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	109		62 - 134			06/26/24 13:39	06/27/24 07:48	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10000		600	mg/Kg		06/27/24 10:14	06/28/24 22:52	200

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## Client Sample Results

Client: Vertex

Job ID: 885-6878-1

Project/Site: PLU 25 Brushy Draw West

Client Sample ID: BH24-10 0.0'

Lab Sample ID: 885-6878-5

Date Collected: 06/24/24 10:30

Matrix: Solid

Date Received: 06/26/24 07:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 15:02	06/28/24 14:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		35 - 166			06/26/24 15:02	06/28/24 14:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		06/26/24 15:02	06/28/24 14:15	0
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 14:15	0
Toluene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 14:15	0
Xylenes, Total	ND		0.10	mg/Kg		06/26/24 15:02	06/28/24 14:15	0
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		48 - 145			06/26/24 15:02	06/28/24 14:15	0

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	23		9.7	mg/Kg		06/27/24 08:15	06/27/24 13:00	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		06/27/24 08:15	06/27/24 13:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	98		62 - 134			06/27/24 08:15	06/27/24 13:00	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17000		600	mg/Kg		06/27/24 10:14	06/28/24 23:04	200

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## Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-11 0.0'

Lab Sample ID: 885-6878-6

Date Collected: 06/24/24 10:35

Matrix: Solid

Date Received: 06/26/24 07:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 15:02	06/28/24 15:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		35 - 166			06/26/24 15:02	06/28/24 15:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		06/26/24 15:02	06/28/24 15:21	1
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 15:21	1
Toluene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 15:21	1
Xylenes, Total	ND		0.10	mg/Kg		06/26/24 15:02	06/28/24 15:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		48 - 145			06/26/24 15:02	06/28/24 15:21	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		9.0	mg/Kg		06/27/24 08:15	06/27/24 13:12	1
Motor Oil Range Organics [C28-C40]	ND		45	mg/Kg		06/27/24 08:15	06/27/24 13:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	99		62 - 134			06/27/24 08:15	06/27/24 13:12	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6700		300	mg/Kg		06/27/24 10:14	06/28/24 23:17	100

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## Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-11 1.5'

Lab Sample ID: 885-6878-7

Date Collected: 06/24/24 10:45

Matrix: Solid

Date Received: 06/26/24 07:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 15:02	06/28/24 16:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		35 - 166			06/26/24 15:02	06/28/24 16:27	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		06/26/24 15:02	06/28/24 16:27	1
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 16:27	1
Toluene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 16:27	1
Xylenes, Total	ND		0.10	mg/Kg		06/26/24 15:02	06/28/24 16:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		48 - 145			06/26/24 15:02	06/28/24 16:27	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.8	mg/Kg		06/27/24 08:15	06/27/24 13:25	1
Motor Oil Range Organics [C28-C40]	ND		44	mg/Kg		06/27/24 08:15	06/27/24 13:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	100		62 - 134			06/27/24 08:15	06/27/24 13:25	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	280		59	mg/Kg		06/27/24 10:14	06/28/24 00:27	20

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Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-31 0.0'

Lab Sample ID: 885-6878-8

Date Collected: 06/24/24 10:50

Matrix: Solid

Date Received: 06/26/24 07:50

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 15:02	06/28/24 16:49		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	101		35 - 166			06/26/24 15:02	06/28/24 16:49		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		06/26/24 15:02	06/28/24 16:49		1
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 16:49		1
Toluene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 16:49		1
Xylenes, Total	ND		0.099	mg/Kg		06/26/24 15:02	06/28/24 16:49		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		48 - 145			06/26/24 15:02	06/28/24 16:49		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.8	mg/Kg		06/27/24 08:15	06/27/24 13:38		1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		06/27/24 08:15	06/27/24 13:38		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	95		62 - 134			06/27/24 08:15	06/27/24 13:38		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	180		60	mg/Kg		06/27/24 10:14	06/28/24 00:40		20

## Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-32 0.0'

Lab Sample ID: 885-6878-9

Date Collected: 06/24/24 10:55

Matrix: Solid

Date Received: 06/26/24 07:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 15:02	06/28/24 17:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		35 - 166			06/26/24 15:02	06/28/24 17:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		06/26/24 15:02	06/28/24 17:33	1
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 17:33	1
Toluene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 17:33	1
Xylenes, Total	ND		0.099	mg/Kg		06/26/24 15:02	06/28/24 17:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		48 - 145			06/26/24 15:02	06/28/24 17:33	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		9.7	mg/Kg		06/27/24 08:15	06/27/24 13:50	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		06/27/24 08:15	06/27/24 13:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	99		62 - 134			06/27/24 08:15	06/27/24 13:50	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		60	mg/Kg		06/27/24 10:14	06/28/24 00:53	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-32 1.0'  
Date Collected: 06/24/24 11:10  
Date Received: 06/26/24 07:50

Lab Sample ID: 885-6878-10  
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		4.8	mg/Kg		06/26/24 15:02	06/28/24 17:55	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			06/26/24 15:02	06/28/24 17:55	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		06/26/24 15:02	06/28/24 17:55	1	
Ethylbenzene	ND		0.048	mg/Kg		06/26/24 15:02	06/28/24 17:55	1	
Toluene	ND		0.048	mg/Kg		06/26/24 15:02	06/28/24 17:55	1	
Xylenes, Total	ND		0.096	mg/Kg		06/26/24 15:02	06/28/24 17:55	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		48 - 145			06/26/24 15:02	06/28/24 17:55	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		9.6	mg/Kg		06/27/24 08:15	06/27/24 14:03	1	
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		06/27/24 08:15	06/27/24 14:03	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	100		62 - 134			06/27/24 08:15	06/27/24 14:03	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	60		60	mg/Kg		06/27/24 15:29	06/27/24 23:53	20	

## Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-33 0.0'

Lab Sample ID: 885-6878-11

Date Collected: 06/24/24 11:15

Matrix: Solid

Date Received: 06/26/24 07:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 15:02	06/28/24 18:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		35 - 166			06/26/24 15:02	06/28/24 18:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		06/26/24 15:02	06/28/24 18:17	1
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 18:17	1
Toluene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 18:17	1
Xylenes, Total	ND		0.10	mg/Kg		06/26/24 15:02	06/28/24 18:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		48 - 145			06/26/24 15:02	06/28/24 18:17	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		9.5	mg/Kg		06/27/24 08:15	06/27/24 14:15	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		06/27/24 08:15	06/27/24 14:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	99		62 - 134			06/27/24 08:15	06/27/24 14:15	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8300		300	mg/Kg		06/27/24 15:29	07/01/24 17:31	100

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Client Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-33 2.0'

Lab Sample ID: 885-6878-12

Date Collected: 06/24/24 11:30

Matrix: Solid

Date Received: 06/26/24 07:50

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		4.9	mg/Kg		06/26/24 15:02	06/28/24 18:39		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		35 - 166			06/26/24 15:02	06/28/24 18:39		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		06/26/24 15:02	06/28/24 18:39		1
Ethylbenzene	ND		0.049	mg/Kg		06/26/24 15:02	06/28/24 18:39		1
Toluene	ND		0.049	mg/Kg		06/26/24 15:02	06/28/24 18:39		1
Xylenes, Total	ND		0.098	mg/Kg		06/26/24 15:02	06/28/24 18:39		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		48 - 145			06/26/24 15:02	06/28/24 18:39		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		06/27/24 08:15	06/27/24 14:28		1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		06/27/24 08:15	06/27/24 14:28		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	103		62 - 134			06/27/24 08:15	06/27/24 14:28		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	620		60	mg/Kg		06/27/24 15:29	06/28/24 00:43		20



QC Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

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

Lab Sample ID: MB 885-7404/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7896						Prep Batch: 7404			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 11:16	07/03/24 14:55	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	96		35 - 166			06/26/24 11:16	07/03/24 14:55	1	

Lab Sample ID: LCS 885-7404/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7896						Prep Batch: 7404			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			25.0	26.5		mg/Kg		106	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	209	S1+	35 - 166						

Lab Sample ID: MB 885-7434/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7671						Prep Batch: 7434			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		06/26/24 15:02	06/28/24 08:42	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			06/26/24 15:02	06/28/24 08:42	1	

Lab Sample ID: LCS 885-7434/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7671						Prep Batch: 7434			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			25.0	25.6		mg/Kg		102	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	204	S1+	35 - 166						

Lab Sample ID: 885-6878-5 MS						Client Sample ID: BH24-10 0.0'			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7671						Prep Batch: 7434			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	ND		25.0	26.9		mg/Kg		108	70 - 130

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## QC Sample Results

Client: Vertex

Job ID: 885-6878-1

Project/Site: PLU 25 Brushy Draw West

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

Lab Sample ID: 885-6878-5 MS

Matrix: Solid

Analysis Batch: 7671

Client Sample ID: BH24-10 0.0'

Prep Type: Total/NA

Prep Batch: 7434

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	214	S1+	35 - 166

Lab Sample ID: 885-6878-5 MSD

Matrix: Solid

Analysis Batch: 7671

Client Sample ID: BH24-10 0.0'

Prep Type: Total/NA

Prep Batch: 7434

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	ND		25.0	24.9		mg/Kg		100	70 - 130	8	20
Surrogate	MSD	MSD									
	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	213	S1+	35 - 166								

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

Lab Sample ID: MB 885-7404/1-A

Matrix: Solid

Analysis Batch: 7897

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7404

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		06/26/24 11:16	07/03/24 14:55	1
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 11:16	07/03/24 14:55	1
Toluene	ND		0.050	mg/Kg		06/26/24 11:16	07/03/24 14:55	1
Xylenes, Total	ND		0.10	mg/Kg		06/26/24 11:16	07/03/24 14:55	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene (Surr)	88		48 - 145			06/26/24 11:16	07/03/24 14:55	1

Lab Sample ID: LCS 885-7404/3-A

Matrix: Solid

Analysis Batch: 7897

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7404

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.882		mg/Kg		88	70 - 130
Ethylbenzene	1.00	0.850		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	2.00	1.73		mg/Kg		87	70 - 130
o-Xylene	1.00	0.834		mg/Kg		83	70 - 130
Toluene	1.00	0.845		mg/Kg		85	70 - 130
Surrogate	LCS	LCS	Limits				
	%Recovery	Qualifier					
4-Bromofluorobenzene (Surr)	90		48 - 145				

Lab Sample ID: MB 885-7434/1-A

Matrix: Solid

Analysis Batch: 7673

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7434

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		06/26/24 15:02	06/28/24 08:42	1

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## QC Sample Results

Client: Vertex

Job ID: 885-6878-1

Project/Site: PLU 25 Brushy Draw West

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

Lab Sample ID: MB 885-7434/1-A

Matrix: Solid

Analysis Batch: 7673

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7434

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Ethylbenzene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 08:42	1
Toluene	ND		0.050	mg/Kg		06/26/24 15:02	06/28/24 08:42	1
Xylenes, Total	ND		0.10	mg/Kg		06/26/24 15:02	06/28/24 08:42	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene (Surr)	91		48 - 145			06/26/24 15:02	06/28/24 08:42	1

Lab Sample ID: LCS 885-7434/3-A

Matrix: Solid

Analysis Batch: 7673

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7434

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	1.00	0.895		mg/Kg		90	70 - 130
Ethylbenzene	1.00	0.908		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	2.00	1.83		mg/Kg		91	70 - 130
o-Xylene	1.00	0.918		mg/Kg		92	70 - 130
Toluene	1.00	0.897		mg/Kg		90	70 - 130
Surrogate	LCS	LCS	Limits			%Recovery	Qualifier
	%Recovery	Qualifier					
4-Bromofluorobenzene (Surr)	90		48 - 145				

Lab Sample ID: 885-6878-6 MS

Matrix: Solid

Analysis Batch: 7673

Client Sample ID: BH24-11 0.0'

Prep Type: Total/NA

Prep Batch: 7434

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits		
	Result	Qualifier	Added	Result	Qualifier			%Rec				
Benzene	ND		0.999	0.922		mg/Kg		92		70 - 130		
Ethylbenzene	ND		0.999	0.949		mg/Kg		95		70 - 130		
m-Xylene & p-Xylene	ND		2.00	1.90		mg/Kg		95		70 - 130		
o-Xylene	ND		0.999	0.973		mg/Kg		97		70 - 130		
Toluene	ND		0.999	0.935		mg/Kg		94		70 - 130		

Lab Sample ID: 885-6878-6 MSD

Matrix: Solid

Analysis Batch: 7673

Client Sample ID: BH24-11 0.0'

Prep Type: Total/NA

Prep Batch: 7434

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Benzene	ND		0.991	0.885		mg/Kg		89	70 - 130	4	20
Ethylbenzene	ND		0.991	0.927		mg/Kg		93	70 - 130	2	20
m-Xylene & p-Xylene	ND		1.98	1.86		mg/Kg		94	70 - 130	2	20
o-Xylene	ND		0.991	0.930		mg/Kg		94	70 - 130	5	20
Toluene	ND		0.991	0.900		mg/Kg		91	70 - 130	4	20

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## QC Sample Results

Client: Vertex

Job ID: 885-6878-1

Project/Site: PLU 25 Brushy Draw West

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

Lab Sample ID: 885-6878-6 MSD

Matrix: Solid

Analysis Batch: 7673

Client Sample ID: BH24-11 0.0'

Prep Type: Total/NA

Prep Batch: 7434

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		48 - 145

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

Lab Sample ID: MB 885-7423/1-A

Matrix: Solid

Analysis Batch: 7443

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7423

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		06/26/24 13:39	06/27/24 04:04	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		06/26/24 13:39	06/27/24 04:04	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	90		62 - 134			06/26/24 13:39	06/27/24 04:04	1

Lab Sample ID: LCS 885-7423/2-A

Matrix: Solid

Analysis Batch: 7443

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7423

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	44.2		mg/Kg		88	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	95		62 - 134				

Lab Sample ID: MB 885-7454/1-A

Matrix: Solid

Analysis Batch: 7443

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7454

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		06/27/24 08:15	06/27/24 12:35	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		06/27/24 08:15	06/27/24 12:35	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	99		62 - 134			06/27/24 08:15	06/27/24 12:35	1

Lab Sample ID: LCS 885-7454/2-A

Matrix: Solid

Analysis Batch: 7443

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7454

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	38.0		mg/Kg		76	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	99		62 - 134				

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## QC Sample Results

Client: Vertex

Job ID: 885-6878-1

Project/Site: PLU 25 Brushy Draw West

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-7485/1-A

Matrix: Solid

Analysis Batch: 7495

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7485

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		06/27/24 10:14	06/27/24 18:06	1

Lab Sample ID: LCS 885-7485/2-A

Matrix: Solid

Analysis Batch: 7495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7485

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	28.3		mg/Kg		94	90 - 110

Lab Sample ID: MB 885-7495/34

Matrix: Solid

Analysis Batch: 7495

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/Kg			06/28/24 01:18	1

Lab Sample ID: MRL 885-7495/33

Matrix: Solid

Analysis Batch: 7495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.547		mg/L		109	50 - 150

Lab Sample ID: MB 885-7524/1-A

Matrix: Solid

Analysis Batch: 7586

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7524

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		06/27/24 15:29	06/27/24 23:29	1

Lab Sample ID: LCS 885-7524/2-A

Matrix: Solid

Analysis Batch: 7586

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7524

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	28.0		mg/Kg		93	90 - 110

Lab Sample ID: 885-6878-10 MS

Matrix: Solid

Analysis Batch: 7586

Client Sample ID: BH24-32 1.0'

Prep Type: Total/NA

Prep Batch: 7524

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	60		30.1	69.7		mg/Kg		NC	50 - 150

Lab Sample ID: 885-6878-10 MSD

Matrix: Solid

Analysis Batch: 7586

Client Sample ID: BH24-32 1.0'

Prep Type: Total/NA

Prep Batch: 7524

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD Limit
Chloride	60		30.1	74.5		mg/Kg		NC	50 - 150	7 20

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QC Sample Results

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-7733/4

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 7733

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/Kg			07/01/24 13:14	1

Lab Sample ID: MRL 885-7733/3

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 7733

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.557		mg/L		111	50 - 150

## QC Association Summary

Client: Vertex

Job ID: 885-6878-1

Project/Site: PLU 25 Brushy Draw West

## GC VOA

## Prep Batch: 7404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-1	BH24-05 0.0'	Total/NA	Solid	5030C	
885-6878-2	BH24-07 0.0'	Total/NA	Solid	5030C	
885-6878-3	BH24-07 1.5'	Total/NA	Solid	5030C	
885-6878-4	BH24-09 0.0'	Total/NA	Solid	5030C	
MB 885-7404/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7404/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7404/3-A	Lab Control Sample	Total/NA	Solid	5030C	

## Prep Batch: 7434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-5	BH24-10 0.0'	Total/NA	Solid	5030C	
885-6878-6	BH24-11 0.0'	Total/NA	Solid	5030C	
885-6878-7	BH24-11 1.5'	Total/NA	Solid	5030C	
885-6878-8	BH24-31 0.0'	Total/NA	Solid	5030C	
885-6878-9	BH24-32 0.0'	Total/NA	Solid	5030C	
885-6878-10	BH24-32 1.0'	Total/NA	Solid	5030C	
885-6878-11	BH24-33 0.0'	Total/NA	Solid	5030C	
885-6878-12	BH24-33 2.0'	Total/NA	Solid	5030C	
MB 885-7434/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7434/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7434/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-6878-5 MS	BH24-10 0.0'	Total/NA	Solid	5030C	
885-6878-5 MSD	BH24-10 0.0'	Total/NA	Solid	5030C	
885-6878-6 MS	BH24-11 0.0'	Total/NA	Solid	5030C	
885-6878-6 MSD	BH24-11 0.0'	Total/NA	Solid	5030C	

## Analysis Batch: 7671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-5	BH24-10 0.0'	Total/NA	Solid	8015M/D	7434
885-6878-6	BH24-11 0.0'	Total/NA	Solid	8015M/D	7434
885-6878-7	BH24-11 1.5'	Total/NA	Solid	8015M/D	7434
885-6878-8	BH24-31 0.0'	Total/NA	Solid	8015M/D	7434
885-6878-9	BH24-32 0.0'	Total/NA	Solid	8015M/D	7434
885-6878-10	BH24-32 1.0'	Total/NA	Solid	8015M/D	7434
885-6878-11	BH24-33 0.0'	Total/NA	Solid	8015M/D	7434
885-6878-12	BH24-33 2.0'	Total/NA	Solid	8015M/D	7434
MB 885-7434/1-A	Method Blank	Total/NA	Solid	8015M/D	7434
LCS 885-7434/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7434
885-6878-5 MS	BH24-10 0.0'	Total/NA	Solid	8015M/D	7434
885-6878-5 MSD	BH24-10 0.0'	Total/NA	Solid	8015M/D	7434

## Analysis Batch: 7673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-5	BH24-10 0.0'	Total/NA	Solid	8021B	7434
885-6878-6	BH24-11 0.0'	Total/NA	Solid	8021B	7434
885-6878-7	BH24-11 1.5'	Total/NA	Solid	8021B	7434
885-6878-8	BH24-31 0.0'	Total/NA	Solid	8021B	7434
885-6878-9	BH24-32 0.0'	Total/NA	Solid	8021B	7434
885-6878-10	BH24-32 1.0'	Total/NA	Solid	8021B	7434
885-6878-11	BH24-33 0.0'	Total/NA	Solid	8021B	7434
885-6878-12	BH24-33 2.0'	Total/NA	Solid	8021B	7434

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QC Association Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

GC VOA (Continued)

Analysis Batch: 7673 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-7434/1-A	Method Blank	Total/NA	Solid	8021B	7434
LCS 885-7434/3-A	Lab Control Sample	Total/NA	Solid	8021B	7434
885-6878-6 MS	BH24-11 0.0'	Total/NA	Solid	8021B	7434
885-6878-6 MSD	BH24-11 0.0'	Total/NA	Solid	8021B	7434

Analysis Batch: 7896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-1	BH24-05 0.0'	Total/NA	Solid	8015M/D	7404
885-6878-2	BH24-07 0.0'	Total/NA	Solid	8015M/D	7404
885-6878-3	BH24-07 1.5'	Total/NA	Solid	8015M/D	7404
885-6878-4	BH24-09 0.0'	Total/NA	Solid	8015M/D	7404
MB 885-7404/1-A	Method Blank	Total/NA	Solid	8015M/D	7404
LCS 885-7404/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7404

Analysis Batch: 7897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-1	BH24-05 0.0'	Total/NA	Solid	8021B	7404
885-6878-2	BH24-07 0.0'	Total/NA	Solid	8021B	7404
885-6878-3	BH24-07 1.5'	Total/NA	Solid	8021B	7404
885-6878-4	BH24-09 0.0'	Total/NA	Solid	8021B	7404
MB 885-7404/1-A	Method Blank	Total/NA	Solid	8021B	7404
LCS 885-7404/3-A	Lab Control Sample	Total/NA	Solid	8021B	7404

GC Semi VOA

Prep Batch: 7423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-1	BH24-05 0.0'	Total/NA	Solid	SHAKE	
885-6878-2	BH24-07 0.0'	Total/NA	Solid	SHAKE	
885-6878-3	BH24-07 1.5'	Total/NA	Solid	SHAKE	
885-6878-4	BH24-09 0.0'	Total/NA	Solid	SHAKE	
MB 885-7423/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7423/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 7443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-1	BH24-05 0.0'	Total/NA	Solid	8015M/D	7423
885-6878-2	BH24-07 0.0'	Total/NA	Solid	8015M/D	7423
885-6878-3	BH24-07 1.5'	Total/NA	Solid	8015M/D	7423
885-6878-4	BH24-09 0.0'	Total/NA	Solid	8015M/D	7423
885-6878-5	BH24-10 0.0'	Total/NA	Solid	8015M/D	7454
885-6878-6	BH24-11 0.0'	Total/NA	Solid	8015M/D	7454
885-6878-7	BH24-11 1.5'	Total/NA	Solid	8015M/D	7454
885-6878-8	BH24-31 0.0'	Total/NA	Solid	8015M/D	7454
885-6878-9	BH24-32 0.0'	Total/NA	Solid	8015M/D	7454
885-6878-10	BH24-32 1.0'	Total/NA	Solid	8015M/D	7454
885-6878-11	BH24-33 0.0'	Total/NA	Solid	8015M/D	7454
885-6878-12	BH24-33 2.0'	Total/NA	Solid	8015M/D	7454
MB 885-7423/1-A	Method Blank	Total/NA	Solid	8015M/D	7423
MB 885-7454/1-A	Method Blank	Total/NA	Solid	8015M/D	7454
LCS 885-7423/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7423

Eurofins Albuquerque

## QC Association Summary

Client: Vertex

Job ID: 885-6878-1

Project/Site: PLU 25 Brushy Draw West

## GC Semi VOA (Continued)

## Analysis Batch: 7443 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 885-7454/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7454

## Prep Batch: 7454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-5	BH24-10 0.0'	Total/NA	Solid	SHAKE	
885-6878-6	BH24-11 0.0'	Total/NA	Solid	SHAKE	
885-6878-7	BH24-11 1.5'	Total/NA	Solid	SHAKE	
885-6878-8	BH24-31 0.0'	Total/NA	Solid	SHAKE	
885-6878-9	BH24-32 0.0'	Total/NA	Solid	SHAKE	
885-6878-10	BH24-32 1.0'	Total/NA	Solid	SHAKE	
885-6878-11	BH24-33 0.0'	Total/NA	Solid	SHAKE	
885-6878-12	BH24-33 2.0'	Total/NA	Solid	SHAKE	
MB 885-7454/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7454/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

## HPLC/IC

## Prep Batch: 7485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-1	BH24-05 0.0'	Total/NA	Solid	300_Prep	
885-6878-2	BH24-07 0.0'	Total/NA	Solid	300_Prep	
885-6878-3	BH24-07 1.5'	Total/NA	Solid	300_Prep	
885-6878-4	BH24-09 0.0'	Total/NA	Solid	300_Prep	
885-6878-5	BH24-10 0.0'	Total/NA	Solid	300_Prep	
885-6878-6	BH24-11 0.0'	Total/NA	Solid	300_Prep	
885-6878-7	BH24-11 1.5'	Total/NA	Solid	300_Prep	
885-6878-8	BH24-31 0.0'	Total/NA	Solid	300_Prep	
885-6878-9	BH24-32 0.0'	Total/NA	Solid	300_Prep	
MB 885-7485/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7485/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

## Analysis Batch: 7495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-2	BH24-07 0.0'	Total/NA	Solid	300.0	7485
885-6878-3	BH24-07 1.5'	Total/NA	Solid	300.0	7485
885-6878-7	BH24-11 1.5'	Total/NA	Solid	300.0	7485
885-6878-8	BH24-31 0.0'	Total/NA	Solid	300.0	7485
885-6878-9	BH24-32 0.0'	Total/NA	Solid	300.0	7485
MB 885-7485/1-A	Method Blank	Total/NA	Solid	300.0	7485
MB 885-7495/34	Method Blank	Total/NA	Solid	300.0	
LCS 885-7485/2-A	Lab Control Sample	Total/NA	Solid	300.0	7485
MRL 885-7495/33	Lab Control Sample	Total/NA	Solid	300.0	

## Prep Batch: 7524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-10	BH24-32 1.0'	Total/NA	Solid	300_Prep	
885-6878-11	BH24-33 0.0'	Total/NA	Solid	300_Prep	
885-6878-12	BH24-33 2.0'	Total/NA	Solid	300_Prep	
MB 885-7524/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7524/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-6878-10 MS	BH24-32 1.0'	Total/NA	Solid	300_Prep	

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QC Association Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

HPLC/IC (Continued)

Prep Batch: 7524 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-10 MSD	BH24-32 1.0'	Total/NA	Solid	300_Prep	

Analysis Batch: 7586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-10	BH24-32 1.0'	Total/NA	Solid	300.0	7524
885-6878-12	BH24-33 2.0'	Total/NA	Solid	300.0	7524
MB 885-7524/1-A	Method Blank	Total/NA	Solid	300.0	7524
LCS 885-7524/2-A	Lab Control Sample	Total/NA	Solid	300.0	7524
885-6878-10 MS	BH24-32 1.0'	Total/NA	Solid	300.0	7524
885-6878-10 MSD	BH24-32 1.0'	Total/NA	Solid	300.0	7524

Analysis Batch: 7597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-1	BH24-05 0.0'	Total/NA	Solid	300.0	7485
885-6878-4	BH24-09 0.0'	Total/NA	Solid	300.0	7485
885-6878-5	BH24-10 0.0'	Total/NA	Solid	300.0	7485
885-6878-6	BH24-11 0.0'	Total/NA	Solid	300.0	7485

Analysis Batch: 7733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6878-11	BH24-33 0.0'	Total/NA	Solid	300.0	7524
MB 885-7733/4	Method Blank	Total/NA	Solid	300.0	
MRL 885-7733/3	Lab Control Sample	Total/NA	Solid	300.0	

Lab Chronicle

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

**Client Sample ID: BH24-05 0.0'**  
**Date Collected: 06/24/24 10:00**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-1**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7404	AT	EET ALB	06/26/24 11:16
Total/NA	Analysis	8015M/D		1	7896	JP	EET ALB	07/03/24 16:29
Total/NA	Prep	5030C			7404	AT	EET ALB	06/26/24 11:16
Total/NA	Analysis	8021B		1	7897	JP	EET ALB	07/03/24 16:29
Total/NA	Prep	SHAKE			7423	KR	EET ALB	06/26/24 13:39
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 07:11
Total/NA	Prep	300_Prep			7485	RC	EET ALB	06/27/24 10:14
Total/NA	Analysis	300.0		200	7597	RC	EET ALB	06/28/24 22:13

**Client Sample ID: BH24-07 0.0'**  
**Date Collected: 06/24/24 10:05**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-2**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7404	AT	EET ALB	06/26/24 11:16
Total/NA	Analysis	8015M/D		1	7896	JP	EET ALB	07/03/24 16:53
Total/NA	Prep	5030C			7404	AT	EET ALB	06/26/24 11:16
Total/NA	Analysis	8021B		1	7897	JP	EET ALB	07/03/24 16:53
Total/NA	Prep	SHAKE			7423	KR	EET ALB	06/26/24 13:39
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 07:23
Total/NA	Prep	300_Prep			7485	RC	EET ALB	06/27/24 10:14
Total/NA	Analysis	300.0		20	7495	RC	EET ALB	06/27/24 22:57

**Client Sample ID: BH24-07 1.5'**  
**Date Collected: 06/24/24 10:20**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-3**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7404	AT	EET ALB	06/26/24 11:16
Total/NA	Analysis	8015M/D		1	7896	JP	EET ALB	07/03/24 17:17
Total/NA	Prep	5030C			7404	AT	EET ALB	06/26/24 11:16
Total/NA	Analysis	8021B		1	7897	JP	EET ALB	07/03/24 17:17
Total/NA	Prep	SHAKE			7423	KR	EET ALB	06/26/24 13:39
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 07:36
Total/NA	Prep	300_Prep			7485	RC	EET ALB	06/27/24 10:14
Total/NA	Analysis	300.0		20	7495	RC	EET ALB	06/27/24 23:10

**Client Sample ID: BH24-09 0.0'**  
**Date Collected: 06/24/24 10:25**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-4**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7404	AT	EET ALB	06/26/24 11:16
Total/NA	Analysis	8015M/D		1	7896	JP	EET ALB	07/03/24 18:04

Eurofins Albuquerque

Lab Chronicle

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Client Sample ID: BH24-09 0.0'

Lab Sample ID: 885-6878-4

Date Collected: 06/24/24 10:25

Matrix: Solid

Date Received: 06/26/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7404	AT	EET ALB	06/26/24 11:16
Total/NA	Analysis	8021B		1	7897	JP	EET ALB	07/03/24 18:04
Total/NA	Prep	SHAKE			7423	KR	EET ALB	06/26/24 13:39
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 07:48
Total/NA	Prep	300_Prep			7485	RC	EET ALB	06/27/24 10:14
Total/NA	Analysis	300.0		200	7597	RC	EET ALB	06/28/24 22:52

Client Sample ID: BH24-10 0.0'

Lab Sample ID: 885-6878-5

Date Collected: 06/24/24 10:30

Matrix: Solid

Date Received: 06/26/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8015M/D		1	7671	RA	EET ALB	06/28/24 14:15
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8021B		0	7673	RA	EET ALB	06/28/24 14:15
Total/NA	Prep	SHAKE			7454	KR	EET ALB	06/27/24 08:15
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 13:00
Total/NA	Prep	300_Prep			7485	RC	EET ALB	06/27/24 10:14
Total/NA	Analysis	300.0		200	7597	RC	EET ALB	06/28/24 23:04

Client Sample ID: BH24-11 0.0'

Lab Sample ID: 885-6878-6

Date Collected: 06/24/24 10:35

Matrix: Solid

Date Received: 06/26/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8015M/D		1	7671	RA	EET ALB	06/28/24 15:21
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8021B		1	7673	RA	EET ALB	06/28/24 15:21
Total/NA	Prep	SHAKE			7454	KR	EET ALB	06/27/24 08:15
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 13:12
Total/NA	Prep	300_Prep			7485	RC	EET ALB	06/27/24 10:14
Total/NA	Analysis	300.0		100	7597	RC	EET ALB	06/28/24 23:17

Client Sample ID: BH24-11 1.5'

Lab Sample ID: 885-6878-7

Date Collected: 06/24/24 10:45

Matrix: Solid

Date Received: 06/26/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8015M/D		1	7671	RA	EET ALB	06/28/24 16:27
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8021B		1	7673	RA	EET ALB	06/28/24 16:27

Eurofins Albuquerque

Lab Chronicle

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

**Client Sample ID: BH24-11 1.5'**  
**Date Collected: 06/24/24 10:45**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-7**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			7454	KR	EET ALB	06/27/24 08:15
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 13:25
Total/NA	Prep	300_Prep			7485	RC	EET ALB	06/27/24 10:14
Total/NA	Analysis	300.0		20	7495	RC	EET ALB	06/28/24 00:27

**Client Sample ID: BH24-31 0.0'**  
**Date Collected: 06/24/24 10:50**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-8**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8015M/D		1	7671	RA	EET ALB	06/28/24 16:49
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8021B		1	7673	RA	EET ALB	06/28/24 16:49
Total/NA	Prep	SHAKE			7454	KR	EET ALB	06/27/24 08:15
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 13:38
Total/NA	Prep	300_Prep			7485	RC	EET ALB	06/27/24 10:14
Total/NA	Analysis	300.0		20	7495	RC	EET ALB	06/28/24 00:40

**Client Sample ID: BH24-32 0.0'**  
**Date Collected: 06/24/24 10:55**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-9**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8015M/D		1	7671	RA	EET ALB	06/28/24 17:33
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8021B		1	7673	RA	EET ALB	06/28/24 17:33
Total/NA	Prep	SHAKE			7454	KR	EET ALB	06/27/24 08:15
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 13:50
Total/NA	Prep	300_Prep			7485	RC	EET ALB	06/27/24 10:14
Total/NA	Analysis	300.0		20	7495	RC	EET ALB	06/28/24 00:53

**Client Sample ID: BH24-32 1.0'**  
**Date Collected: 06/24/24 11:10**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-10**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8015M/D		1	7671	RA	EET ALB	06/28/24 17:55
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8021B		1	7673	RA	EET ALB	06/28/24 17:55
Total/NA	Prep	SHAKE			7454	KR	EET ALB	06/27/24 08:15
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 14:03

Eurofins Albuquerque

Lab Chronicle

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

**Client Sample ID: BH24-32 1.0'**  
**Date Collected: 06/24/24 11:10**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-10**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			7524	ES	EET ALB	06/27/24 15:29
Total/NA	Analysis	300.0		20	7586	JT	EET ALB	06/27/24 23:53

**Client Sample ID: BH24-33 0.0'**  
**Date Collected: 06/24/24 11:15**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-11**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8015M/D		1	7671	RA	EET ALB	06/28/24 18:17
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8021B		1	7673	RA	EET ALB	06/28/24 18:17
Total/NA	Prep	SHAKE			7454	KR	EET ALB	06/27/24 08:15
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 14:15
Total/NA	Prep	300_Prep			7524	ES	EET ALB	06/27/24 15:29
Total/NA	Analysis	300.0		100	7733	JT	EET ALB	07/01/24 17:31

**Client Sample ID: BH24-33 2.0'**  
**Date Collected: 06/24/24 11:30**  
**Date Received: 06/26/24 07:50**

**Lab Sample ID: 885-6878-12**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8015M/D		1	7671	RA	EET ALB	06/28/24 18:39
Total/NA	Prep	5030C			7434	AT	EET ALB	06/26/24 15:02
Total/NA	Analysis	8021B		1	7673	RA	EET ALB	06/28/24 18:39
Total/NA	Prep	SHAKE			7454	KR	EET ALB	06/27/24 08:15
Total/NA	Analysis	8015M/D		1	7443	DH	EET ALB	06/27/24 14:28
Total/NA	Prep	300_Prep			7524	ES	EET ALB	06/27/24 15:29
Total/NA	Analysis	300.0		20	7586	JT	EET ALB	06/28/24 00:43

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



Accreditation/Certification Summary

Client: Vertex  
Project/Site: PLU 25 Brushy Draw West

Job ID: 885-6878-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics (GRO)-C6-C10
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25

## Chain-of-Custody Record

Client: Vertex

(XTO Energy)

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:

5-day

☐ Standard ☒ Rush

Project Name:

PLU 25 Brushy Draw West

Project #:

24E-00670

Project Manager:

Sally Castar

Sampler: AL

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CP): 0450-0.4 (°C)

Container Type and #

402

Preservative Type

ICE

HEAL No.

1

Date

24-24

Time

1000

Sample Name

BH24-05 0.0'

Matrix

Soil

Date

1005

Time

1005

Sample Name

BH24-07 1.5'

Matrix

Soil

Date

1020

Time

1020

Sample Name

BH24-09 0.0'

Matrix

Soil

Date

1025

Time

1025

Sample Name

BH24-10 0.0'

Matrix

Soil

Date

1030

Time

1030

Sample Name

BH24-11 0.0'

Matrix

Soil

Date

1035

Time

1035

Sample Name

BH24-11 1.5'

Matrix

Soil

Date

1045

Time

1045

Sample Name

BH24-31 0.0'

Matrix

Soil

Date

1050

Time

1050

Sample Name

BH24-32 0.0'

Matrix

Soil

Date

1055

Time

1055

Sample Name

BH24-32 1.0'

Matrix

Soil

Date

1110

Time

1110

Sample Name

BH24-33 0.0'

Matrix

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Sample Name

BH24-33 2.0'

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Sample Name

BH24-33 2.0'

Matrix

Soil

Date

## Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-6878-1

Login Number: 6878

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

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



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September 17, 2024

SALLY CARTTAR

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PLU 25 BRUSHY DRAW WEST

Enclosed are the results of analyses for samples received by the laboratory on 09/12/24 13:51.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 38 0' (H245516-01)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14	
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26	
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10	
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20	
Total BTX	<0.300	0.300	09/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	09/13/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 64.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.9 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 38 1' (H245516-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	2.03	101	2.00	2.14	
Toluene*	<0.050	0.050	09/13/2024	ND	1.93	96.7	2.00	1.26	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.98	98.9	2.00	1.10	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.89	98.1	6.00	1.20	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/13/2024	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 72.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.1 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 SALLY CARTTAR  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 09/12/2024  
 Reported: 09/17/2024  
 Project Name: PLU 25 BRUSHY DRAW WEST  
 Project Number: 24E- 00670  
 Project Location: XTO

Sampling Date: 09/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 39 0' (H245516-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60	
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/13/2024	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 71.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 39 1' (H245516-04)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/13/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 77.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 SALLY CARTTAR  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 09/12/2024  
 Reported: 09/17/2024  
 Project Name: PLU 25 BRUSHY DRAW WEST  
 Project Number: 24E- 00670  
 Project Location: XTO

Sampling Date: 09/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 40 0' (H245516-05)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60	
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/13/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 80.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 40 1' (H245516-06)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 75.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 41 0' (H245516-07)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5040	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	51.7	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 73.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 41 1' (H245516-08)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 76.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 41 1.5' (H245516-09)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	09/13/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 77.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
 SALLY CARTTAR  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 09/12/2024  
 Reported: 09/17/2024  
 Project Name: PLU 25 BRUSHY DRAW WEST  
 Project Number: 24E- 00670  
 Project Location: XTO

Sampling Date: 09/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 42 0' (H245516-10)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7280	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 77.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 42 1' (H245516-11)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1550	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 68.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.8 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 42 2' (H245516-12)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/13/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 72.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.7 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 42 3' (H245516-13)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60	
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/13/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/12/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/12/2024	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 43 0' (H245516-14)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 86.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.9 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 43 1' (H245516-15)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 81.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 44 0' (H245516-16)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 94.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 44 1' (H245516-17)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 85.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

**Company Name:** Vertex Resource Services (Direct Bill to XTO Energy, Inc.)

**Project Manager:** Sally Carttar

**Address:** 3101 Boyd Drive

**City:** Carlsbad **State:** NM **Zip:** 88220

**Phone #:** 575.725.5001 **Fax #:**

**Project #:** 24E-00670 **Project Owner:** Amy Ruth

**Project Name:** PLU 25 Brushy Draw West

**Project Location:**

**Sampler Name:** L. Pullman

**Lab I.D.:**

**P.O. #:**

**Company:** XTO Energy, Inc.

**Attn:** Amy Ruth

**Address:** 3104 E. Greene St

**City:** Carlsbad

**State:** NM **Zip:** 88220

**Phone #:** 432-661-0571 **Fax #:**

Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	BTX (8021)		TPH:8015D(GRO / DRO / MRO)		Chloride		
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER : ACID/BASE: ICE / COOL OTHER :			DATE	TIME	X	X	X	X	
BH24-42 1'		C 1							09.05.24	12:00	X	X	X				
BH24-42 2'		C 1							09.05.24	12:05	X	X	X				
BH24-42 3'		C 1							09.05.24	12:20	X	X	X				
BH24-43 0'		C 1							09.05.24	12:30	X	X	X				
BH24-43 1'		C 1							09.05.24	12:45	X	X	X				
BH24-44 0'		C 1							09.05.24	13:40	X	X	X				
BH24-44 1'		C 1							09.05.24	13:45	X	X	X				

**Relinquished By:** *Sally Carttar*

**Date:** 9-9-2024 **Received By:** *AP*

**Time:** 07:00

**Date:** 9-12-24 **Received By:** *AP*

**Time:** 1351

**Observed Temp. °C:** -0.5°C **Corrected Temp. °C:** -1.1°C

**Sample Condition:** ☒ Cool ☐ Intact ☐ No

**CHECKED BY:** (Initials) *AP*

**Remarks:** Direct Bill to XTO Energy, Inc., Cost Center # 2191851001, Incident #: NAPP2408553359

**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**

**Thermometer ID:** #113 **Correction Factor:** -0.0°C

**Thermometer ID:** #140 **Correction Factor:** -0.0°C





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 17, 2024

SALLY CARTTAR

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PLU 25 BRUSHY DRAW WEST

Enclosed are the results of analyses for samples received by the laboratory on 09/12/24 13:51.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 10 1' (H245518-01)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60	
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	18400	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 92.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 SALLY CARTTAR  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 09/12/2024  
 Reported: 09/17/2024  
 Project Name: PLU 25 BRUSHY DRAW WEST  
 Project Number: 24E- 00670  
 Project Location: XTO

Sampling Date: 09/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 10 2' (H245518-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/14/2024	ND	2.09	105	2.00	1.27	
Toluene*	<0.050	0.050	09/14/2024	ND	2.01	100	2.00	0.177	
Ethylbenzene*	<0.050	0.050	09/14/2024	ND	2.01	100	2.00	0.690	
Total Xylenes*	<0.150	0.150	09/14/2024	ND	5.98	99.6	6.00	0.914	
Total BTEX	<0.300	0.300	09/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10300	16.0	09/13/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 91.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 10 3' (H245518-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/14/2024	ND	2.09	105	2.00	1.27		
Toluene*	<0.050	0.050	09/14/2024	ND	2.01	100	2.00	0.177		
Ethylbenzene*	<0.050	0.050	09/14/2024	ND	2.01	100	2.00	0.690		
Total Xylenes*	<0.150	0.150	09/14/2024	ND	5.98	99.6	6.00	0.914		
Total BTEX	<0.300	0.300	09/14/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4160	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 96.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 10 4' (H245518-04)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/14/2024	ND	2.09	105	2.00	1.27		
Toluene*	<0.050	0.050	09/14/2024	ND	2.01	100	2.00	0.177		
Ethylbenzene*	<0.050	0.050	09/14/2024	ND	2.01	100	2.00	0.690		
Total Xylenes*	<0.150	0.150	09/14/2024	ND	5.98	99.6	6.00	0.914		
Total BTEX	<0.300	0.300	09/14/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3440	16.0	09/13/2024	ND	400	100	400	0.00	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 94.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QM-07      The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND      Analyte NOT DETECTED at or above the reporting limit
- RPD      Relative Percent Difference
- \*\*      Samples not received at proper temperature of 6°C or below.
- \*\*\*      Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "C. D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)

BILL TO

ANALYSIS REQUEST

Project Manager: Sally Carttar  
Address: 3101 Boyd Drive  
City: Carlsbad State: NM Zip: 88220  
Phone #: 575.725.5001 Fax #: 575.725.5001  
Project #: 24E-00670 Project Owner: Amy Ruth  
Project Name: PLU 25 Brushy Draw West  
Project Location:  
Sampler Name: L. Pullman.  
P.O. #: Company: XTO Energy, Inc.  
Attn: Amy Ruth  
Address: 3104 E. Greene St  
City: Carlsbad  
State: NM Zip: 88220  
Phone #: 432-661-0571 Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	BTEX (8021)		TPH:8015D(GRO / DRO / MRO)		Chloride	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :								
	BH24-10 1'		C 1			X				09.06.24	10:25	X	X	X			
	BH24-10 2'		C 1			X				09.06.24	10:25	X	X	X			
	BH24-10 3'		C 1			X				09.06.24	10:30	X	X	X			
	BH24-10 4'		C 1			X				09.06.24	10:30	X	X	X			

PLEASE NOTE: Laboratory charges for analysis of samples are based on the number of samples and the type of analysis requested. Samples must be submitted in accordance with the Chain of Custody and Analysis Request form. Samples must be submitted in accordance with the Chain of Custody and Analysis Request form. Samples must be submitted in accordance with the Chain of Custody and Analysis Request form.

Relinquished By: *[Signature]* Date: 9-24 Time: 0:00  
Relinquished By: *[Signature]* Date: 9-24 Time: 0:00  
Received By: *[Signature]*  
Delivered By: (Circle One) Observed Temp. °C: -0.5°C Corrected Temp. °C: -1.1°C  
Sampler - UPS - Bus - Other: Sample Condition: Cool Intact ☒ No ☐  
CHECKED BY: (Initials) *[Signature]*  
Thermometer ID: *[Signature]* Correction Factor: *[Signature]* Observed Temp. °C: *[Signature]* Corrected Temp. °C: *[Signature]*  
REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2191851001, Incident #: nAPP2403657069  
Verbal Result: ☐ Yes ☐ No Add'l Phone #: *[Signature]*  
All Results are emailed. Please provide Email address: Sally Carttar (Scarttar@vertexresource.com), Lakin Pullman (lpullman@vertexresource.com)



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 10, 2024

SALLY CARTTAR  
VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD, NM 88220

RE: PLU 25 BRUSHY DRAW WEST

Enclosed are the results of analyses for samples received by the laboratory on 09/05/24 14:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 34 0' (H245374-01)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2024	ND	1.73	86.5	2.00	12.9	
Toluene*	<0.050	0.050	09/06/2024	ND	1.78	89.2	2.00	14.0	
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.85	92.6	2.00	14.7	
Total Xylenes*	<0.150	0.150	09/06/2024	ND	5.68	94.7	6.00	15.8	
Total BTEX	<0.300	0.300	09/06/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	09/09/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	194	97.1	200	2.33	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	192	96.1	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 121 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 34 1' (H245374-02)**

BTEx 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2024	ND	1.73	86.5	2.00	12.9	
Toluene*	<0.050	0.050	09/06/2024	ND	1.78	89.2	2.00	14.0	
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.85	92.6	2.00	14.7	
Total Xylenes*	<0.150	0.150	09/06/2024	ND	5.68	94.7	6.00	15.8	
Total BTEX	<0.300	0.300	09/06/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 137 % 71.5-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/09/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	194	97.1	200	2.33	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	192	96.1	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 116 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 34 1.5' (H245374-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.73	86.5	2.00	12.9		
Toluene*	<0.050	0.050	09/06/2024	ND	1.78	89.2	2.00	14.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.85	92.6	2.00	14.7		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	5.68	94.7	6.00	15.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 133 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	194	97.1	200	2.33	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	192	96.1	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 35 0' (H245374-04)**

BTEx 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2024	ND	1.73	86.5	2.00	12.9	
Toluene*	<0.050	0.050	09/07/2024	ND	1.78	89.2	2.00	14.0	
Ethylbenzene*	<0.050	0.050	09/07/2024	ND	1.85	92.6	2.00	14.7	
Total Xylenes*	<0.150	0.150	09/07/2024	ND	5.68	94.7	6.00	15.8	
Total BTEX	<0.300	0.300	09/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 151 % 71.5-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	09/09/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	194	97.1	200	2.33	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	192	96.1	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 123 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 35 1' (H245374-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 36 0' (H245374-06)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 36 1' (H245374-07)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 37 0' (H245374-08)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/09/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 124 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 37 1' (H245374-09)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 92.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.8 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24 - 37 1.5' (H245374-10)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-04	The RPD for the BS/BSD was outside of historical limits.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)										<b>BILL TO</b>										ANALYSIS REQUEST																			
Project Manager: Sally Carttar										P.O. #:																													
Address: 3101 Boyd Drive										Company: XTO Energy, Inc.																													
City: Carlsbad State: NM Zip: 88220										Attn: Army Ruth																													
Phone #: 575.725.5001 Fax #:										Address: 3104 E. Greene St																													
Project #: 24E-00670										Project Owner: Army Ruth																													
Project Name: PLU 25 Brushy Draw West										State: NM Zip: 88220																													
Project Location:										Phone #: 432-661-0571																													
Sampler Name: L. Pullman.										Fax #:																													
FOR LAB USE ONLY																																							
Lab I.D.										Sample I.D.																													
<div style="text-align: right; font-weight: bold;">H24S374</div>										(GRAB OR (C)OMP.																													
										# CONTAINERS																													
										GROUNDWATER																													
										WASTEWATER																													
										SOIL																													
										OIL																													
										SLUDGE																													
										OTHER :																													
										ACID/BASE:																													
										ICE / COOL																													
OTHER :																																							
DATE										TIME																													
1 BH24-34 0'										C 1										X																			
2 BH24-34 1'										C 1										X																			
3 BH24-34 1.5'										C 1										X																			
4 BH24-35 0'										C 1										X																			
5 BH24-35 1'										C 1										X																			
6 BH24-36 0'										C 1										X																			
7 BH24-36 1'										C 1										X																			
8 BH24-37 0'										C 1										X																			
9 BH24-37 1'										C 1										X																			
10 BH24-37 1.5'										C 1										X																			
<small>PL/ELAB NOTE: (Lab) and (Sample) Control standards must be run every time a sample is analyzed. All samples including those for inorganic and any other status whatsoever must be analyzed within 30 days after completion of the applicable service. In no event shall Carlsbad be liable for incidental or consequential damages, including without limitation, business interruption, loss of data or loss of profits incurred by client, its subsidiaries, affiliates or successors arising and/or related to the performance of services hereunder by Carlsbad, regardless of whether and/or when a written report any of the above stated regions or otherwise.</small>										DATE										TIME																			
										09.03.24										9:40										X									
09.03.24										9:55										X																			
09.04.24										10:10										X																			
09.04.24										10:30										X																			
09.04.24										10:35										X																			
09.04.24										10:45										X																			
09.04.24										10:55										X																			
09.04.24										11:05										X																			
09.04.24										11:10										X																			
09.04.24										11:15										X																			
<small>FOR LAB USE ONLY</small>										BTEX (8021)										TPH:8015D(GRO / DRO / MRO)										Chloride									
<small>FOR LAB USE ONLY</small>										DATE										TIME																			

**Relinquished By:** *[Signature]* **Date:** 9-5-24 **Time:** 06:00

**Relinquished By:** *[Signature]* **Date:** 9-5-24 **Time:** 1440

**Received By:** *[Signature]* **Date:** 9-5-24 **Time:** 1440

**Received By:** *[Signature]* **Date:** 9-5-24 **Time:** 1440

**Delivered By: (Circle One)**  
 Sampler - UPS - Bus - Other: *UPS*

**Observed Temp. °C:** 22.2 **Corrected Temp. °C:** 10.0

**Sample Condition:**  
☒ Cool ☐ Intact ☐ Yes ☐ No

**CHECKED BY:** *[Signature]* (Initials)

**Thermometer ID:** *444* **Correction Factor:** *-0.0°C*

**Remarks:** Direct Bill to XTO Energy, Inc., Cost Center #: 2191851001, Incident #: nAPP2403657069.

**Verbal Result:** ☐ Yes ☐ No

**Add'l Phone #:**

**Remarks:** Direct Bill to XTO Energy, Inc., Cost Center #: 2191851001, Incident #: nAPP2403657069.



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 29, 2024

SALLY CARTTAR

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PLU 25 BRUSHY DRAW WEST

Enclosed are the results of analyses for samples received by the laboratory on 10/28/24 12:02.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 10/28/2024  
Reported: 10/29/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 10/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24-04 3.5' (H246537-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/28/2024	ND	2.16	108	2.00	3.27	
Toluene*	<0.050	0.050	10/28/2024	ND	2.10	105	2.00	2.10	
Ethylbenzene*	<0.050	0.050	10/28/2024	ND	2.11	106	2.00	0.934	
Total Xylenes*	<0.150	0.150	10/28/2024	ND	6.28	105	6.00	1.03	
Total BTEX	<0.300	0.300	10/28/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/29/2024	ND	464	116	400	3.51	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/28/2024	ND	233	116	200	6.62	
DRO >C10-C28*	<10.0	10.0	10/28/2024	ND	243	122	200	0.604	
EXT DRO >C28-C36	<10.0	10.0	10/28/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 10/28/2024  
Reported: 10/29/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 10/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24-04 5' (H246537-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/28/2024	ND	2.16	108	2.00	3.27		
Toluene*	<0.050	0.050	10/28/2024	ND	2.10	105	2.00	2.10		
Ethylbenzene*	<0.050	0.050	10/28/2024	ND	2.11	106	2.00	0.934		
Total Xylenes*	<0.150	0.150	10/28/2024	ND	6.28	105	6.00	1.03		
Total BTEX	<0.300	0.300	10/28/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	10/29/2024	ND	464	116	400	3.51		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/28/2024	ND	233	116	200	6.62	
DRO >C10-C28*	<10.0	10.0	10/28/2024	ND	243	122	200	0.604	
EXT DRO >C28-C36	<10.0	10.0	10/28/2024	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 10/28/2024  
Reported: 10/29/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 10/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24-29 4' (H246537-03)**

BTEx 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/28/2024	ND	2.16	108	2.00	3.27	
Toluene*	<0.050	0.050	10/28/2024	ND	2.10	105	2.00	2.10	GC-NC
Ethylbenzene*	<b>0.284</b>	0.050	10/28/2024	ND	2.11	106	2.00	0.934	GC-NC1
<b>Total Xylenes*</b>	<b>2.97</b>	0.150	10/28/2024	ND	6.28	105	6.00	1.03	
<b>Total BTEX</b>	<b>3.26</b>	0.300	10/28/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 184 % 71.5-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1010</b>	16.0	10/29/2024	ND	464	116	400	3.51	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>150</b>	10.0	10/28/2024	ND	233	116	200	6.62	
<b>DRO &gt;C10-C28*</b>	<b>1380</b>	10.0	10/28/2024	ND	243	122	200	0.604	
<b>EXT DRO &gt;C28-C36</b>	<b>151</b>	10.0	10/28/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 10/28/2024  
Reported: 10/29/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 10/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24-29 6' (H246537-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/28/2024	ND	2.16	108	2.00	3.27		
Toluene*	<0.050	0.050	10/28/2024	ND	2.10	105	2.00	2.10		
Ethylbenzene*	<0.050	0.050	10/28/2024	ND	2.11	106	2.00	0.934		
Total Xylenes*	<0.150	0.150	10/28/2024	ND	6.28	105	6.00	1.03		
Total BTEX	<0.300	0.300	10/28/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	864	16.0	10/29/2024	ND	464	116	400	3.51		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/28/2024	ND	233	116	200	6.62	
DRO >C10-C28*	<10.0	10.0	10/28/2024	ND	243	122	200	0.604	
EXT DRO >C28-C36	<10.0	10.0	10/28/2024	ND					

Surrogate: 1-Chlorooctane 88.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 10/28/2024  
Reported: 10/29/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 10/26/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BH 24-29 8' (H246537-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/28/2024	ND	2.23	112	2.00	4.18		
Toluene*	<0.050	0.050	10/28/2024	ND	2.33	117	2.00	3.16		
Ethylbenzene*	<0.050	0.050	10/28/2024	ND	2.29	114	2.00	2.58		
Total Xylenes*	<0.150	0.150	10/28/2024	ND	7.14	119	6.00	2.29		
Total BTEX	<0.300	0.300	10/28/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	10/29/2024	ND	464	116	400	3.51		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/28/2024	ND	233	116	200	6.62	
DRO >C10-C28*	<10.0	10.0	10/28/2024	ND	243	122	200	0.604	
EXT DRO >C28-C36	<10.0	10.0	10/28/2024	ND					

Surrogate: 1-Chlorooctane 99.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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September 10, 2024

SALLY CARTTAR

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PLU 25 BRUSHY DRAW WEST

Enclosed are the results of analyses for samples received by the laboratory on 09/05/24 14:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 23E-00670  
Project Location: XTO

Sampling Date: 09/03/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 01 0.5' (H245377-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5	
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0	
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9	
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8	
Total BTEX	<0.300	0.300	09/06/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4160	16.0	09/09/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 23E-00670  
Project Location: XTO

Sampling Date: 09/03/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 02 0.5' (H245377-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3920	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 125 % 48.2-134

Surrogate: 1-Chlorooctadecane 126 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 23E-00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 03 0.5' (H245377-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7600	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 23E-00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 04 0.5' (H245377-04)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8240	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 121 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 23E-00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 05 0.5' (H245377-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6500	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 129 % 48.2-134

Surrogate: 1-Chlorooctadecane 130 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/05/2024  
Reported: 09/10/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 23E-00670  
Project Location: XTO

Sampling Date: 09/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 06 0.5' (H245377-06)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5		
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0		
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9		
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8		
Total BTEX	<0.300	0.300	09/06/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7500	16.0	09/09/2024	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 SALLY CARTTAR  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 09/05/2024  
 Reported: 09/10/2024  
 Project Name: PLU 25 BRUSHY DRAW WEST  
 Project Number: 23E-00670  
 Project Location: XTO

Sampling Date: 09/04/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 07 0.5' (H245377-07)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2024	ND	1.50	75.2	2.00	20.5	
Toluene*	<0.050	0.050	09/06/2024	ND	1.42	70.9	2.00	20.0	
Ethylbenzene*	<0.050	0.050	09/06/2024	ND	1.46	72.8	2.00	19.9	
Total Xylenes*	<0.150	0.150	09/06/2024	ND	4.31	71.8	6.00	19.8	
Total BTEX	<0.300	0.300	09/06/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6400	16.0	09/09/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2024	ND	193	96.3	200	0.474	
DRO >C10-C28*	<10.0	10.0	09/06/2024	ND	186	93.0	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	09/06/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)

Project Manager: Sally Carttar

Address: 3101 Boyd Drive

City: Carlsbad State: NM Zip: 88220

Phone #: 575.725.5001 Fax #: 575.725.5001

Project #: 24E-00670 Project Owner: Amy Ruth

Project Name: PLU 25 Brushy Draw West

Project Location:

Sample Name: L. Pullman.

Lab I.D.

P.O. #: \_\_\_\_\_

Company: XTO Energy, Inc.

Attn: Amy Ruth

Address: 3104 E. Greene St

City: Carlsbad

State: NM Zip: 88220

Phone #: 432-861-0571

Fax #: \_\_\_\_\_

### BILL TO

### ANALYSIS REQUEST

PLEASE NOTE: Laboratory results and reports will be issued for any data entry error based on the amount paid by the customer. All data is provided to the customer for informational purposes only. The customer is responsible for the accuracy of the data. The customer is responsible for the accuracy of the data. The customer is responsible for the accuracy of the data.

Sample I.D.	Observed Temp. °C	Corrected Temp. °C	Time	Date	Received By:	MATRIX										DATE	TIME	BTEX (8021)		Chloride
						(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL			OTHER		
1 BS24-01 0.5'																				
2 BS24-02 0.5'																				
3 BS24-03 0.5'																				
4 BS24-04 0.5'																				
5 BS24-05 0.5'																				
6 BS24-06 0.5'																				
7 BS24-07 0.5'																				

Reinquinshed By: \_\_\_\_\_

Reinquinshed Date: 9-8-24

Reinquinshed Time: 06:00

Reinquinshed Date: 9-8-24

Reinquinshed Time: 14:00

Reinquinshed By: \_\_\_\_\_

Reinquinshed Date: 9-8-24

Reinquinshed Time: 14:00

Reinquinshed By: \_\_\_\_\_

Reinquinshed Date: 9-8-24

Reinquinshed Time: 14:00

Delivered By: (Circle One) \_\_\_\_\_

Observed Temp. °C: 22.2

Corrected Temp. °C: 14.0

Sample Condition: ☒ Cool ☐ Intact

Thermometer ID: 4444

Correction Factor: 0.00

Thermometer ID: 4444

Correction Factor: 0.00

REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2191851001, Incident #: nAPP2403657069, nAPP2408553359.



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 17, 2024

SALLY CARTTAR

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PLU 25 BRUSHY DRAW WEST

Enclosed are the results of analyses for samples received by the laboratory on 09/12/24 13:51.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/09/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 40 0.5' (H245517-01)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60	
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	09/13/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 84.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 SALLY CARTTAR  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 09/12/2024  
 Reported: 09/17/2024  
 Project Name: PLU 25 BRUSHY DRAW WEST  
 Project Number: 24E- 00670  
 Project Location: XTO

Sampling Date: 09/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 41 0.5' (H245517-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60	
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12200	16.0	09/13/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 99.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/11/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 42 0.5' (H245517-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5860	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 90.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/11/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 43 0.5' (H245517-04)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	1.95	97.3	2.00	4.60		
Toluene*	<0.050	0.050	09/13/2024	ND	1.86	93.0	2.00	6.00		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	1.91	95.7	2.00	6.32		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	5.68	94.7	6.00	6.48		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	13300	16.0	09/13/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	182	90.9	200	1.80	
DRO >C10-C28*	133	10.0	09/13/2024	ND	175	87.4	200	4.95	
EXT DRO >C28-C36	23.4	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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---

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>Vortex Resource Services (Bill to XTO Energy, Inc)</b>	P.O. #:	ANALYSIS REQUEST
-------------------------------------------------------------------------	---------	------------------

Project Manager: <b>Sally Carttar</b>	Company: <b>XTO Energy, Inc.</b>
---------------------------------------	----------------------------------

Address: <b>3101 Boyd Dr.</b>	Attn: <b>Amy Ruth</b>
-------------------------------	-----------------------

City: <b>Carlsbad</b>	Address: <b>3104 E. Greene St.</b>
-----------------------	------------------------------------

Phone #: <b>575.725.5001</b>	City: <b>Carlsbad</b>
------------------------------	-----------------------

State: <b>NM</b> Zip: <b>88220</b>	State: <b>NM</b> Zip: <b>88220</b>
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Project #: <b>24E-00670</b>	Project Owner: <b>Amy Ruth</b>
-----------------------------	--------------------------------

Project Name: <b>PLV 25 Brushy Draw West</b>	Phone #: <b>432.661.0571</b>
----------------------------------------------	------------------------------

Project Location:	Fax #:
-------------------	--------

Sampler Name: <b>Andrew L. Vuk</b>	SAMPLING
------------------------------------	----------

Lab I.D.	PRESERV.
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Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST					
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:								
1 BS24-40 0.5'	C 1	X							9.9.24	0920	X	X	X			
2 BS24-41 0.5'	C 1	X							9.11.24	1210						
3 BS24-42 0.5'	C 1	X								1530						
4 BS24-43 0.5'	C 1	X								1535						

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Relinquished By:	Date: <b>9.12.24</b>	Received By:	Date: <b>0700</b>
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Time: <b>0700</b>	Received By:
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Time: <b>0700</b>	Received By:
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---

September 19, 2024

SALLY CARTTAR

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PLU 25 BRUSHY DRAW WEST

Enclosed are the results of analyses for samples received by the laboratory on 09/17/24 14:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/17/2024  
Reported: 09/19/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/12/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: BS24 - 44 0.5' (H245635-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2024	ND	2.21	111	2.00	4.98	
Toluene*	<0.050	0.050	09/18/2024	ND	2.29	115	2.00	4.18	
Ethylbenzene*	<0.050	0.050	09/18/2024	ND	2.32	116	2.00	2.80	
Total Xylenes*	<0.150	0.150	09/18/2024	ND	6.97	116	6.00	2.34	
Total BTEX	<0.300	0.300	09/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9800	16.0	09/18/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2024	ND	200	99.9	200	0.227	
DRO >C10-C28*	1530	10.0	09/18/2024	ND	203	101	200	0.147	QM-07
EXT DRO >C28-C36	295	10.0	09/18/2024	ND					

Surrogate: 1-Chlorooctane 96.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/17/2024  
Reported: 09/19/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/12/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: BS24 - 45 0.5' (H245635-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2024	ND	2.21	111	2.00	4.98	
Toluene*	<0.050	0.050	09/18/2024	ND	2.29	115	2.00	4.18	
Ethylbenzene*	<0.050	0.050	09/18/2024	ND	2.32	116	2.00	2.80	
Total Xylenes*	<0.150	0.150	09/18/2024	ND	6.97	116	6.00	2.34	
Total BTEX	<0.300	0.300	09/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10100	16.0	09/18/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2024	ND	200	99.9	200	0.227	
DRO >C10-C28*	<10.0	10.0	09/18/2024	ND	203	101	200	0.147	
EXT DRO >C28-C36	<10.0	10.0	09/18/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/17/2024  
Reported: 09/19/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: BS24 - 46 0.5' (H245635-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2024	ND	2.21	111	2.00	4.98	
Toluene*	<0.050	0.050	09/18/2024	ND	2.29	115	2.00	4.18	
Ethylbenzene*	<0.050	0.050	09/18/2024	ND	2.32	116	2.00	2.80	
Total Xylenes*	<0.150	0.150	09/18/2024	ND	6.97	116	6.00	2.34	
Total BTEx	<0.300	0.300	09/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4500	16.0	09/18/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2024	ND	200	99.9	200	0.227	
DRO >C10-C28*	91.7	10.0	09/18/2024	ND	203	101	200	0.147	
EXT DRO >C28-C36	<10.0	10.0	09/18/2024	ND					

Surrogate: 1-Chlorooctane 93.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/17/2024  
Reported: 09/19/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: BS24 - 47 0.5' (H245635-04)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2024	ND	2.21	111	2.00	4.98		
Toluene*	<0.050	0.050	09/18/2024	ND	2.29	115	2.00	4.18		
Ethylbenzene*	<0.050	0.050	09/18/2024	ND	2.32	116	2.00	2.80		
Total Xylenes*	<0.150	0.150	09/18/2024	ND	6.97	116	6.00	2.34		
Total BTEX	<0.300	0.300	09/18/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	09/18/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2024	ND	200	99.9	200	0.227	
DRO >C10-C28*	<10.0	10.0	09/18/2024	ND	203	101	200	0.147	
EXT DRO >C28-C36	<10.0	10.0	09/18/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/17/2024  
Reported: 09/19/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/13/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: BS24 - 48 0.5' (H245635-05)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2024	ND	2.21	111	2.00	4.98	
Toluene*	<0.050	0.050	09/18/2024	ND	2.29	115	2.00	4.18	
Ethylbenzene*	<0.050	0.050	09/18/2024	ND	2.32	116	2.00	2.80	
Total Xylenes*	<0.150	0.150	09/18/2024	ND	6.97	116	6.00	2.34	
Total BTEX	<0.300	0.300	09/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2520	16.0	09/18/2024	ND	416	104	400	8.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2024	ND	200	99.9	200	0.227	
DRO >C10-C28*	801	10.0	09/18/2024	ND	203	101	200	0.147	
EXT DRO >C28-C36	182	10.0	09/18/2024	ND					

Surrogate: 1-Chlorooctane 97.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QM-07      The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND      Analyte NOT DETECTED at or above the reporting limit
- RPD      Relative Percent Difference
- \*\*      Samples not received at proper temperature of 6°C or below.
- \*\*\*      Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "C. D. Keene".

Celey D. Keene, Lab Director/Quality Manager





101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: **Vertex Resource Services (Direct bill to XTO Energy Inc.)**

Project Manager: **Sally Carttar**

Address: **3101 Boyd Dr.**

City: **Carlsbad** State: **NM** Zip: **88220**

Phone #: **575-725-5001** Fax #:

Project #: **24E-00670** Project Owner: **Amy Ruth**

Project Name: **PLU 25 Brush Draw West**

Project Location:

Sampler Name: **Andrew Ludwig**

Lab I.D.

P.O. #:

Company: **XTO Energy, Inc.**

Attn: **Amy Ruth**

Address: **3104 E. Greene St**

City: **Carlsbad**

State: **NM** Zip: **88220**

Phone #: **432-661-0571**

Fax #:

PRESERV.

SAMPLING

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BTEX (8021)  
TPH: 801SD (GRO/DRO/MRO)  
Chloride

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Verbal Result: ☐ Yes ☐ No

Add'l Phone #:

Remarks: **Direct bill to XTO Energy Inc.**

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 17, 2024

SALLY CARTTAR

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: PLU 25 BRUSHY DRAW WEST

Enclosed are the results of analyses for samples received by the laboratory on 09/12/24 13:51.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 08 0.5' (H245515-01)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9400	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2024	ND	193	96.6	200	1.77	
DRO >C10-C28*	<10.0	10.0	09/12/2024	ND	189	94.5	200	0.275	
EXT DRO >C28-C36	<10.0	10.0	09/12/2024	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.3 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 09 0.5' (H245515-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9460	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2024	ND	193	96.6	200	1.77	
DRO >C10-C28*	<10.0	10.0	09/12/2024	ND	189	94.5	200	0.275	
EXT DRO >C28-C36	<10.0	10.0	09/12/2024	ND					

Surrogate: 1-Chlorooctane 97.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 10 0.5' (H245515-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7120	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2024	ND	193	96.6	200	1.77	
DRO >C10-C28*	<10.0	10.0	09/12/2024	ND	189	94.5	200	0.275	
EXT DRO >C28-C36	<10.0	10.0	09/12/2024	ND					

Surrogate: 1-Chlorooctane 96.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 11 0.5' (H245515-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9860	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2024	ND	193	96.6	200	1.77	
DRO >C10-C28*	<10.0	10.0	09/12/2024	ND	189	94.5	200	0.275	
EXT DRO >C28-C36	<10.0	10.0	09/12/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 12 0.5' (H245515-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6000	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	193	96.6	200	1.77	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	189	94.5	200	0.275	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 97.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
 SALLY CARTTAR  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 09/12/2024  
 Reported: 09/17/2024  
 Project Name: PLU 25 BRUSHY DRAW WEST  
 Project Number: 24E- 00670  
 Project Location: XTO

Sampling Date: 09/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 13 0.5' (H245515-06)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51	
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	09/13/2024	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	193	96.6	200	1.77	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	189	94.5	200	0.275	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 96.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 14 0.5' (H245515-07)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4400	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 83.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.6 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/05/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 15 0.5' (H245515-08)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3560	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 79.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.0 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
 SALLY CARTTAR  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 09/12/2024  
 Reported: 09/17/2024  
 Project Name: PLU 25 BRUSHY DRAW WEST  
 Project Number: 24E- 00670  
 Project Location: XTO

Sampling Date: 09/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 16 0.5' (H245515-09)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51	
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	09/13/2024	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 78.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.6 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 17 0.5' (H245515-10)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1230	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 82.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.5 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 18 0.5' (H245515-11)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1810	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 62.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.0 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 19 0.5' (H245515-12)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	672	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 63.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.6 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 20 0.5' (H245515-13)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 75.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 21 0.5' (H245515-14)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	09/13/2024	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 76.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 22 0.5' (H245515-15)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1840	16.0	09/13/2024	ND	416	104	400	3.77	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 79.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.6 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 23 0.5' (H245515-16)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51	
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82	
Total BTEX	<0.300	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	09/13/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 82.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.3 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 24 0.5' (H245515-17)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 79.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.3 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 25 0.5' (H245515-18)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 79.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.8 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 26 0.5' (H245515-19)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1500	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 75.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.9 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 27 0.5' (H245515-20)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14	
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26	
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10	
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20	
Total BTEX	<0.300	0.300	09/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	09/13/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 87.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.2 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 28 0.5' (H245515-21)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14	
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26	
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10	
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20	
Total BTEX	<0.300	0.300	09/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 66.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 29 0.5' (H245515-22)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 70.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.2 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 30 0.5' (H245515-23)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	09/13/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 68.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 31 0.5' (H245515-24)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5280	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 72.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 32 0.5' (H245515-25)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 73.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 33 0.5' (H245515-26)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	09/13/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	190	95.1	200	0.185	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	178	88.8	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 59.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 66.9 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 34 0.5' (H245515-27)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 62.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 35 0.5' (H245515-28)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 68.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 36 0.5' (H245515-29)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6130	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 75.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 37 0.5' (H245515-30)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 70.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.2 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 38 0.5' (H245515-31)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 72.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 39 0.5' (H245515-32)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1600	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 76.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: WS 24 - 01 0-0.5' (H245515-33)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 74.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/12/2024  
Reported: 09/17/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/06/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Alyssa Parras

**Sample ID: WS 24 - 02 0-0.5' (H245515-34)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/12/2024	ND	2.03	101	2.00	2.14		
Toluene*	<0.050	0.050	09/12/2024	ND	1.93	96.7	2.00	1.26		
Ethylbenzene*	<0.050	0.050	09/12/2024	ND	1.98	98.9	2.00	1.10		
Total Xylenes*	<0.150	0.150	09/12/2024	ND	5.89	98.1	6.00	1.20		
Total BTEX	<0.300	0.300	09/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/13/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	187	93.5	200	1.51	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	184	91.8	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 75.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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Notes and Definitions

- QM-07      The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND      Analyte NOT DETECTED at or above the reporting limit
- RPD      Relative Percent Difference
- \*\*      Samples not received at proper temperature of 6°C or below.
- \*\*\*      Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Caley D. Keene".

Caley D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]





101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)

BILL TO

ANALYSIS REQUEST

Project Manager: Sally Carttar

P.O. #:

Address: 3101 Boyd Drive

Company: XTO Energy, Inc.

City: Carlsbad State: NM

Zip: 88220

Attn: Amy Ruth

Phone #: 575.725.5001 Fax #:

Address: 3104 E. Greene St

Project #: 24E-00670

Project Owner: Amy Ruth

City: Carlsbad

Project Name: PLU 25 Brushy Draw West

State: NM Zip: 88220

Project Location:

Phone #: 432-661-0571

Sampler Name: L. Pullman.

Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Sample I.D.	(G)RAB OR (C)OMP.										DATE	TIME	TPH:8015									
	# CONTAINERS																					
	GROUNDWATER																					
	WASTEWATER																					
	SOIL																					
	OIL																					
	SLUDGE																					
	OTHER :																					
	ACID/BASE:																					
	ICE / COOL																					
OTHER :																						

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Relinquished By:

Date: 9-9-24

Received By:

Verbal Result: ☐ Yes ☐ No

Add'l Phone #:

Relinquished By:

Date: 9-9-24

Received By:

All Results are emailed. Please provide Email address: Sally Carttar (Scarttar@vertexresource.com), Lakin Pullman (lpullman@vertexresource.com)

Relinquished By:

Date: 9-9-24

Received By:

REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 219181001, Incident #: NAPP2403657069

Delivered By: (Circle One)  
Sampler - UPS - Bus - Other:

Observed Temp, °C: -0.5°C  
Corrected Temp, °C: -1.1°C

Sample Condition  
Cool ☒ Intact ☒  
No ☐ No ☐

CHECKED BY: (Initials)

Thermometer ID: 4433 #140  
Correction Factor: -0.5°C

Backflow (only Sample Condition)  
☐ Yes ☐ No  
☐ Yes ☐ No  
Corrected Temp, °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celykeene@cardinallabsnm.com



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2328 FAX (575) 393-2476

Company Name: Vertex Resource Services (Direct Bill to XTO Energy, Inc.)

Project Manager: Sally Cartlar

Address: 3101 Boyd Drive

City: Carlsbad State: NM Zip: 88220

Phone #: 575.725.5001 Fax #:

Project #: 24E-00670

Project Name: PLU 25 Brushy Draw West

Project Location:

Sampler Name: L. Pullman.

FOR LAB USE ONLY

Lab I.D.

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: XTO Energy, Inc.

Attn: Amy Ruth

Address: 3104 E. Greene St

City: Carlsbad

State: NM Zip: 88220

Phone #: 432-661-0571

Fax #:

BTEX (8021)

TPH:8015D(GRO / DRO / MRO)

Chloride

Sample I.D.

BS24-38 0.5'

BS24-39 0.5'

WS24-01 0-0.5'

WS24-02 0-0.5'

(G)RAB OR (C)OMP

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

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Relinquished By:

Date: 9-9-24

Time: 07:00

Relinquished By:

Date: 9-12-24

Time: 1357

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Received By:

Date: 9-12-24

Time: 1357

Received By:

Date: 9-12-24

Time: 1357

Observed Temp. °C

Corrected Temp. °C

Sample Condition

Cool Intact

Yes No

Yes No

Yes No

Yes No

CHECKED BY:

(Initials)

PP

Thermometer ID #113

Correction Factor -0.5°C

Thermometer Type

Cool Intact

Yes No

Yes No

Verbal Result: ☐ Yes ☐ No

Add'l Phone #:

All Results are emailed. Please provide Email address:

Sally Cartlar (Scartlar@vertexresource.com), Lakin Pullman (lpullman@vertexresource.com)

REMARKS: Direct Bill to XTO Energy, Inc., Cost Center #: 2191851001, Incident #: nAPP2403657069

Thermometer Type

Cool Intact

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

FORM-006 R 3.2 10/07/21

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 24, 2024

SALLY CARTTAR  
VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD, NM 88220

RE: PLU 25 BRUSHY DRAW WEST

Enclosed are the results of analyses for samples received by the laboratory on 09/19/24 13:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: WS 24 - 03 0-0.5' (H245697-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.28	114	2.00	0.102	
Toluene*	<0.050	0.050	09/20/2024	ND	2.22	111	2.00	3.27	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.25	113	2.00	4.04	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	6.78	113	6.00	4.14	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 99.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 49 0.5' (H245697-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930	
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16400	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: WS 24 - 04 0-0.5' (H245697-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930	
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5600	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 55 0.5' (H245697-04)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930	
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3920	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	50.5	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 56 0.5' (H245697-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930		
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12		
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70		
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00		
Total BTEX	<0.300	0.300	09/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3920	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	975	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	138	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 136 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 57 0.5' (H245697-06)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930	
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 58 0.5' (H245697-07)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930	
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	09/20/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 59 0.5' (H245697-08)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930	
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 60 0.5' (H245697-09)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930		
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12		
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70		
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00		
Total BTEX	<0.300	0.300	09/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	768	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 91.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.8 % 49.1-148

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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: WS 24 - 06 0-0.5' (H245697-10)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930		
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12		
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70		
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00		
Total BTEX	<0.300	0.300	09/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 93.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/17/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: WS 24 - 05 0-0.5' (H245697-11)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930		
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12		
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70		
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00		
Total BTEX	<0.300	0.300	09/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 50 0.5' (H245697-12)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930	
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1420	16.0	09/20/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 51 0.5' (H245697-13)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930		
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12		
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70		
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00		
Total BTEX	<0.300	0.300	09/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4280	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/19/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/19/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 52 0.5' (H245697-14)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930	
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1200	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/20/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/20/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 53 0.5' (H245697-15)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930		
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12		
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70		
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00		
Total BTEX	<0.300	0.300	09/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1840	16.0	09/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/20/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/20/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
SALLY CARTTAR  
3101 BOYD DRIVE  
CARLSBAD NM, 88220  
Fax To: NA

Received: 09/19/2024  
Reported: 09/24/2024  
Project Name: PLU 25 BRUSHY DRAW WEST  
Project Number: 24E- 00670  
Project Location: XTO

Sampling Date: 09/18/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BS 24 - 54 0.5' (H245697-16)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2024	ND	2.27	113	2.00	0.0930	
Toluene*	<0.050	0.050	09/20/2024	ND	2.31	116	2.00	2.12	
Ethylbenzene*	<0.050	0.050	09/20/2024	ND	2.32	116	2.00	3.70	
Total Xylenes*	<0.150	0.150	09/20/2024	ND	7.05	118	6.00	3.00	
Total BTEX	<0.300	0.300	09/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	09/20/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2024	ND	208	104	200	1.24	
DRO >C10-C28*	<10.0	10.0	09/20/2024	ND	205	103	200	0.0439	
EXT DRO >C28-C36	<10.0	10.0	09/20/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name:

Project Manager: **Sally Carter**

Address: **3101 Boyd Dr.**

City: **Carlsbad** State: **NM** Zip: **88220**

Phone #: **575-725-5001** Fax #:

Project #: **24E-00670** Project Owner: **Amy Ruth**

Project Name: **PLU 25 Brushy Draw West**

Project Location:

Sampler Name: **Andrew Ludvik**

Lab I.D.:

FOR LAB USE ONLY

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: **XTO Energy, Inc**

Attn: **Amy Ruth**

Address: **3104 Egreene St.**

City: **Carlsbad**

State: **NM** Zip: **88220**

Phone #: **432.661.0571**

Fax #:

MATRIX

PRESERV.

SAMPLING

DATE

TIME

BTex (8021)

TPH: 80150 (GRO/DRO/MRO)

Chloride

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Relinquished By: **[Signature]** Date: **11-19-24** Received By: **[Signature]** Date: **11-31-24**

Relinquished By: **[Signature]** Date: **11-31-24** Received By: **[Signature]** Date: **11-31-24**

Delivered By: (Circle One) **UPS** Observed Temp. °C: **1.7** Corrected Temp. °C: **1.1**

Sample Condition: ☒ Intact ☐ Broken

CHECKED BY: **[Signature]** (Initials)

Turnaround Time: ☒ Standard ☐ Expedited

Thermometer ID: **#140** Correction Factor: **-0.6°C**

Incubator #: **NAPP 240 365 7069**

† Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabsnm.com





101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: **Veritec Resource Services / Bill to XTO Energy, Inc.**  
Project Manager: **Sally Carttar**  
Address: **3101 Bayd Dr.**  
City: **Carlsbad** State: **NM** Zip: **88220**  
Phone #: **575.725.5001** Fax #:   
Project #: **24E-00670** Project Owner: **Amy Ruth**  
Project Name: **PLU 25 Brushy Draw West**  
Project Location:   
Sampler Name: **Andrew Ludvik** Phone #: **432-661.0571** Fax #:

BILL TO

ANALYSIS REQUEST

P.O. #:  Company: **XTO Energy, Inc**  
Attn: **Amy Ruth**  
Address: **3104 E Greene St.**  
City: **Carlsbad** State: **NM** Zip: **88226**  
Phone #: **432-661.0571** Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	PRESERV.		SAMPLING	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			ICE / COOL	OTHER :		
11	WS24-05	0-0.5'	1			X				9.17.24	1205				
12	BS24-50	0.5'	1							9.18.24	0910				
13	BS24-51	0.5'	1												
14	BS24-52	0.5'	1												
15	BS24-53	0.5'	1												
16	BS24-54	0.5'	1												

PLEASE NOTE: Laboratory and Client's respective responsibilities for any chain of custody errors are outlined in the attached Chain of Custody Addendum. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client in such cases. Cardinal's liability shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other claims whatsoever, shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client in such cases. Cardinal's liability shall be limited to the amount paid by the client for the analysis.

Relinquished By: **[Signature]**

Relinquished By: **[Signature]**

Date: **9-19-24** Received By: **[Signature]**  
Time: **1:315**  
Date: **9/19/24**  
Time:

Delivered By: (Circle One)  
Sampler - UPS - Bus - Other:

Observed Temp. °C  
Corrected Temp. °C

Sample Condition  
Cool Intact ☒ ☐  
No ☐ No ☐

CHECKED BY: **[Signature]**  
(Initials)

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

All Results are emailed. Please provide Email address:

Sally Carttar (s.carttar@veritecresource.com); Andrew Ludvik (a.ludvik@veritecresource.com)

REMARKS: Direct bill to XTO Energy, Inc. Incident #: AAP2408553359

Incident #: AAP2408553359

Thermometer ID: **#146**  
Correction Factor: **-0.1°C**  
Turnaround Time: **2-4 hrs**  
Cool Intact ☒ ☐  
Bacteria (only) Sample Condition: **Standard**  
Observed Temp. °C: **11.7**  
Corrected Temp. °C: **11.1**

Yes ☐ No ☐  
Yes ☐ No ☐  
Corrected Temp. °C

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Energy, Minerals and Natural Resources

Oil Conservation Division

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Santa Fe, NM 87505

QUESTIONS

Action 399531

QUESTIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  399531
	Action Type:  [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2403657069
Incident Name	NAPP2403657069 PLU 25 BRUSHY DRAW WEST @ 0
Incident Type	Produced Water Release
Incident Status	Deferral Request Received

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PLU 25 Brushy Draw West
Date Release Discovered	01/22/2024
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion   Flow Line - Production   Produced Water   Released: 40 BBL   Recovered: 35 BBL   Lost: 5 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 399531

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 399531
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
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: Garrett Green Title: SHE Coordinator Email: garrett.green@exxonmobil.com Date: 02/05/2024
----------------------------------------------------	----------------------------------------------------------------------------------------------------------

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QUESTIONS, Page 3

Action 399531

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:
	5380
	Action Number: 399531
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**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 100 and 500 (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
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 300 and 500 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 500 and 1000 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 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	No

**Remediation Plan**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

**Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	17000
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	23
GRO+DRO (EPA SW-846 Method 8015M)	23
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	07/22/2024
On what date will (or did) the final sampling or liner inspection occur	06/24/2024
On what date will (or was) the remediation complete(d)	10/22/2024
What is the estimated surface area (in square feet) that will be reclaimed	8480
What is the estimated volume (in cubic yards) that will be reclaimed	200
What is the estimated surface area (in square feet) that will be remediated	8480
What is the estimated volume (in cubic yards) that will be remediated	200

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.



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Action 399531

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  399531
	Action Type:  [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	HALFWAY DISPOSAL AND LANDFILL [FEEM0112334510]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	No
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Kailee Smith Title: Regulatory Analyst Email: kailee.smith@exxonmobil.com Date: 11/05/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 399531

**QUESTIONS (continued)**

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  399531
	Action Type:  [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Deferral Requests Only</b>	
<i>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.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	The deferral area is directly under and surrounding separators and a pipe rack. Removal of this equipment would require well shut-in and major facility deconstruction.
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	3208
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	500
<i>Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.</i>	
Enter the facility ID (f#) on which this deferral should be granted	PLU 25 BRUSHY DRAW BTY [fAPP2126355953]
Enter the well API (30-) on which this deferral should be granted	Not answered.
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Kailee Smith Title: Regulatory Analyst Email: kailee.smith@exxonmobil.com Date: 11/05/2024

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Action 399531

**QUESTIONS (continued)**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 399531
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	383207
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/20/2024
What was the (estimated) number of samples that were to be gathered	45
What was the sampling surface area in square feet	9000

**Remediation Closure Request**

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	No
----------------------------------------------------------------	----

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CONDITIONS

Action 399531

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  399531
	Action Type:  [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests final remediation for (Incident Number NAPP2403657069) until final reclamation of the well pad or major construction, whichever comes first. Vertex and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The impacted soil is the shaded area on figure 2 that is designated in proximity to equipment, specifically characterization borehole BH24-29 and confirmation sample areas BS24-44 and WS24-04, where remediation would require a major facility deconstruction. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue.	12/10/2024