

CEDAR 11 SOUTHWEST CTB

1/09/2024

OCD Incident nAPP2401035055

<b>Spill Volume(Bbls) Calculator</b>	
<i>Inputs in blue, Outputs in red</i>	
<b>Contaminated Soil measurement</b>	
Area (sq feet)	Depth (in)
<u>0.00</u>	<u>0.00</u>
Cubic Feet of Soil Impacted	<u>0.00</u>
Barrels of Soil Impacted	<u>0.00</u>
Soil Type	Clay/Sand
Barrels of Oil Assuming 100% Saturation	<u>0.00</u>
Saturation	Fluid present with shovel/backhoe
Estimated Barrels of Oil Released	0.00
<b>Free Standing Fluid Only</b>	
Area (sq feet)	Depth (inches))
<u>604.00</u>	<u>2.000</u>
Standing fluid	<u>17.90</u>
<b>Total fluids spilled</b>	<b><u>17.90</u></b>



April 1, 2024

**New Mexico Energy Minerals and Natural Resources Department**

New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Deferral Request  
Cedar 11 Southwest CTB  
Incident Number nAPP2401035055  
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Devon Energy Production Company (Devon), has prepared this *Deferral Request* to document assessment and soil sampling activities at the Cedar 11 Southwest CTB (Site) in Unit M, Section 11, Township 21 South, Range 27 East, in Eddy County, New Mexico (Figure 1). The Site (32.49017°, -104.16796°) is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of crude oil within a lined containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, Devon is submitting this *Deferral Request*, describing Site assessment and delineation activities that have occurred and requesting deferral of final remediation for Incident Number nAPP2401035055 until the Site is reconstructed and/or the well pad is abandoned.

## **BACKGROUND**

On January 9, 2024, a 3-inch Victaulic clamp on the inlet line to the circulating pump popped off, resulting in the release of approximately 18 barrels (bbls) of crude oil into the lined tank battery containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; all 18 bbls of released crude oil were recovered from within the lined containment. Devon reported the release to the NMOCD via email on January 10, 2024, and subsequently the release was assigned Incident Number nAPP2401035055. A 48-hour advance notice of liner inspection was provided via email to the New Mexico Oil Conservation Division (NMOCD) via web portal. A liner integrity inspection was conducted by Ensolum personnel following fluid recovery. Upon inspection, the liner was determined to be insufficient.

## **SITE CHARACTERIZATION AND CLOSURE CRITERIA**

The Site was characterized to assess applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 200 feet below ground surface (bgs) based on groundwater depth measurement of a nearby water well. On November 11, 2013, a soil boring (New Mexico Office of the State Engineer (NMOSE) file number C-03690 POD1) was drilled nearly 0.43 miles west of the Site. Soil boring C-03690 was drilled to a depth of 200 feet bgs. Depth to groundwater was confirmed to be greater than 200 feet bgs as indicated on the well log and record (see Appendix A).

The closest continuously flowing or significant watercourse to the Site is an intermittent dry wash, located approximately 0.83 miles northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is underlain by unstable geology (high karst potential designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total Petroleum Hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

## SITE ASSESSMENT ACTIVITIES

On February 5, 2024, Ensolum personnel visited the Site to perform a liner integrity inspection and to conducted Site assessment activities. Ensolum personnel competent in conducting liner inspections identified five tears and it was determined the liner was insufficient and did not have the ability to contain the release in question. Four assessment soil samples (SS01 through SS04) were collected from each side of the lined secondary containment at surface level. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a PetroFLAG<sup>®</sup> Hydrocarbon Test Kit and chloride using the MOHR method titration. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted in Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Envirotech Analytical Laboratory (Envirotech) in Farmington, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

## DELINEATION ACTIVITIES

Ensolum returned to the Site on February 12, 2024, to conduct delineation activities and to assess for the presence or absence of impacts to soil beneath the containment. The liner was found insufficient during the February 2024 inspection and as such, four boreholes (BH01 through BH04) were advanced in the general vicinity of the tears in the damaged liner. Borehole BH04 was collected in between tears four and five in the containment liner. The boreholes were advanced via hand auger to a depth of 2 feet

bgs in borehole BH01 and to a depth of 1-foot bgs in boreholes BH02 through BH04, and field screened for VOCs and chlorides at each foot as described above. The soil samples were handled and analyzed as previously described. Field screening results and observations from the boreholes were logged on lithologic/soil sampling logs, which are included in Appendix C. Discrete delineation soil samples were collected at ground surface and from each foot in boreholes (BH01 through BH04) and submitted for laboratory analysis.

On February 27, 2024, Ensolum personnel returned to the Site to recollect lateral assessment soil samples SS01 and SS02, which exceeded the Site Closure Criteria due to localized surface contamination from ongoing production operations. Lateral assessment soil samples SS01A and SS02A were recollected at ground surface; the samples were handled and analyzed in the same manner as previously described.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for assessment soil samples SS01A, SS02A, SS03 and SS04, collected from outside of the lined secondary containment, indicated all COC concentrations were compliant with Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

Laboratory analytical results for the vertical delineation soil samples collected from borehole BH01 indicated COC concentrations were compliant with the Site Closure Criteria at ground surface to 2 feet bgs. Concentrations of chloride exceeded the Site Closure Criteria at ground surface in boreholes BH02 through BH04. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

## DEFERRAL REQUEST

Devon is requesting deferral of final remediation due to the presence of active production equipment and surface pipelines within the lined containment. Impacted soil is limited to the area immediately beneath the lined containment and active production equipment, where remediation would require a major facility deconstruction.

Impacted soil remaining in place beneath the liner, which is delineated vertically by delineation soil samples BH01 through BH04, collected from a depth of 2 feet bgs in borehole BH01 and at 1-foot bgs in boreholes BH02 through BH04, and laterally by surface soil samples SS01A, SS02A, SS03 and SS04, collected at the ground surface. A maximum of 362 cubic yards of chloride impacted soil remains in place beneath the liner assuming a maximum 1-foot depth based on the delineation soil samples listed above. Impacted soil volumes estimate include waste-containing soil volumes to be addressed through reconstruction of the containment or final pad reclamation. The area of deferment is depicted on Figure 3.

Devon does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 200 feet bgs, the release was contained laterally by the lined containment, and the impacted soil remaining in place is limited to the area immediately beneath the liner. The liner has been repaired by Devon and will restrict future vertical migration of residual impacts and any interactions with humans and/or wildlife.

Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, Devon requests deferral of final remediation for Incident Number nAPP2401035055 until final reclamation of the well pad or major construction,



whichever comes first. Remedial actions completed to date have been protective of human health, the environment, and groundwater and deferment of impacted soil beneath the lined containment appears to be equally protective and warranting deferment. Notifications submitted to the NMOCD are included in Appendix E.

If you have any questions or comments, please contact Ms. Ashley Giovengo at (575) 988-0055 or [agiovengo@ensolum.com](mailto:agiovengo@ensolum.com).

Sincerely,  
**Ensolum, LLC**



Ashely Giovengo  
Senior Scientist



Daniel R. Moir, PG  
Senior Managing Geologist

cc: Dale Woodall, Devon  
Bureau of Land Management






Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Area of Requested Deferral
Table 1	Soil Sample Analytical Results
Appendix A	Reference Wells
Appendix B	Photographic Log
Appendix C	Lithographic Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	Email Correspondence






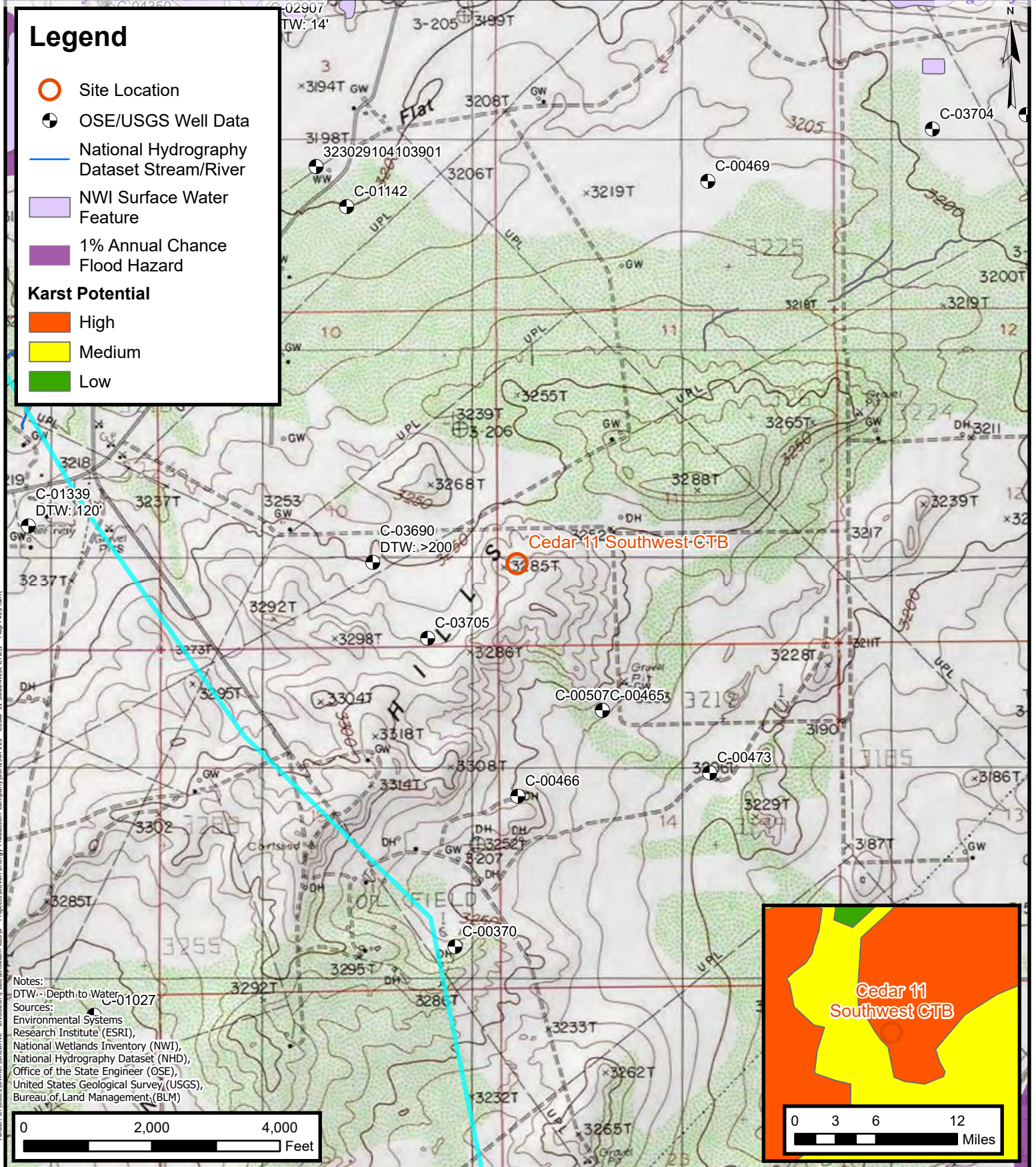
FIGURES

# Legend

-  Site Location
-  OSE/USGS Well Data
-  National Hydrography Dataset Stream/River
-  NWI Surface Water Feature
-  1% Annual Chance Flood Hazard

## Karst Potential

-  High
-  Medium
-  Low



## Site Receptor Map

Devon Energy Production Company  
Cedar 11 Southwest CTB  
Incident Number: nAPP2401035055  
Unit M, Section 11, Township 21S, Range 27E  
Eddy County, New Mexico

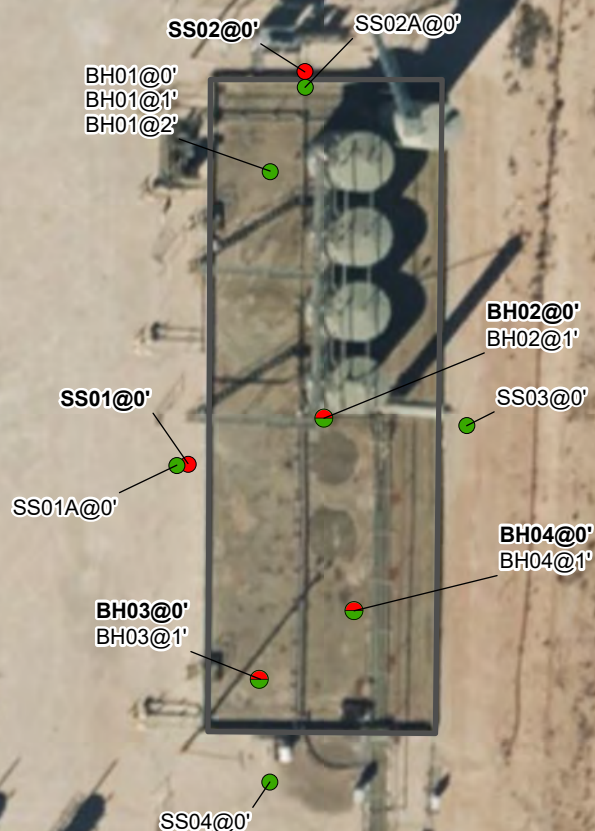
**FIGURE**

**1**



## Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Delineation Soil Sample with Concentrations Exceeding Closure Criteria
- Containment Berm



Notes:  
 Sample ID @ Depth Below Ground Surface  
 Samples in **bold** indicate sample exceeded applicable reclamation criteria.

0 50 100  
 Feet

Source:  
 Bing Maps

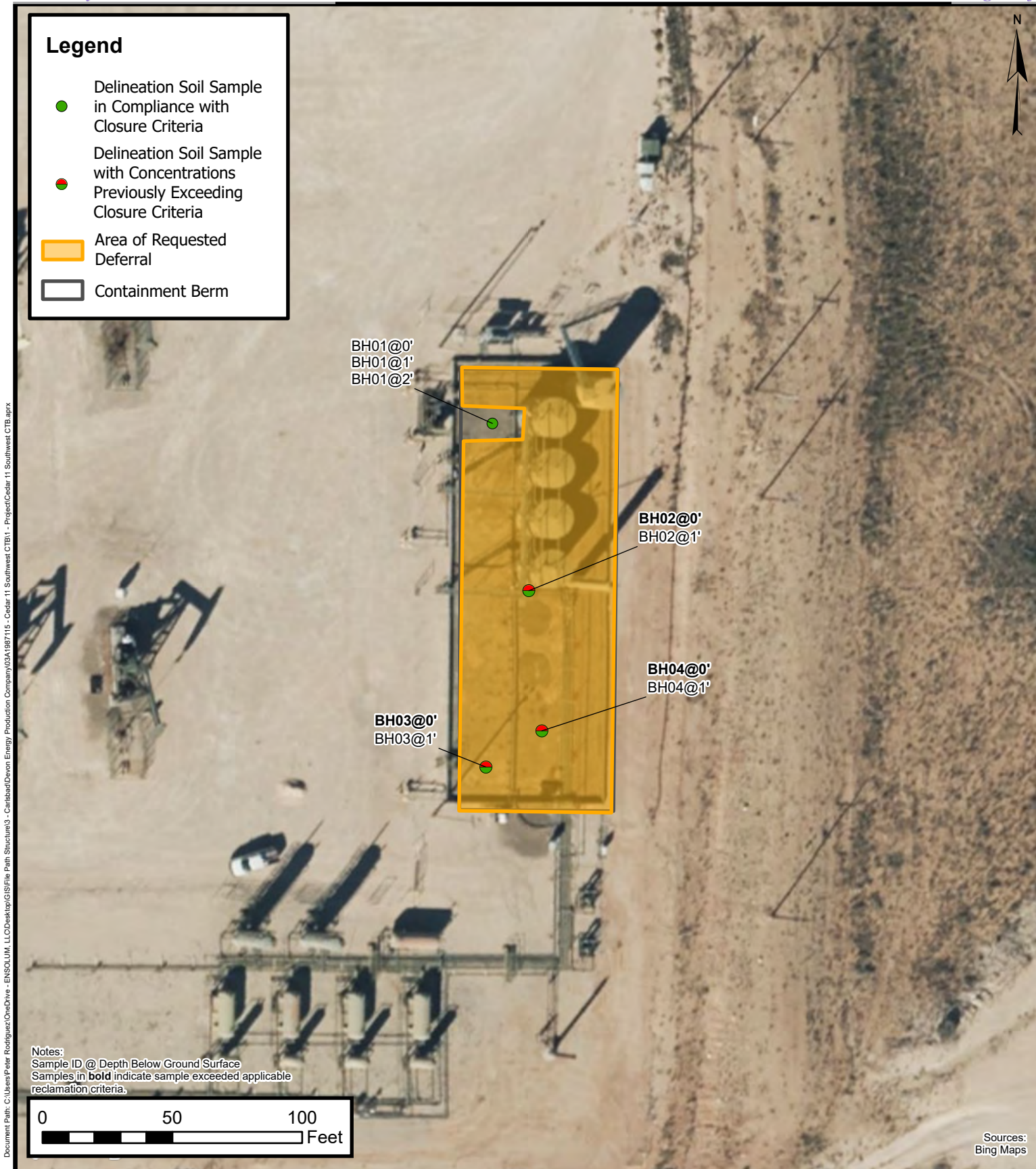


## Delineation Soil Sample Locations

Devon Energy Production Company  
 Cedar 11 Southwest CTB  
 Incident Number: nAPP2401035055  
 Unit M, Section 11, Township 21S, Range 27E  
 Eddy County, New Mexico

FIGURE  
 2





## Area of Requested Deferral

Devon Energy Production Company

Cedar 11 Southwest CTB

Incident Number: nAPP2401035055

Unit M, Section 11, Township 21S, Range 27E  
 Eddy County, New Mexico

FIGURE

3



TABLES



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Cedar 11 Southwest CTB  
 Devon Energy  
 Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
<b>Delineation Soil Samples</b>										
SS01	2/5/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>661</b>
SS01A	2/27/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	421
SS02	2/5/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>646</b>
SS02A	2/27/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	64.4
SS03	2/5/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	255
SS04	2/5/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	372
BH01	2/12/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<20.0
BH01	2/12/2024	1	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<20.0
BH01	2/12/2024	2	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	37.0
BH02	2/12/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>2,060</b>
BH02	2/12/2024	1	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	376
BH03	2/12/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>711</b>
BH03	2/12/2024	1	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	25.0
BH04	2/12/2024	0	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	<b>1,240</b>
BH04	2/12/2024	1	<0.0250	<0.0250	<20.0	<25.0	<50.0	<20.0	<20.0	371

**Notes:**

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Grey text represents samples that have been excavated

&lt;": Laboratory Analytical result is less than reporting limit

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.

\* Indicates sample was collected in area to be reclaimed after remediation is complete; reclamation for chloride in the top 4 feet is 600 mg/kg and total TPH is 100 mg/kg.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes





## APPENDIX A

### Well Log and Record

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# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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

STATE ENGINEER OFFICE  
PO BOX 10000

NOV 19 A 2:13

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) <b>POD 1</b>				OSE FILE NUMBER(S) <b>C-3690</b>			
	WELL OWNER NAME(S) <b>Winston Ballard</b>				PHONE (OPTIONAL) <b>575-513-9366</b>			
	WELL OWNER MAILING ADDRESS <b>1819-2 N. Canal</b>				CITY <b>Carlsbad</b>		STATE <b>NM</b>	ZIP <b>88220</b>
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE <b>32</b>	MINUTES <b>23</b>	SECONDS <b>17.0</b> N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
LONGITUDE <b>104</b> <b>10</b> <b>18.4</b> W								
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER <b>WD-1348</b>		NAME OF LICENSED DRILLER <b>Clinton E Taylor</b>			NAME OF WELL DRILLING COMPANY <b>Taylor Water Well Service</b>		
	DRILLING STARTED <b>11/10/2013</b>	DRILLING ENDED <b>11/11/2013</b>	DEPTH OF COMPLETED WELL (FT) <b>Plugged</b>		BORE HOLE DEPTH (FT) <b>200</b>	DEPTH WATER FIRST ENCOUNTERED (FT) <b>None</b>		
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input checked="" type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD    ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
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 06/08/2012)

FILE NUMBER <b>C-3690</b>	POD NUMBER <b>1</b>	TRN NUMBER <b>534022</b>
LOCATION <b>215.27E.10.414</b>		PAGE 1 OF 2

#### 4. HYDROGEOLOGIC LOG OF WELL

FOR OSE INTERNAL USE



## APPENDIX B

### Photographic Log

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### Photographic Log

Devon Energy Production Company

Cedar 11 Southwest CTB

Incident Number: nAPP2401035055



Photograph 1  
Date: 01/09/2024  
Description: Initial Release  
View: Northeast



Photograph 2  
Date: 01/09/2024  
Description: Initial Release  
View: Southeast

SE S SW  
191°S (T) LAT: 32.492435 LON: -104.168261 ±13ft ▲ 3280ft



Photograph 3  
Date: 02/05/2024  
Description: Liner Inspection  
View: South

NE E SE  
93°E (T) LAT: 32.491150 LON: -104.168051 ±13ft ▲ 3297ft



Photograph 4  
Date: 02/05/2024  
Description: Liner Inspection  
View: East



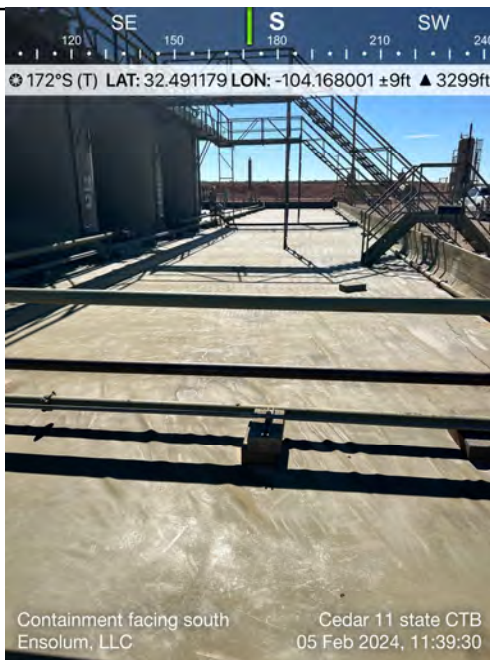


# Photographic Log

Devon Energy Production Company

Cedar 11 Southwest CTB

Incident Number: nAPP2401035055



Photograph 5

Date: 02/05/2024

Description: Liner Inspection

View: South

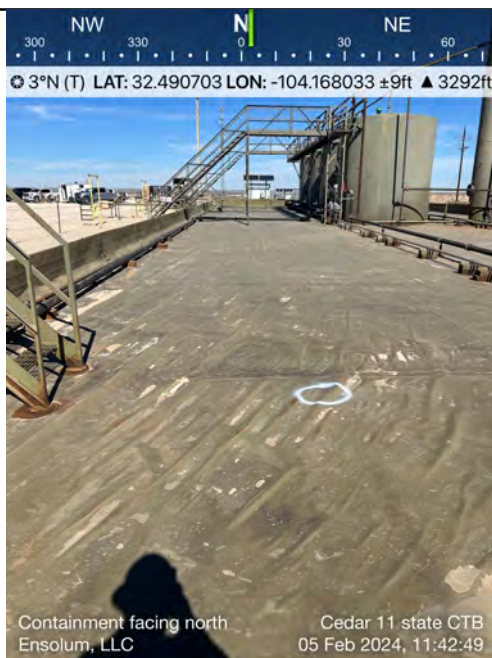


Photograph 6

Date: 02/05/2024

Description: Liner Inspection

View: West



Photograph 7

Date: 02/05/2024

Description: Liner Inspection

View: North



Photograph 8

Date: 02/05/2024

Description: Liner Inspection

View: Northeast





# Photographic Log

Devon Energy Production Company

Cedar 11 Southwest CTB

Incident Number: nAPP2401035055



Photograph 9

Date: 02/12/2024

Description: Liner Delineation

View: East



Photograph 10

Date: 02/12/2024

Description: Liner Delineation

View: East

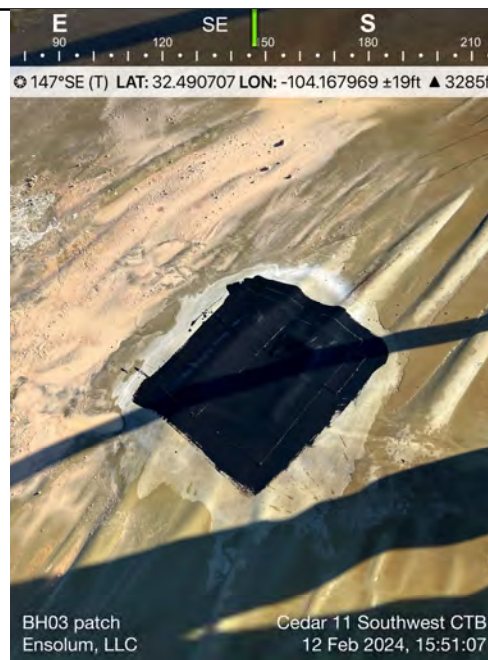


Photograph 11

Date: 02/12/2024

Description: Liner Delineation

View: East



Photograph 12

Date: 02/12/2024

Description: Liner Delineation

View: Southeast



**Photographic Log**

Devon Energy Production Company

Cedar 11 Southwest CTB

Incident Number: nAPP2401035055



Photograph 13

Date: 02/12/2024

Description: Liner Patch

View: Southeast



Photograph 14

Date: 02/12/2024

Description: Liner Patch

View: North



Photograph 15

Date: 02/27/2024

Description: Lateral Delineation Sampling

View: East



Photograph 16

Date: 02/27/2024

Description: Lateral Delineation Sampling


View: Southeast





## APPENDIX C


### Lithologic Soil Sampling Logs

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								Sample Name: BH01		2/12/2024	
								Site Name: Cedar 11 Southwest CTB			
								Incident Number: nAPP2401035055			
								Job Number: 03A1987115			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Israel Estrella		Method: Hand Auger	
Coordinates: 32.491110, -104.168008								Hole Diameter: 3"		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
W	ND	16	N	BH01	0	0	CCHE	Caliche- stain			
M			N	BH01	1	1	SP-SM	Sand- brown			
M			N	BH01	2	2	SP- SM	Sand - brown			
Total Depth @ 2' bgs											

								Sample Name: BH02		Date: 2/12/24	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Site Name: Cedar 11 Southwest CTB			
								Incident Number: nAPP2401035055			
								Job Number: 03A1987115			
Coordinates: 32.4909330, -104.1679646								Logged By: Israel Estrella		Method: Hand Auger	
Hole Diameter: 3"								Total Depth: 1'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
W	2520		N	BH02	0	0	CHHE	Caliche- light stain			
M	235	22	N	BH02	1	1	CHHE	Caliche- No stain			
Total Depth @ 1' bgs											

								Sample Name: BH03		Date: 2/12/24	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Site Name: Cedar 11 Southwest CTB			
								Incident Number: nAPP2401035055			
								Job Number: 03A1987115			
Coordinates: 32.4907464, -104.1680209								Logged By: Israel Estrella		Method: Hand Auger	
Hole Diameter: 3"								Total Depth: 1'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
W	576		N	BH03	0	0	CHHE	Caliche- light stain			
M	ND	22	N	BH03	1	1	CHHE	Caliche- No stain			
Total Depth @ 1' bgs											

								Sample Name: BH04		Date: 2/12/24	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Site Name: Cedar 11 Southwest CTB			
								Incident Number: nAPP2401035055			
								Job Number: 03A1987115			
Coordinates: 32.4907961, -104.1679404								Logged By: Israel Estrella		Method: Hand Auger	
Hole Diameter: 3"								Total Depth: 1'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
W	1176		N	BH04	0	0	CHHE	Caliche- light stain			
M	240	52	N	BH04	1	1	CHHE	Caliche- No stain			
Total Depth 1' bgs											



## APPENDIX D

### Laboratory Analytical Reports & Chain-of-Custody Documentation

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Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Cedar 11 Southwest CTB

Work Order: E402069

Job Number: 01058-0007

Received: 2/7/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/13/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/13/24

Ashley Giovengo  
6488 7 Rivers Hwy  
Artesia, NM 88210



Project Name: Cedar 11 Southwest CTB  
Workorder: E402069  
Date Received: 2/7/2024 6:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/7/2024 6:00:00AM, under the Project Name: Cedar 11 Southwest CTB.

The analytical test results summarized in this report with the Project Name: Cedar 11 Southwest CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

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Sample Summary

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	02/13/24 15:07

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS01-0'	E402069-01A	Soil	02/05/24	02/07/24	Glass Jar, 2 oz.
SS02-0'	E402069-02A	Soil	02/05/24	02/07/24	Glass Jar, 2 oz.
SS03-0'	E402069-03A	Soil	02/05/24	02/07/24	Glass Jar, 2 oz.
SS04-0'	E402069-04A	Soil	02/05/24	02/07/24	Glass Jar, 2 oz.



## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:07:44PM
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SS01-0'

E402069-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
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Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY		Batch: 2406070
Benzene	ND	0.0250	1	02/07/24	02/09/24
Ethylbenzene	ND	0.0250	1	02/07/24	02/09/24
Toluene	ND	0.0250	1	02/07/24	02/09/24
o-Xylene	ND	0.0250	1	02/07/24	02/09/24
p,m-Xylene	ND	0.0500	1	02/07/24	02/09/24
Total Xylenes	ND	0.0250	1	02/07/24	02/09/24
Surrogate: Bromofluorobenzene	113 %	70-130		02/07/24	02/09/24
Surrogate: 1,2-Dichloroethane-d4	89.7 %	70-130		02/07/24	02/09/24
Surrogate: Toluene-d8	107 %	70-130		02/07/24	02/09/24

Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY		Batch: 2406070
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/09/24
Surrogate: Bromofluorobenzene	113 %	70-130		02/07/24	02/09/24
Surrogate: 1,2-Dichloroethane-d4	89.7 %	70-130		02/07/24	02/09/24
Surrogate: Toluene-d8	107 %	70-130		02/07/24	02/09/24

Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2406099
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24
Surrogate: n-Nonane	106 %	50-200		02/09/24	02/10/24

Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2406085
Chloride	661	20.0	1	02/08/24	02/08/24	



## Sample Data

Devon Energy - Carlsbad  
6488 7 Rivers Hwy  
Artesia NM, 88210

Project Name: Cedar 11 Southwest CTB  
Project Number: 01058-0007  
Project Manager: Ashley Giovengo

**Reported:**  
2/13/2024 3:07:44PM

SS02-0'

E402069-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406070
Benzene	ND	0.0250	1	02/07/24	02/09/24	
Ethylbenzene	ND	0.0250	1	02/07/24	02/09/24	
Toluene	ND	0.0250	1	02/07/24	02/09/24	
o-Xylene	ND	0.0250	1	02/07/24	02/09/24	
p,m-Xylene	ND	0.0500	1	02/07/24	02/09/24	
Total Xylenes	ND	0.0250	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene		112 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		90.6 %	70-130	02/07/24	02/09/24	
Surrogate: Toluene-d8		108 %	70-130	02/07/24	02/09/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406070
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene		112 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		90.6 %	70-130	02/07/24	02/09/24	
Surrogate: Toluene-d8		108 %	70-130	02/07/24	02/09/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2406099
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
Surrogate: n-Nonane		102 %	50-200	02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406085
Chloride	646	100	5	02/08/24	02/08/24	



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:07:44PM
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SS03-0'

E402069-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406070
Benzene	ND	0.0250	1	02/07/24	02/09/24	
Ethylbenzene	ND	0.0250	1	02/07/24	02/09/24	
Toluene	ND	0.0250	1	02/07/24	02/09/24	
o-Xylene	ND	0.0250	1	02/07/24	02/09/24	
p,m-Xylene	ND	0.0500	1	02/07/24	02/09/24	
Total Xylenes	ND	0.0250	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene		112 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		92.6 %	70-130	02/07/24	02/09/24	
Surrogate: Toluene-d8		107 %	70-130	02/07/24	02/09/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406070
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene		112 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		92.6 %	70-130	02/07/24	02/09/24	
Surrogate: Toluene-d8		107 %	70-130	02/07/24	02/09/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2406099
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
Surrogate: n-Nonane		90.5 %	50-200	02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406085
Chloride	255	20.0	1	02/08/24	02/08/24	





Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/13/2024 3:07:44PM
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SS04-0'

E402069-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406070
Benzene	ND	0.0250	1	02/07/24	02/09/24	
Ethylbenzene	ND	0.0250	1	02/07/24	02/09/24	
Toluene	ND	0.0250	1	02/07/24	02/09/24	
o-Xylene	ND	0.0250	1	02/07/24	02/09/24	
p,m-Xylene	ND	0.0500	1	02/07/24	02/09/24	
Total Xylenes	ND	0.0250	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene		115 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		92.5 %	70-130	02/07/24	02/09/24	
Surrogate: Toluene-d8		106 %	70-130	02/07/24	02/09/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406070
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene		115 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		92.5 %	70-130	02/07/24	02/09/24	
Surrogate: Toluene-d8		106 %	70-130	02/07/24	02/09/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2406099
Diesel Range Organics (C10-C28)	ND	25.0	1	02/09/24	02/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/09/24	02/10/24	
Surrogate: n-Nonane		103 %	50-200	02/09/24	02/10/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406085
Chloride	372	40.0	2	02/08/24	02/08/24	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/13/2024 3:07:44PM

Volatile Organic Compounds by EPA 8260B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2406070-BLK1) Prepared: 02/07/24 Analyzed: 02/09/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.562		0.500		112	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.454		0.500		90.8	70-130			
Surrogate: Toluene-d8	0.532		0.500		106	70-130			

LCS (2406070-BS1) Prepared: 02/07/24 Analyzed: 02/09/24

Benzene	2.79	0.0250	2.50		111	70-130			
Ethylbenzene	2.77	0.0250	2.50		111	70-130			
Toluene	2.67	0.0250	2.50		107	70-130			
o-Xylene	2.78	0.0250	2.50		111	70-130			
p,m-Xylene	5.50	0.0500	5.00		110	70-130			
Total Xylenes	8.28	0.0250	7.50		110	70-130			
Surrogate: Bromofluorobenzene	0.591		0.500		118	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.494		0.500		98.7	70-130			
Surrogate: Toluene-d8	0.535		0.500		107	70-130			

Matrix Spike (2406070-MS1) Source: E402066-02 Prepared: 02/07/24 Analyzed: 02/09/24

Benzene	2.42	0.0250	2.50	ND	96.7	48-131			
Ethylbenzene	2.76	0.0250	2.50	ND	110	45-135			
Toluene	2.55	0.0250	2.50	ND	102	48-130			
o-Xylene	2.76	0.0250	2.50	ND	110	43-135			
p,m-Xylene	5.50	0.0500	5.00	ND	110	43-135			
Total Xylenes	8.26	0.0250	7.50	ND	110	43-135			
Surrogate: Bromofluorobenzene	0.583		0.500		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.467		0.500		93.3	70-130			
Surrogate: Toluene-d8	0.544		0.500		109	70-130			

Matrix Spike Dup (2406070-MSD1) Source: E402066-02 Prepared: 02/07/24 Analyzed: 02/09/24

Benzene	2.23	0.0250	2.50	ND	89.4	48-131	7.91	23	
Ethylbenzene	2.60	0.0250	2.50	ND	104	45-135	6.03	27	
Toluene	2.42	0.0250	2.50	ND	96.8	48-130	5.31	24	
o-Xylene	2.68	0.0250	2.50	ND	107	43-135	3.11	27	
p,m-Xylene	5.27	0.0500	5.00	ND	105	43-135	4.26	27	
Total Xylenes	7.95	0.0250	7.50	ND	106	43-135	3.87	27	
Surrogate: Bromofluorobenzene	0.577		0.500		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.477		0.500		95.3	70-130			
Surrogate: Toluene-d8	0.530		0.500		106	70-130			

QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/13/2024 3:07:44PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2406070-BLK1) Prepared: 02/07/24 Analyzed: 02/09/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.562		0.500		112	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.454		0.500		90.8	70-130			
Surrogate: Toluene-d8	0.532		0.500		106	70-130			

LCS (2406070-BS2) Prepared: 02/07/24 Analyzed: 02/09/24

Gasoline Range Organics (C6-C10)	54.6	20.0	50.0		109	70-130			
Surrogate: Bromofluorobenzene	0.556		0.500		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.456		0.500		91.2	70-130			
Surrogate: Toluene-d8	0.549		0.500		110	70-130			

Matrix Spike (2406070-MS2) Source: E402066-02 Prepared: 02/07/24 Analyzed: 02/09/24

Gasoline Range Organics (C6-C10)	54.7	20.0	50.0	ND	109	70-130			
Surrogate: Bromofluorobenzene	0.574		0.500		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.467		0.500		93.4	70-130			
Surrogate: Toluene-d8	0.542		0.500		108	70-130			

Matrix Spike Dup (2406070-MSD2) Source: E402066-02 Prepared: 02/07/24 Analyzed: 02/09/24

Gasoline Range Organics (C6-C10)	55.3	20.0	50.0	ND	111	70-130	1.16	20	
Surrogate: Bromofluorobenzene	0.578		0.500		116	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.441		0.500		88.1	70-130			
Surrogate: Toluene-d8	0.554		0.500		111	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/13/2024 3:07:44PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2406099-BLK1)					Prepared: 02/09/24 Analyzed: 02/10/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	57.4		50.0		115	50-200			

LCS (2406099-BS1)					Prepared: 02/09/24 Analyzed: 02/10/24				
Diesel Range Organics (C10-C28)	279	25.0	250		112	38-132			
Surrogate: n-Nonane	57.6		50.0		115	50-200			

Matrix Spike (2406099-MS1)					Source: E402065-02		Prepared: 02/09/24 Analyzed: 02/10/24		
Diesel Range Organics (C10-C28)	298	25.0	250	ND	119	38-132			
Surrogate: n-Nonane	58.3		50.0		117	50-200			

Matrix Spike Dup (2406099-MSD1)					Source: E402065-02		Prepared: 02/09/24 Analyzed: 02/10/24		
Diesel Range Organics (C10-C28)	291	25.0	250	ND	116	38-132	2.46	20	
Surrogate: n-Nonane	58.7		50.0		117	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/13/2024 3:07:44PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2406085-BLK1)					Prepared: 02/08/24 Analyzed: 02/08/24				
Chloride	ND	20.0							
LCS (2406085-BS1)					Prepared: 02/08/24 Analyzed: 02/08/24				
Chloride	251	20.0	250		100	90-110			
Matrix Spike (2406085-MS1)					Source: E402074-03		Prepared: 02/08/24 Analyzed: 02/08/24		
Chloride	3600	200	250	3210	155	80-120			M4
Matrix Spike Dup (2406085-MSD1)					Source: E402074-03		Prepared: 02/08/24 Analyzed: 02/08/24		
Chloride	3430	200	250	3210	88.2	80-120	4.73	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.

Definitions and Notes

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Ashley Giovengo	02/13/24 15:07

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.





Client: Devon				Bill To				Lab Use Only				TAT				EPA Program						
Project: Cedar 11 Southwest CTB				Attention: Dale Woodall				Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA					
Project Manager: Ashley Giovengo				Address: 205 E Bender Road #150				E402069		01058-0007					x							
Address: 3122 National Parks Hwy				City, State, Zip: Hobbs NM, 88240				Analysis and Method											RCRA			
City, State, Zip: Carlsbad NM, 88220				Phone: (575)748-1838				TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	State							
Phone: 575-988-0055				Email: dale.woodall@dvn.com											NM	CO	UT	AZ	TX			
Email: agiovengo@ensolum.com															x							
Report due by:																		Remarks				
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number																	
13:26	2/5/2024	Soil	1	SS01 - 0'	1									X								
12:00	2/5/2024	Soil	1	SS02 - 0'	2									X								
12:02	2/5/2024	Soil	1	SS03 - 0'	3									X								
12:04	2/5/2024	Soil	1	SS04 - 0'	4									X								
Additional Instructions: Please CC: cburton@ensolum.com, agiovengo@ensolum.com, dale.woodall@dvn.com, chamilton@ensolum.com, ehafft@ensolum.com																						
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.												Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.										
Relinquished by: (Signature)				Date		Time		Received by: (Signature)				Date		Time		Lab Use Only						
				2/6/24		1130						2-6-24		1130		Received on ice: <input checked="" type="checkbox"/> Y / N						
Relinquished by: (Signature)				Date		Time		Received by: (Signature)				Date		Time		T1 T2 T3						
				2-6-24		1545						2-6-24		1830								
Relinquished by: (Signature)				Date		Time		Received by: (Signature)				Date		Time		AVG Temp °C						
				2-6-24		1400						2-7-24		0600		4						
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other												Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA										
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above sample is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																						

## Envirotech Analytical Laboratory

Printed: 2/7/2024 9:02:10AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client: Devon Energy - Carlsbad  
Phone: (505) 382-1211  
Email: ashley.giovengo@wescominc.com

Date Received: 02/07/24 06:00  
Date Logged In: 02/06/24 15:04  
Due Date: 02/13/24 17:00 (4 day TAT)

Work Order ID: E402069  
Logged In By: Alexa Michaels

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes  
2. Does the number of samples per sampling site location match the COC? Yes  
3. Were samples dropped off by client or carrier? Yes  
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes  
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes  
8. If yes, was cooler received in good condition? Yes  
9. Was the sample(s) received intact, i.e., not broken? Yes  
10. Were custody/security seals present? No  
11. If yes, were custody/security seals intact? NA  
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No  
15. Are VOC samples collected in VOA Vials? NA  
16. Is the head space less than 6-8 mm (pea sized or less)? NA  
17. Was a trip blank (TB) included for VOC analyses? NA  
18. Are non-VOC samples collected in the correct containers? Yes  
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No  
22. Are sample(s) correctly preserved? NA  
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No  
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No  
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client InstructionComments/Resolution

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Cedar 11 Southwest CTB

Work Order: E402113

Job Number: 01058-0007

Received: 2/14/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/19/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/19/24

Ashley Giovengo  
6488 7 Rivers Hwy  
Artesia, NM 88210



Project Name: Cedar 11 Southwest CTB  
Workorder: E402113  
Date Received: 2/14/2024 7:00:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/14/2024 7:00:00AM, under the Project Name: Cedar 11 Southwest CTB.

The analytical test results summarized in this report with the Project Name: Cedar 11 Southwest CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
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**Alexa Michaels**  
Sample Custody Officer  
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Field Offices:

**Southern New Mexico Area**

**Lynn Jarboe**  
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**Michelle Golzaes**  
Client Representative  
Office: 505-421-LABS(5227)  
Cell: 505-947-8222  
[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	02/19/24 15:28

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH01-0'	E402113-01A	Soil	02/12/24	02/14/24	Glass Jar, 2 oz.
BH01-1'	E402113-02A	Soil	02/12/24	02/14/24	Glass Jar, 2 oz.
BH01-2'	E402113-03A	Soil	02/12/24	02/14/24	Glass Jar, 2 oz.
BH02-0'	E402113-04A	Soil	02/12/24	02/14/24	Glass Jar, 2 oz.
BH02-1'	E402113-05A	Soil	02/12/24	02/14/24	Glass Jar, 2 oz.
BH03-0'	E402113-06A	Soil	02/12/24	02/14/24	Glass Jar, 2 oz.
BH03-1'	E402113-07A	Soil	02/12/24	02/14/24	Glass Jar, 2 oz.
BH04-0'	E402113-08A	Soil	02/12/24	02/14/24	Glass Jar, 2 oz.
BH04-1'	E402113-09A	Soil	02/12/24	02/14/24	Glass Jar, 2 oz.



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/19/2024 3:28:13PM
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BH01-0'

E402113-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Benzene	ND	0.0250	1	02/14/24	02/15/24	
Ethylbenzene	ND	0.0250	1	02/14/24	02/15/24	
Toluene	ND	0.0250	1	02/14/24	02/15/24	
o-Xylene	ND	0.0250	1	02/14/24	02/15/24	
p,m-Xylene	ND	0.0500	1	02/14/24	02/15/24	
Total Xylenes	ND	0.0250	1	02/14/24	02/15/24	
Surrogate: 4-Bromochlorobenzene-PID	86.5 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/24	02/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	99.1 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2407057	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/24	02/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/24	02/16/24	
Surrogate: n-Nonane	100 %	50-200		02/15/24	02/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2407043	
Chloride	ND	20.0	1	02/14/24	02/14/24	

Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/19/2024 3:28:13PM
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BH01-1'

E402113-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Benzene	ND	0.0250	1	02/14/24	02/15/24	
Ethylbenzene	ND	0.0250	1	02/14/24	02/15/24	
Toluene	ND	0.0250	1	02/14/24	02/15/24	
o-Xylene	ND	0.0250	1	02/14/24	02/15/24	
p,m-Xylene	ND	0.0500	1	02/14/24	02/15/24	
Total Xylenes	ND	0.0250	1	02/14/24	02/15/24	
Surrogate: 4-Bromochlorobenzene-PID	85.6 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/24	02/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	99.4 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2407057	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/24	02/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/24	02/16/24	
Surrogate: n-Nonane	96.9 %	50-200		02/15/24	02/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2407043	
Chloride	ND	20.0	1	02/14/24	02/15/24	





## Sample Data

Devon Energy - Carlsbad  
6488 7 Rivers Hwy  
Artesia NM, 88210

Project Name: Cedar 11 Southwest CTB  
Project Number: 01058-0007  
Project Manager: Ashley Giovengo

**Reported:**  
2/19/2024 3:28:13PM

BH01-2'

E402113-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Benzene	ND	0.0250	1	02/14/24	02/15/24	
Ethylbenzene	ND	0.0250	1	02/14/24	02/15/24	
Toluene	ND	0.0250	1	02/14/24	02/15/24	
o-Xylene	ND	0.0250	1	02/14/24	02/15/24	
p,m-Xylene	ND	0.0500	1	02/14/24	02/15/24	
Total Xylenes	ND	0.0250	1	02/14/24	02/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	85.6 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/24	02/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	98.8 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2407057	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/24	02/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/24	02/16/24	
<i>Surrogate: n-Nonane</i>						
	100 %	50-200		02/15/24	02/16/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2407043	
Chloride	37.0	20.0	1	02/14/24	02/15/24	



## Sample Data

Devon Energy - Carlsbad  
6488 7 Rivers Hwy  
Artesia NM, 88210

Project Name: Cedar 11 Southwest CTB  
Project Number: 01058-0007  
Project Manager: Ashley Giovengo

**Reported:**  
2/19/2024 3:28:13PM

BH02-0'

E402113-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Benzene	ND	0.0250	1	02/14/24	02/15/24	
Ethylbenzene	ND	0.0250	1	02/14/24	02/15/24	
Toluene	ND	0.0250	1	02/14/24	02/15/24	
o-Xylene	ND	0.0250	1	02/14/24	02/15/24	
p,m-Xylene	ND	0.0500	1	02/14/24	02/15/24	
Total Xylenes	ND	0.0250	1	02/14/24	02/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	86.0 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/24	02/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	100 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2407057	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/24	02/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/24	02/16/24	
<i>Surrogate: n-Nonane</i>						
	95.4 %	50-200		02/15/24	02/16/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2407043	
Chloride	2060	20.0	1	02/14/24	02/15/24	



## Sample Data

Devon Energy - Carlsbad  
6488 7 Rivers Hwy  
Artesia NM, 88210

Project Name: Cedar 11 Southwest CTB  
Project Number: 01058-0007  
Project Manager: Ashley Giovengo

**Reported:**  
2/19/2024 3:28:13PM

BH02-1'

E402113-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2407040
Benzene	ND	0.0250	1	02/14/24	02/15/24	
Ethylbenzene	ND	0.0250	1	02/14/24	02/15/24	
Toluene	ND	0.0250	1	02/14/24	02/15/24	
o-Xylene	ND	0.0250	1	02/14/24	02/15/24	
p,m-Xylene	ND	0.0500	1	02/14/24	02/15/24	
Total Xylenes	ND	0.0250	1	02/14/24	02/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	84.8 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2407040
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/24	02/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	99.2 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2407057
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/24	02/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/24	02/16/24	
<i>Surrogate: n-Nonane</i>						
	101 %	50-200		02/15/24	02/16/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2407043
Chloride	376	20.0	1	02/14/24	02/15/24	



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/19/2024 3:28:13PM
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BH03-0'

E402113-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Benzene	ND	0.0250	1	02/14/24	02/15/24	
Ethylbenzene	ND	0.0250	1	02/14/24	02/15/24	
Toluene	ND	0.0250	1	02/14/24	02/15/24	
o-Xylene	ND	0.0250	1	02/14/24	02/15/24	
p,m-Xylene	ND	0.0500	1	02/14/24	02/15/24	
Total Xylenes	ND	0.0250	1	02/14/24	02/15/24	
Surrogate: 4-Bromochlorobenzene-PID	84.9 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/24	02/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	99.1 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2407057	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/24	02/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/24	02/16/24	
Surrogate: n-Nonane	97.5 %	50-200		02/15/24	02/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2407043	
Chloride	711	20.0	1	02/14/24	02/15/24	



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/19/2024 3:28:13PM
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BH03-1'

E402113-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Benzene	ND	0.0250	1	02/14/24	02/15/24	
Ethylbenzene	ND	0.0250	1	02/14/24	02/15/24	
Toluene	ND	0.0250	1	02/14/24	02/15/24	
o-Xylene	ND	0.0250	1	02/14/24	02/15/24	
p,m-Xylene	ND	0.0500	1	02/14/24	02/15/24	
Total Xylenes	ND	0.0250	1	02/14/24	02/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	88.2 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/24	02/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	100 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2407057	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/24	02/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/24	02/16/24	
<i>Surrogate: n-Nonane</i>						
	105 %	50-200		02/15/24	02/16/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2407043	
Chloride	25.0	20.0	1	02/14/24	02/15/24	





Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/19/2024 3:28:13PM
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BH04-0'

E402113-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Benzene	ND	0.0250	1	02/14/24	02/15/24	
Ethylbenzene	ND	0.0250	1	02/14/24	02/15/24	
Toluene	ND	0.0250	1	02/14/24	02/15/24	
o-Xylene	ND	0.0250	1	02/14/24	02/15/24	
p,m-Xylene	ND	0.0500	1	02/14/24	02/15/24	
Total Xylenes	ND	0.0250	1	02/14/24	02/15/24	
Surrogate: 4-Bromochlorobenzene-PID	86.3 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/24	02/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	99.1 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2407057	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/24	02/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/24	02/16/24	
Surrogate: n-Nonane	104 %	50-200		02/15/24	02/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2407043	
Chloride	1240	40.0	2	02/14/24	02/15/24	



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 2/19/2024 3:28:13PM
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BH04-1'

E402113-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Benzene	ND	0.0250	1	02/14/24	02/15/24	
Ethylbenzene	ND	0.0250	1	02/14/24	02/15/24	
Toluene	ND	0.0250	1	02/14/24	02/15/24	
o-Xylene	ND	0.0250	1	02/14/24	02/15/24	
p,m-Xylene	ND	0.0500	1	02/14/24	02/15/24	
Total Xylenes	ND	0.0250	1	02/14/24	02/15/24	
Surrogate: 4-Bromochlorobenzene-PID	88.7 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2407040	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/24	02/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	98.1 %	70-130		02/14/24	02/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2407057	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/24	02/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/24	02/16/24	
Surrogate: n-Nonane	99.1 %	50-200		02/15/24	02/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2407043	
Chloride	371	20.0	1	02/14/24	02/15/24	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/19/2024 3:28:13PM

Volatile Organics by EPA 8021B

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2407040-BLK1) Prepared: 02/14/24 Analyzed: 02/14/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.38		8.00		92.2	70-130			

LCS (2407040-BS1) Prepared: 02/14/24 Analyzed: 02/14/24

Benzene	4.52	0.0250	5.00		90.3	70-130			
Ethylbenzene	4.71	0.0250	5.00		94.3	70-130			
Toluene	4.64	0.0250	5.00		92.8	70-130			
o-Xylene	4.67	0.0250	5.00		93.4	70-130			
p,m-Xylene	9.51	0.0500	10.0		95.1	70-130			
Total Xylenes	14.2	0.0250	15.0		94.5	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.40		8.00		92.4	70-130			

Matrix Spike (2407040-MS1) Source: E402112-01 Prepared: 02/14/24 Analyzed: 02/14/24

Benzene	4.81	0.0250	5.00	ND	96.1	54-133			
Ethylbenzene	5.05	0.0250	5.00	ND	101	61-133			
Toluene	4.98	0.0250	5.00	ND	99.5	61-130			
o-Xylene	5.00	0.0250	5.00	ND	100	63-131			
p,m-Xylene	10.2	0.0500	10.0	ND	102	63-131			
Total Xylenes	15.2	0.0250	15.0	ND	101	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.34		8.00		91.7	70-130			

Matrix Spike Dup (2407040-MSD1) Source: E402112-01 Prepared: 02/14/24 Analyzed: 02/14/24

Benzene	4.81	0.0250	5.00	ND	96.2	54-133	0.103	20	
Ethylbenzene	5.07	0.0250	5.00	ND	101	61-133	0.273	20	
Toluene	4.98	0.0250	5.00	ND	99.7	61-130	0.192	20	
o-Xylene	5.03	0.0250	5.00	ND	101	63-131	0.450	20	
p,m-Xylene	10.2	0.0500	10.0	ND	102	63-131	0.380	20	
Total Xylenes	15.2	0.0250	15.0	ND	102	63-131	0.403	20	
Surrogate: 4-Bromochlorobenzene-PID	7.27		8.00		90.9	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/19/2024 3:28:13PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2407040-BLK1) Prepared: 02/14/24 Analyzed: 02/14/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.66		8.00		95.8	70-130			

LCS (2407040-BS2) Prepared: 02/14/24 Analyzed: 02/14/24

Gasoline Range Organics (C6-C10)	51.8	20.0	50.0		104	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.72		8.00		96.5	70-130			

Matrix Spike (2407040-MS2) Source: E402112-01 Prepared: 02/14/24 Analyzed: 02/15/24

Gasoline Range Organics (C6-C10)	48.6	20.0	50.0	ND	97.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.97		8.00		99.7	70-130			

Matrix Spike Dup (2407040-MSD2) Source: E402112-01 Prepared: 02/14/24 Analyzed: 02/15/24

Gasoline Range Organics (C6-C10)	50.0	20.0	50.0	ND	100	70-130	2.71	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.86		8.00		98.2	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/19/2024 3:28:13PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2407057-BLK1) Prepared: 02/15/24 Analyzed: 02/16/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	53.9		50.0		108	50-200			

LCS (2407057-BS1) Prepared: 02/15/24 Analyzed: 02/16/24

Diesel Range Organics (C10-C28)	299	25.0	250		119	38-132			
Surrogate: n-Nonane	54.1		50.0		108	50-200			

Matrix Spike (2407057-MS1) Source: E402113-04 Prepared: 02/15/24 Analyzed: 02/16/24

Diesel Range Organics (C10-C28)	324	25.0	250	ND	130	38-132			
Surrogate: n-Nonane	57.2		50.0		114	50-200			

Matrix Spike Dup (2407057-MSD1) Source: E402113-04 Prepared: 02/15/24 Analyzed: 02/16/24

Diesel Range Organics (C10-C28)	312	25.0	250	ND	125	38-132	3.70	20	
Surrogate: n-Nonane	55.2		50.0		110	50-200			





QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/19/2024 3:28:13PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2407043-BLK1)					Prepared: 02/14/24 Analyzed: 02/14/24				
Chloride	ND	20.0							
LCS (2407043-BS1)					Prepared: 02/14/24 Analyzed: 02/14/24				
Chloride	250	20.0	250		99.9	90-110			
Matrix Spike (2407043-MS1)					Source: E402107-03		Prepared: 02/14/24 Analyzed: 02/14/24		
Chloride	250	20.0	250	ND	100	80-120			
Matrix Spike Dup (2407043-MSD1)					Source: E402107-03		Prepared: 02/14/24 Analyzed: 02/14/24		
Chloride	250	20.0	250	ND	100	80-120	0.163	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Ashley Giovengo	02/19/24 15:28

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Client: Devon		Bill To		Lab Use Only				TAT				EPA Program					
Project: Cedar 11 Southwest CTB		Attention: Dale Woodall		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA				
Project Manager: Ashley Giovengo		Address: 205 E Bender Road #150		E402113		01058-0007					X						
Address: 3122 National Parks Hwy		City, State, Zip: Hobbs NM, 88240		Analysis and Method									RCRA				
City, State, Zip: Carlsbad NM, 88220		Phone: (575)748-1838		W/DRO/ORO by	8021	4260	010	300.0		NM	TX	State					
Phone: 575-988-0055		Email: dale.woodall@dvn.com										NM	CO	UT	AZ	TX	
Email: agiovengo@ensolum.com																	
Report due by:																	

[illegible]

Additional Instructions: Please CC: cburton@ensolum.com, agiovento@ensolum.com, dale.woodall@dvn.com, chamilton@ensolum.com, ehaff@ensolum.com, jestrella@ensolum.com

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Israel Estrella

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature) <i>[Signature]</i>	Date 02/13/24	Time 9:13	Received by: (Signature) <i>Michelle Gough</i>	Date 2-13-24	Time 9:13	Lab Use Only Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Relinquished by: (Signature) <i>Michelle Gough</i>	Date 2-13-24	Time 1630	Received by: (Signature) <i>Andrew M. 880</i>	Date 2-13-24	Time 1800	
Relinquished by: (Signature) <i>Andrew M. 880</i>	Date 2-13-24	Time 2400	Received by: (Signature) <i>[Signature]</i>	Date 2/14/24	Time 0700	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, **v** - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above sample is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

## Envirotech Analytical Laboratory

Printed: 2/14/2024 12:01:31PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client: Devon Energy - Carlsbad  
 Phone: (505) 382-1211  
 Email: ashley.giovenco@wescominc.com

Date Received: 02/14/24 07:00  
 Date Logged In: 02/13/24 16:38  
 Due Date: 02/20/24 17:00 (4 day TAT)

Work Order ID: E402113  
 Logged In By: Raina Schwanz

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
 Sample ID? Yes  
 Date/Time Collected? Yes  
 Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Cedar 11 Southwest CTB

Work Order: E402282

Job Number: 01058-0007

Received: 2/29/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/29/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 2/29/24



Ashley Giovengo  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Cedar 11 Southwest CTB  
Workorder: E402282  
Date Received: 2/29/2024 5:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/29/2024 5:30:00AM, under the Project Name: Cedar 11 Southwest CTB.

The analytical test results summarized in this report with the Project Name: Cedar 11 Southwest CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

**Lynn Jarboe**  
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[ljjarboe@envirotech-inc.com](mailto:ljjarboe@envirotech-inc.com)

**Michelle Golzales**  
Client Representative  
Office: 505-421-LABS(5227)  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)



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Sample Summary

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	02/29/24 15:46

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS01A-0'	E402282-01A	Soil	02/27/24	02/29/24	Glass Jar, 2 oz.



Sample Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/29/2024 3:46:53PM

SS01A-0'

E402282-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2409060	
Benzene	ND	0.0250	1	02/29/24	02/29/24	
Ethylbenzene	ND	0.0250	1	02/29/24	02/29/24	
Toluene	ND	0.0250	1	02/29/24	02/29/24	
o-Xylene	ND	0.0250	1	02/29/24	02/29/24	
p,m-Xylene	ND	0.0500	1	02/29/24	02/29/24	
Total Xylenes	ND	0.0250	1	02/29/24	02/29/24	
Surrogate: 4-Bromochlorobenzene-PID	99.2 %	70-130		02/29/24	02/29/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2409060	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/29/24	02/29/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.8 %	70-130		02/29/24	02/29/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV		Batch: 2409062	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/29/24	02/29/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/29/24	02/29/24	
Surrogate: n-Nonane	105 %	50-200		02/29/24	02/29/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2409061	
Chloride	421	20.0	1	02/29/24	02/29/24	

QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/29/2024 3:46:53PM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2409060-BLK1)Prepared: 02/29/24 Analyzed: 02/29/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.14		8.00		89.2	70-130			

LCS (2409060-BS1)Prepared: 02/29/24 Analyzed: 02/29/24

Benzene	3.92	0.0250	5.00		78.4	70-130			
Ethylbenzene	3.97	0.0250	5.00		79.4	70-130			
Toluene	3.94	0.0250	5.00		78.9	70-130			
o-Xylene	3.91	0.0250	5.00		78.2	70-130			
p,m-Xylene	8.03	0.0500	10.0		80.3	70-130			
Total Xylenes	11.9	0.0250	15.0		79.6	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.25		8.00		90.6	70-130			

Matrix Spike (2409060-MS1)Source: E402281-02Prepared: 02/29/24 Analyzed: 02/29/24

Benzene	4.19	0.0250	5.00	ND	83.8	54-133			
Ethylbenzene	4.26	0.0250	5.00	ND	85.2	61-133			
Toluene	4.23	0.0250	5.00	ND	84.6	61-130			
o-Xylene	4.20	0.0250	5.00	ND	83.9	63-131			
p,m-Xylene	8.61	0.0500	10.0	ND	86.1	63-131			
Total Xylenes	12.8	0.0250	15.0	ND	85.4	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.40		8.00		92.4	70-130			

Matrix Spike Dup (2409060-MSD1)Source: E402281-02Prepared: 02/29/24 Analyzed: 02/29/24

Benzene	4.77	0.0250	5.00	ND	95.3	54-133	12.9	20	
Ethylbenzene	4.85	0.0250	5.00	ND	96.9	61-133	12.9	20	
Toluene	4.82	0.0250	5.00	ND	96.3	61-130	12.9	20	
o-Xylene	4.80	0.0250	5.00	ND	96.0	63-131	13.5	20	
p,m-Xylene	9.78	0.0500	10.0	ND	97.8	63-131	12.7	20	
Total Xylenes	14.6	0.0250	15.0	ND	97.2	63-131	13.0	20	
Surrogate: 4-Bromochlorobenzene-PID	7.43		8.00		92.8	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/29/2024 3:46:53PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2409060-BLK1)

Prepared: 02/29/24 Analyzed: 02/29/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.95		8.00		99.3	70-130			

LCS (2409060-BS2)

Prepared: 02/29/24 Analyzed: 02/29/24

Gasoline Range Organics (C6-C10)	48.5	20.0	50.0		96.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.91		8.00		98.9	70-130			

Matrix Spike (2409060-MS2)

Source: E402281-02 Prepared: 02/29/24 Analyzed: 02/29/24

Gasoline Range Organics (C6-C10)	50.0	20.0	50.0	ND	100	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.88		8.00		98.5	70-130			

Matrix Spike Dup (2409060-MSD2)

Source: E402281-02 Prepared: 02/29/24 Analyzed: 02/29/24

Gasoline Range Organics (C6-C10)	55.8	20.0	50.0	ND	112	70-130	10.8	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.84		8.00		97.9	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/29/2024 3:46:53PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2409062-BLK1)					Prepared: 02/29/24 Analyzed: 02/29/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	42.0		50.0		84.0	50-200			

LCS (2409062-BS1)					Prepared: 02/29/24 Analyzed: 02/29/24				
Diesel Range Organics (C10-C28)	233	25.0	250		93.2	38-132			
Surrogate: n-Nonane	43.1		50.0		86.2	50-200			

Matrix Spike (2409062-MS1)					Source: E402229-03		Prepared: 02/29/24 Analyzed: 02/29/24		
Diesel Range Organics (C10-C28)	7820	250	250	5750	830	38-132			M4
Surrogate: n-Nonane	111		50.0		221	50-200			S5

Matrix Spike Dup (2409062-MSD1)					Source: E402229-03		Prepared: 02/29/24 Analyzed: 02/29/24		
Diesel Range Organics (C10-C28)	8390	250	250	5750	NR	38-132	6.99	20	M4
Surrogate: n-Nonane	113		50.0		226	50-200			S5





QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	2/29/2024 3:46:53PM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2409061-BLK1)					Prepared: 02/29/24 Analyzed: 02/29/24				
Chloride	ND	20.0							
LCS (2409061-BS1)					Prepared: 02/29/24 Analyzed: 02/29/24				
Chloride	249	20.0	250		99.4	90-110			
Matrix Spike (2409061-MS1)					Source: E402277-02		Prepared: 02/29/24 Analyzed: 02/29/24		
Chloride	1680	100	250	1370	120	80-120			
Matrix Spike Dup (2409061-MSD1)					Source: E402277-02		Prepared: 02/29/24 Analyzed: 02/29/24		
Chloride	2070	100	250	1370	280	80-120	21.2	20	M4, R3

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Ashley Giovengo	02/29/24 15:46

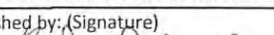
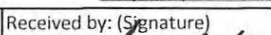
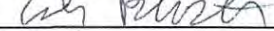



- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- R3 The RPD exceeded the acceptance limit. LCS spike recovery met acceptance criteria.
- S5 Surrogate spike recovery exceeded acceptance limits due to interfering target and/or non-target analytes.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



[illegible]

Additional Instructions: Please CC: cburton@ensolum.com, agiovento@ensolum.com, dale.woodall@dmv.com, chamilton@ensolum.com, iestrella@ensolum.com									
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.						Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.			
Sampled by: Cole Burton									
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only			
	2-28-24	7:17		2-28-24	1050	Received on ice: <input checked="" type="checkbox"/> Y / N			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1			
	2-28-24	1710		2-28	1749	T2			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T3			
	2-29	2415		2-29-24	0530	AVG Temp °C 4			
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other						Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA			
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.									

## Envirotech Analytical Laboratory

Printed: 2/29/2024 8:28:49AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client: Devon Energy - Carlsbad  
 Phone: (505) 382-1211  
 Email: ashley.giovengo@wescominc.com

Date Received: 02/29/24 05:30  
 Date Logged In: 02/28/24 15:52  
 Due Date: 02/29/24 17:00 (0 day TAT)

Work Order ID: E402282  
 Logged In By: Alexa Michaels

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Carrier: Courier

Note: Analysis, such as pH which should be conducted in the field,  
 i.e., 15 minute hold time, are not included in this discussion.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15  
 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
 Sample ID? Yes  
 Date/Time Collected? Yes  
 Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client InstructionComments/Resolution

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:

Ashley Giovengo



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Cedar 11 Southwest CTB

Work Order: E402285

Job Number: 01058-0007

Received: 2/29/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
3/6/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 3/6/24



Ashley Giovengo  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Cedar 11 Southwest CTB  
Workorder: E402285  
Date Received: 2/29/2024 5:30:00AM

Ashley Giovengo,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/29/2024 5:30:00AM, under the Project Name: Cedar 11 Southwest CTB.

The analytical test results summarized in this report with the Project Name: Cedar 11 Southwest CTB apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
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**Alexa Michaels**  
Sample Custody Officer  
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[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

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**Southern New Mexico Area**

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Cell: 505-947-8222  
[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)



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Sample Summary

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	03/06/24 12:23

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS02A-0'	E402285-01A	Soil	02/27/24	02/29/24	Glass Jar, 2 oz.



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Cedar 11 Southwest CTB Project Number: 01058-0007 Project Manager: Ashley Giovengo	Reported: 3/6/2024 12:23:22PM
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SS02A-0'

E402285-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2409060	
Benzene	ND	0.0250	1	02/29/24	03/01/24	
Ethylbenzene	ND	0.0250	1	02/29/24	03/01/24	
Toluene	ND	0.0250	1	02/29/24	03/01/24	
o-Xylene	ND	0.0250	1	02/29/24	03/01/24	
p,m-Xylene	ND	0.0500	1	02/29/24	03/01/24	
Total Xylenes	ND	0.0250	1	02/29/24	03/01/24	
Surrogate: 4-Bromochlorobenzene-PID	92.2 %	70-130		02/29/24	03/01/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: RKS		Batch: 2409060	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/29/24	03/01/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	97.5 %	70-130		02/29/24	03/01/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2410040	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/05/24	03/05/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/05/24	03/05/24	
Surrogate: n-Nonane	87.2 %	50-200		03/05/24	03/05/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2409061	
Chloride	64.4	20.0	1	02/29/24	02/29/24	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	3/6/2024 12:23:22PM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2409060-BLK1) Prepared: 02/29/24 Analyzed: 02/29/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.14		8.00		89.2	70-130			

LCS (2409060-BS1) Prepared: 02/29/24 Analyzed: 02/29/24

Benzene	3.92	0.0250	5.00		78.4	70-130			
Ethylbenzene	3.97	0.0250	5.00		79.4	70-130			
Toluene	3.94	0.0250	5.00		78.9	70-130			
o-Xylene	3.91	0.0250	5.00		78.2	70-130			
p,m-Xylene	8.03	0.0500	10.0		80.3	70-130			
Total Xylenes	11.9	0.0250	15.0		79.6	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.25		8.00		90.6	70-130			

Matrix Spike (2409060-MS1) Source: E402281-02 Prepared: 02/29/24 Analyzed: 02/29/24

Benzene	4.19	0.0250	5.00	ND	83.8	54-133			
Ethylbenzene	4.26	0.0250	5.00	ND	85.2	61-133			
Toluene	4.23	0.0250	5.00	ND	84.6	61-130			
o-Xylene	4.20	0.0250	5.00	ND	83.9	63-131			
p,m-Xylene	8.61	0.0500	10.0	ND	86.1	63-131			
Total Xylenes	12.8	0.0250	15.0	ND	85.4	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.40		8.00		92.4	70-130			

Matrix Spike Dup (2409060-MSD1) Source: E402281-02 Prepared: 02/29/24 Analyzed: 02/29/24

Benzene	4.77	0.0250	5.00	ND	95.3	54-133	12.9	20	
Ethylbenzene	4.85	0.0250	5.00	ND	96.9	61-133	12.9	20	
Toluene	4.82	0.0250	5.00	ND	96.3	61-130	12.9	20	
o-Xylene	4.80	0.0250	5.00	ND	96.0	63-131	13.5	20	
p,m-Xylene	9.78	0.0500	10.0	ND	97.8	63-131	12.7	20	
Total Xylenes	14.6	0.0250	15.0	ND	97.2	63-131	13.0	20	
Surrogate: 4-Bromochlorobenzene-PID	7.43		8.00		92.8	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	3/6/2024 12:23:22PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2409060-BLK1) Prepared: 02/29/24 Analyzed: 02/29/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.95		8.00		99.3	70-130			

LCS (2409060-BS2) Prepared: 02/29/24 Analyzed: 02/29/24

Gasoline Range Organics (C6-C10)	48.5	20.0	50.0		96.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.91		8.00		98.9	70-130			

Matrix Spike (2409060-MS2) Source: E402281-02 Prepared: 02/29/24 Analyzed: 02/29/24

Gasoline Range Organics (C6-C10)	50.0	20.0	50.0	ND	100	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.88		8.00		98.5	70-130			

Matrix Spike Dup (2409060-MSD2) Source: E402281-02 Prepared: 02/29/24 Analyzed: 02/29/24

Gasoline Range Organics (C6-C10)	55.8	20.0	50.0	ND	112	70-130	10.8	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.84		8.00		97.9	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	3/6/2024 12:23:22PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

Blank (2410040-BLK1) Prepared: 03/05/24 Analyzed: 03/05/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	44.3		50.0		88.7	50-200			

LCS (2410040-BS1) Prepared: 03/05/24 Analyzed: 03/05/24

Diesel Range Organics (C10-C28)	256	25.0	250		102	38-132			
Surrogate: n-Nonane	46.7		50.0		93.3	50-200			

Matrix Spike (2410040-MS1) Source: E402287-03 Prepared: 03/05/24 Analyzed: 03/05/24

Diesel Range Organics (C10-C28)	266	25.0	250	ND	107	38-132			
Surrogate: n-Nonane	49.7		50.0		99.4	50-200			

Matrix Spike Dup (2410040-MSD1) Source: E402287-03 Prepared: 03/05/24 Analyzed: 03/05/24

Diesel Range Organics (C10-C28)	243	25.0	250	ND	97.1	38-132	9.28	20	
Surrogate: n-Nonane	43.9		50.0		87.7	50-200			





QC Summary Data

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Ashley Giovengo	3/6/2024 12:23:22PM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2409061-BLK1)					Prepared: 02/29/24 Analyzed: 02/29/24				
Chloride	ND	20.0							
LCS (2409061-BS1)					Prepared: 02/29/24 Analyzed: 02/29/24				
Chloride	249	20.0	250		99.4	90-110			
Matrix Spike (2409061-MS1)					Source: E402277-02		Prepared: 02/29/24 Analyzed: 02/29/24		
Chloride	1680	100	250	1370	120	80-120			
Matrix Spike Dup (2409061-MSD1)					Source: E402277-02		Prepared: 02/29/24 Analyzed: 02/29/24		
Chloride	2070	100	250	1370	280	80-120	21.2	20	M4, R3

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Devon Energy - Carlsbad	Project Name:	Cedar 11 Southwest CTB	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Ashley Giovengo	03/06/24 12:23

- M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
- R3 The RPD exceeded the acceptance limit. LCS spike recovery met acceptance criteria.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite
- DNR Did not react with the addition of acid or base.

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

[illegible]

## Envirotech Analytical Laboratory

Printed: 2/29/2024 10:49:31AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client: Devon Energy - Carlsbad  
 Phone: (505) 382-1211  
 Email: ashley.giovengo@wescominc.com

Date Received: 02/29/24 05:30  
 Date Logged In: 02/28/24 16:08  
 Due Date: 03/06/24 17:00 (4 day TAT)

Work Order ID: E402285  
 Logged In By: Alexa Michaels

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
 Sample ID? Yes  
 Date/Time Collected? Yes  
 Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client InstructionComments/Resolution

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



## APPENDIX E

### Email Correspondence

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OCD Permitting

Home    Operator Data    Action Status    Action Search Results    Action Status Item Details

[NOTIFY] Notification Of Liner Inspection (C-141L) Application

Submission Information

Submission ID:	309514	Districts:	Artesia
Operator:	[6137] DEVON ENERGY PRODUCTION COMPANY, LP	Counties:	Eddy
Description:	DEVON ENERGY PRODUCTION COMPANY, LP [6137] , CEDAR 11 SOUTHWEST CTB , nAPP2401035055		
Status:	APPROVED		
Status Date:	01/30/2024		
References (2):	fAPP2123645922, nAPP2401035055		

Forms

This application type does not have attachments.

Questions

Prerequisites

Incident ID (n#)	nAPP2401035055
Incident Name	NAPP2401035055 CEDAR 11 SOUTHWEST CTB @ 0
Incident Type	Oil Release
Incident Status	Initial C-141 Approved
Incident Facility	[fAPP2123645922] CEDAR 11 SOUTHWEST CTB



Location of Release Source

Site Name	CEDAR 11 SOUTHWEST CTB
Date Release Discovered	01/09/2024
Surface Owner	Federal

Liner Inspection Event Information

Please answer all the questions in this group.

What is the liner inspection surface area in square feet	9,050
Have all the impacted materials been removed from the liner	Yes
Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC	02/05/2024
Time liner inspection will commence	09:00 AM
Warning: Notification can not be less than two business days prior to conducting liner inspection.	
Please provide any information necessary for observers to liner inspection	Ashley Giovengo Senior Engineer 575-988-0055
Please provide any information necessary for navigation to liner inspection site	M-11-21S-27E (32.49017, -104.16796)

Acknowledgments

This submission type does not have acknowledgments, at this time.

Comments

No comments found for this submission.

Conditions

**Summary:** *wdale (1/30/2024)*, Failure to notify the OCD of liner inspections including any changes in date/time per the requirements of 19.15.29.11.A(5)(a)(ii) NMAC, may result in the inspection not being accepted.

Reasons

No reasons found for this submission.

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
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**District III**  
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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 335154

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 335154
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2401035055
Incident Name	NAPP2401035055 CEDAR 11 SOUTHWEST CTB @ 0
Incident Type	Oil Release
Incident Status	Deferral Request Received
Incident Facility	[fAPP2123645922] CEDAR 11 SOUTHWEST CTB

<b>Location of Release Source</b>	
<i>Please answer all the questions in this group.</i>	
Site Name	CEDAR 11 SOUTHWEST CTB
Date Release Discovered	01/09/2024
Surface Owner	Federal

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

<b>Nature and Volume of Release</b>	
<i>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.</i>	
Crude Oil Released (bbls) Details	Cause: Equipment Failure   Coupling   Crude Oil   Released: 18 BBL   Recovered: 18 BBL   Lost: 0 BBL.
Produced Water Released (bbls) Details	Not answered.
Is the concentration of chloride in the produced water >10,000 mg/l	No
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)	Lease Op was recirculating the VRT to clean bottoms out. When 3" Victaulic clamp on inlet line to the circulating pump popped off. Spilling oil into the secondary containment.

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QUESTIONS, Page 2

Action 335154

**QUESTIONS (continued)**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:
	6137
	Action Number:
	335154
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

**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: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dmv.com Date: 04/18/2024
--	--

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QUESTIONS, Page 3

Action 335154

**QUESTIONS (continued)**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:	6137
	Action Number:	335154
	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 ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	High
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)	2060
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0
GRO+DRO (EPA SW-846 Method 8015M)	0
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	01/10/2070
On what date will (or did) the final sampling or liner inspection occur	02/05/2024
On what date will (or was) the remediation complete(d)	01/10/2070
What is the estimated surface area (in square feet) that will be reclaimed	9774
What is the estimated volume (in cubic yards) that will be reclaimed	362
What is the estimated surface area (in square feet) that will be remediated	9774
What is the estimated volume (in cubic yards) that will be remediated	362

*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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**Santa Fe, NM 87505**

QUESTIONS, Page 4

Action 335154

**QUESTIONS (continued)**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 335154
	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.)	<i>Not answered.</i>
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	<i>Not answered.</i>
(In Situ) Soil Vapor Extraction	<i>Not answered.</i>
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	<i>Not answered.</i>
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	<i>Not answered.</i>
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	<i>Not answered.</i>
Ground Water Abatement pursuant to 19.15.30 NMAC	<i>Not answered.</i>
OTHER (Non-listed remedial process)	<b>Yes</b>
Other Non-listed Remedial Process. Please specify	deferral
<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: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dmn.com Date: 04/25/2024
<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 335154

**QUESTIONS (continued)**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:	6137
	Action Number:	335154
	Action Type:	[C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS****Deferral Requests Only**

Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.

Requesting a deferral of the remediation closure due date with the approval of this submission	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	production equipment
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	9774
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	362
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.	
Enter the facility ID (f#) on which this deferral should be granted	CEDAR 11 SOUTHWEST CTB [fAPP2123645922]
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
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dmn.com Date: 04/25/2024

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QUESTIONS, Page 6  
  
Action 335154

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 335154
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	{Unavailable.}

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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**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 335154

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:
	6137
	Action Number:
	335154
Action Type:	
[C-141] Deferral Request C-141 (C-141-v-Deferral)	

CONDITIONS

Created By	Condition	Condition Date
rhamlet	Devon's deferral requests final remediation for (Incident Number NAPP2401035055) until final reclamation of the well pad or major construction, whichever comes first. Ensolum and Devon do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The area requested for deferral is the area underneath the liner, which include sample areas (BH02, BH03, and BH04). 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.	5/21/2024