



New Mexico Oil Conservation Division  
506 W. Texas Ave  
Artesia, NM 88210

RE: Closure Request Addendum Cover Letter  
Devon Energy Production Company, LP  
Black Mamba 15 State Com 8H  
Incident Number nJXK1534548184  
Lea County, New Mexico

To Whom It May Concern:

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Devon Energy Production Company, LP (Devon), presents the following Closure Request Addendum Cover Letter (CRACL) that requests No Further Remedial Action (NFRA) for an inadvertent release of produced water assigned Incident Number (nJXK1534548184) at the Black Mamba 15 State Com 8H (Site) (**Figure 1 in Appendix A**), based on previous remediation efforts and additional backfill soil samples collected as requested.

This CRACL is being submitted to present additional data in response to the denial of the Closure Request Report (CRR), previously submitted on January 8, 2025. The CRR detailed corrective actions that were completed to address the inadvertent spill, but was denied on January 8, 2025, by the New Mexico Oil Conservation Division (NMOCD), and on January 23, 2025, by the New Mexico State Land Office (NMSLO) for the following reason(s):

*"Remediation/Reclamation closure denied. Backfill sample included in the submitted report was a field screen. Backfill sample is to be submitted to a lab analysis for the constituents of concern in Table I.*

On January 15, 2025, Etech collected via hand shovel four (4) 5-point composite soil samples of the backfill soil cover (SC01 through SC04) from each of the backfilled excavations from approximately ground surface to 0.25-foot below ground surface (bgs). The 5-point composite soil samples were comprised of five equivalent aliquots homogenized in a 1-gallon, resealable plastic bag. The samples were then placed into lab provided pre-cleaned glass jars, packaged with minimal void space, labeled, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Envirotech, Inc. (Envirotech) in Farmington, New Mexico, for analysis of the constituents of concern (COC) listed in 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): Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX) by Method Environmental Protection Agency (EPA) 8260B; TPH (Total Petroleum Hydrocarbon) - Gasoline Range Organics (GRO), TPH-Diesel Range Organics (DRO), and TPH-Oil Range Organics (ORO) by Method EPA 8015D; and chloride by Method EPA 300.0. The locations of the backfill soil cover samples are shown in **Figure 2 in Appendix A**. Photographic documentation is included in **Appendix B**.

Laboratory analytical results for all of the backfill soil cover samples indicated all analyzed COCs were below the Site Closure Criteria and/or reclamation standard. Laboratory analytical results are summarized in **Table 1** included in **Appendix C**. The executed chain-of custody forms and laboratory analytical reports are provided in **Appendix D**.

Based on laboratory analytical results for the backfill soil cover samples and previous confirmation soil samples presented in the CRR, Devon believes that residual soil impacts associated with the inadvertent release have been excavated, removed from the Site, and subsequently reclaimed "as close to its original state" as possible. Laboratory analytical results confirmed that concentrations of the COC for all backfill soil cover samples were below the Site Closure Criteria and/or reclamation standard, as directed by NMOCD and NMSLO. As such, NFRA appears warranted, and Devon requests the NMOCD and NMSLO respectfully consider this CRACL associated with Incident Number nJXK1534548184 for Closure.



If you have any questions or comments, please do not hesitate to contact Joseph Hernandez at (432) 305-6413 or [joseph@etechenv.com](mailto:joseph@etechenv.com) or Erick Herrera (432) 305-6416 or [erick@etechenv.com](mailto:erick@etechenv.com). **Appendix E** provides correspondence and/or email notification receipts associated with the subject release. The previously submitted CRR can be referenced in **Appendix F**.

Sincerely,  
Etech Environmental and Safety Solutions, Inc.

A handwritten signature in black ink, appearing to read 'Erick H'.

Erick Herrera  
Project Geologist

A handwritten signature in black ink, appearing to read 'Joseph S. Hernandez'.

Joseph S. Hernandez  
Senior Managing Geologist

cc: Jim Raley, Devon  
New Mexico Oil Conservation Division  
New Mexico State Land Office

**Appendices:**

- Appendix A:** Figure 1: Site Location Map  
Figure 2: Backfill Soil Sample Locations
- Appendix B:** Photographic Log
- Appendix C:** Tables
- Appendix D:** Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix E:** Correspondence & Email Notifications
- Appendix F:** Archived Reports



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# APPENDIX A

## Figures

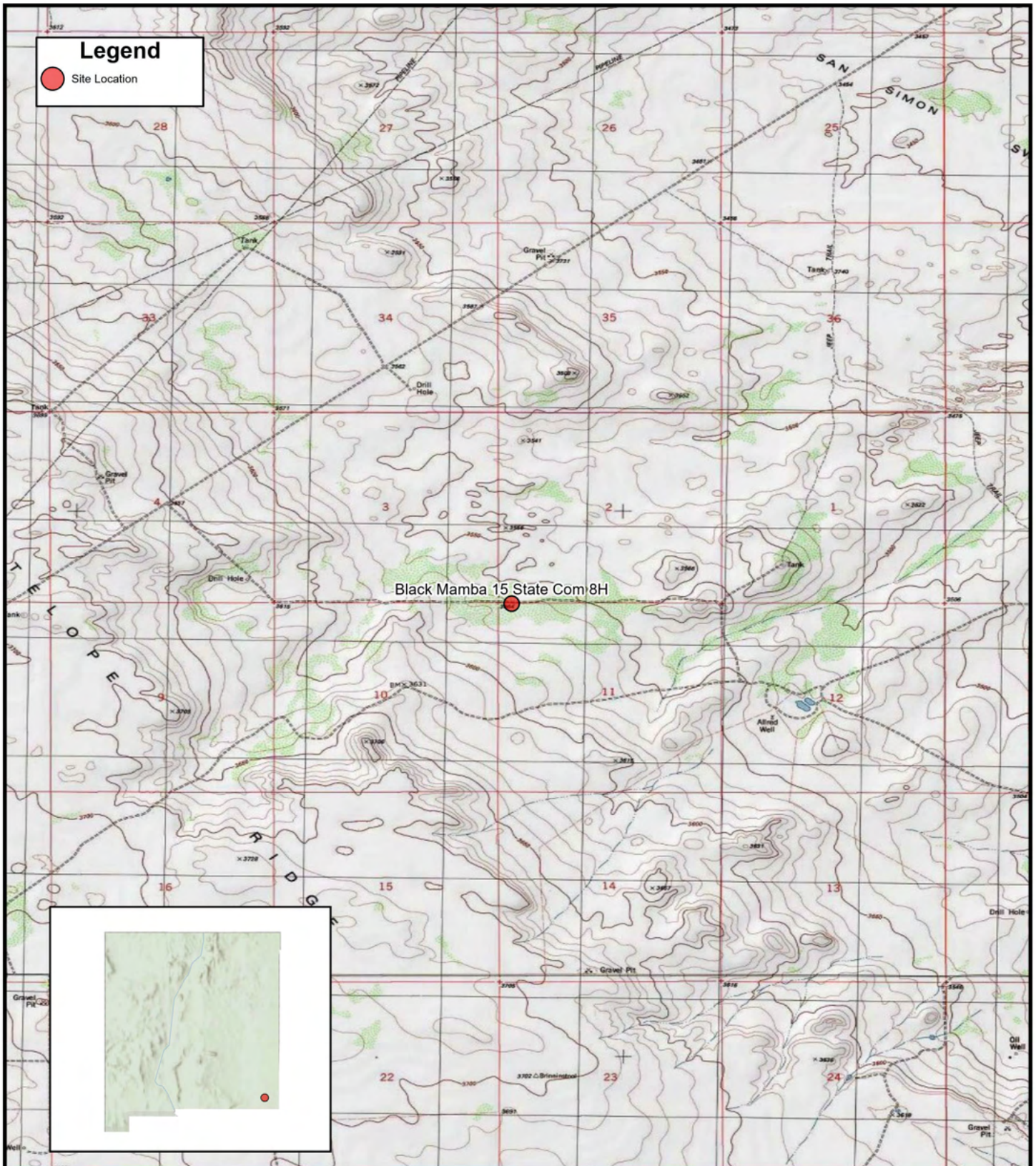


FIGURE 1

### Site Location Map

Devon Energy Production Company, LP  
Black Mamba 15 State Com 8H  
Unit D Sec 11 T23S R33E  
Lea County, New Mexico

eTECH



0 2,000 4,000 Feet



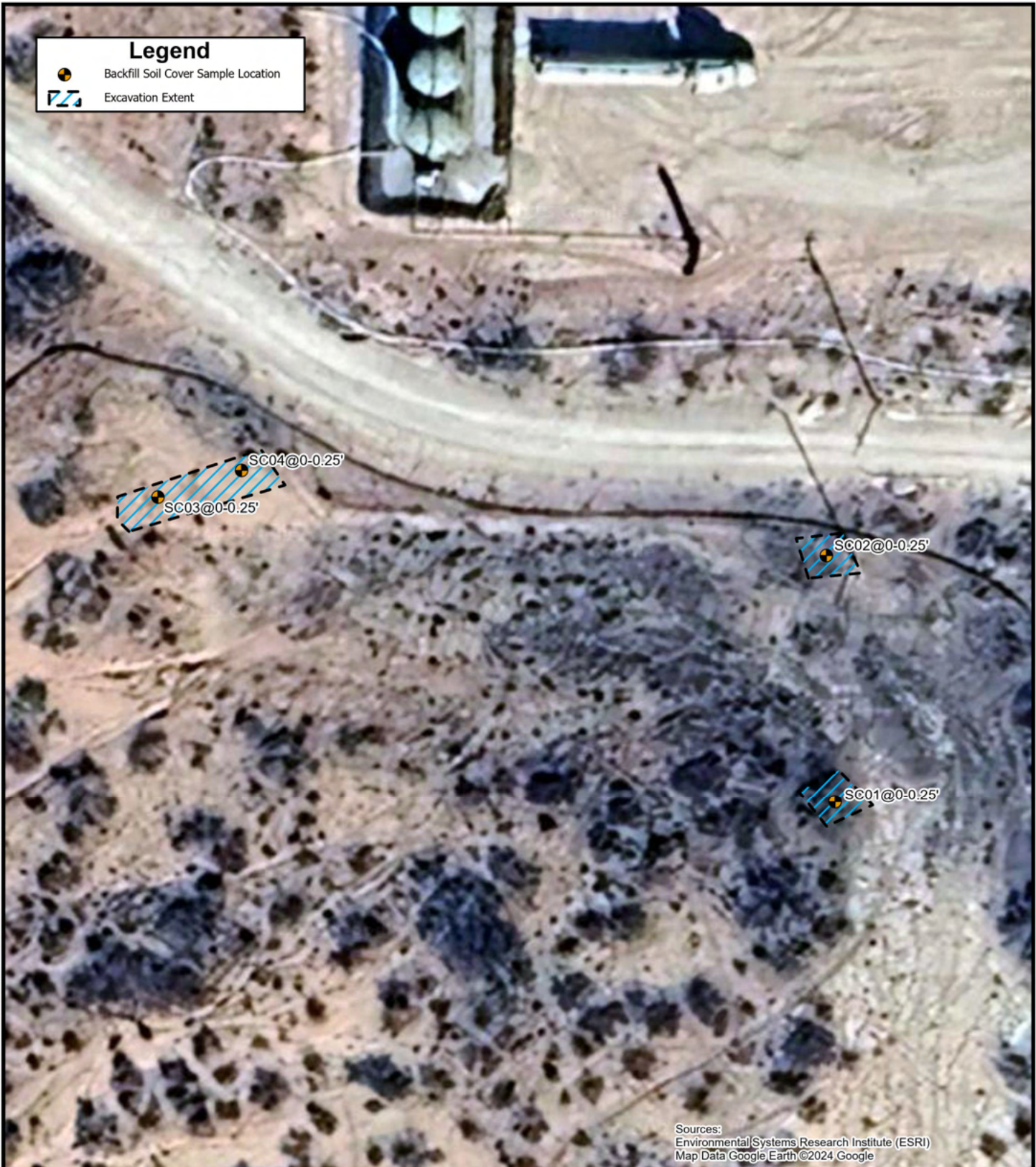


FIGURE 2

## Backfill Soil Sample Locations

Devon Energy Production Company, LP  
Black Mamba 15 State Com 8H  
Unit D Sec 11 T23S R33E  
Lea County, New Mexico

eTECH



0 25 50 Feet

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# APPENDIX B

## Photographic Log

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P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213







# PHOTOGRAPHIC LOG

Devon Energy Production Company, LP

Black Mamba 15 State Com 8H

Incident Number: NJXK1534548184



**Photograph 1**

**Date: 01/15/2025**

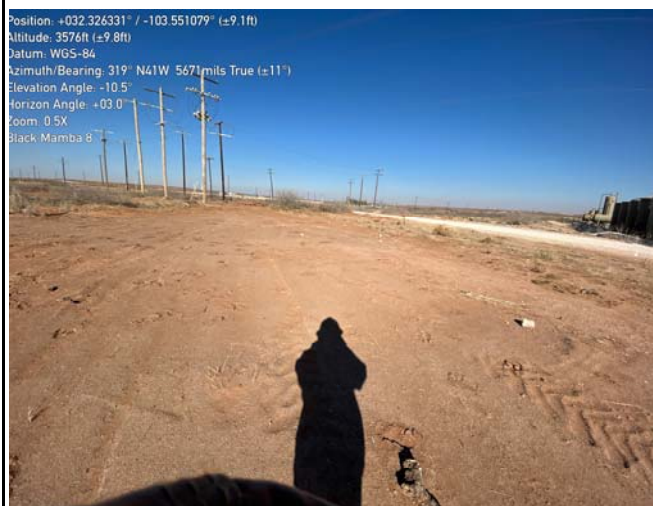
Description: Western view of completed restoration.



**Photograph 2**

**Date: 01/15/2025**

Description: Southwestern view of completed restoration.



**Photograph 3**

**Date: 01/15/2025**

Description: Northwestern view of completed restoration.



**Photograph 4**

**Date: 01/15/2025**

Description: Northwestern view of completed restoration.

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# APPENDIX C

## Tables



**Table 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**Devon Energy Production Company, LP**  
**Black Mamba 15 State Com 8H**  
**Lea County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	DRO+GRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Backfill Soil Samples - nJXK1534548184										
SC01	01/15/2025	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SC02	01/15/2025	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SC03	01/15/2025	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SC04	01/15/2025	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>

**Notes:**

bgs: below ground surface

mg/kg: milligrams per kilogram

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Text in "grey" represents excavated soil samples

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria and/or Reclamation Standard<sup>†</sup> for Soils Impacted by a Release

<sup>†</sup> The reclamation concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.

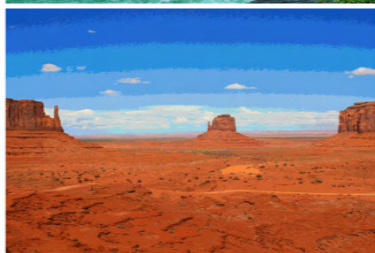


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## APPENDIX D

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

Report to:  
Haleigh Blume



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Black Mamba 15 State COM #008

Work Order: E501098

Job Number: 01058-0007

Received: 1/17/2025

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
1/23/25

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: 1/23/25



Haleigh Blume  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Black Mamba 15 State COM #008  
Workorder: E501098  
Date Received: 1/17/2025 8:15:11AM

Haleigh Blume,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 1/17/2025 8:15:11AM, under the Project Name: Black Mamba 15 State COM #008.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State COM #008 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)

Field Offices:

**Southern New Mexico Area**

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

**Michelle Gonzales**  
Client Representative  
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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:	Black Mamba 15 State COM #008	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	01/23/25 13:16

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SC01 0-0.25'	E501098-01A	Soil	01/15/25	01/17/25	Glass Jar, 2 oz.
SC02 0-0.25'	E501098-02A	Soil	01/15/25	01/17/25	Glass Jar, 2 oz.
SC03 0-0.25'	E501098-03A	Soil	01/15/25	01/17/25	Glass Jar, 2 oz.
SC04 0-0.25'	E501098-04A	Soil	01/15/25	01/17/25	Glass Jar, 2 oz.



## Sample Data

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

Project Name: Black Mamba 15 State COM #008  
Project Number: 01058-0007  
Project Manager: Haleigh Blume

**Reported:**  
1/23/2025 1:16:14PM

**SC01 0-0.25'**

**E501098-01**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2503114
Benzene	ND	0.0250	1	01/17/25	01/21/25	
Ethylbenzene	ND	0.0250	1	01/17/25	01/21/25	
Toluene	ND	0.0250	1	01/17/25	01/21/25	
o-Xylene	ND	0.0250	1	01/17/25	01/21/25	
p,m-Xylene	ND	0.0500	1	01/17/25	01/21/25	
Total Xylenes	ND	0.0250	1	01/17/25	01/21/25	
<i>Surrogate: Bromofluorobenzene</i>		102 %	70-130	01/17/25	01/21/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.8 %	70-130	01/17/25	01/21/25	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	01/17/25	01/21/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2503114
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/25	01/21/25	
<i>Surrogate: Bromofluorobenzene</i>		102 %	70-130	01/17/25	01/21/25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.8 %	70-130	01/17/25	01/21/25	
<i>Surrogate: Toluene-d8</i>		104 %	70-130	01/17/25	01/21/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2503112
Diesel Range Organics (C10-C28)	ND	25.0	1	01/17/25	01/18/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/17/25	01/18/25	
<i>Surrogate: n-Nonane</i>		104 %	50-200	01/17/25	01/18/25	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2503097
Chloride	ND	20.0	1	01/17/25	01/17/25	



## Sample Data

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

Project Name: Black Mamba 15 State COM #008  
Project Number: 01058-0007  
Project Manager: Haleigh Blume

**Reported:**  
1/23/2025 1:16:14PM

SC02 0-0.25'

E501098-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2503114
Benzene	ND	0.0250	1	01/17/25	01/21/25	
Ethylbenzene	ND	0.0250	1	01/17/25	01/21/25	
Toluene	ND	0.0250	1	01/17/25	01/21/25	
o-Xylene	ND	0.0250	1	01/17/25	01/21/25	
p,m-Xylene	ND	0.0500	1	01/17/25	01/21/25	
Total Xylenes	ND	0.0250	1	01/17/25	01/21/25	
Surrogate: Bromofluorobenzene		103 %	70-130	01/17/25	01/21/25	
Surrogate: 1,2-Dichloroethane-d4		97.4 %	70-130	01/17/25	01/21/25	
Surrogate: Toluene-d8		105 %	70-130	01/17/25	01/21/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2503114
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/25	01/21/25	
Surrogate: Bromofluorobenzene		103 %	70-130	01/17/25	01/21/25	
Surrogate: 1,2-Dichloroethane-d4		97.4 %	70-130	01/17/25	01/21/25	
Surrogate: Toluene-d8		105 %	70-130	01/17/25	01/21/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2503112
Diesel Range Organics (C10-C28)	ND	25.0	1	01/17/25	01/18/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/17/25	01/18/25	
Surrogate: n-Nonane		114 %	50-200	01/17/25	01/18/25	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2503097
Chloride	ND	20.0	1	01/17/25	01/17/25	





## Sample Data

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

Project Name: Black Mamba 15 State COM #008  
Project Number: 01058-0007  
Project Manager: Haleigh Blume

**Reported:**  
1/23/2025 1:16:14PM

SC03 0-0.25'

E501098-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2503114
Benzene	ND	0.0250	1	01/17/25	01/21/25	
Ethylbenzene	ND	0.0250	1	01/17/25	01/21/25	
Toluene	ND	0.0250	1	01/17/25	01/21/25	
o-Xylene	ND	0.0250	1	01/17/25	01/21/25	
p,m-Xylene	ND	0.0500	1	01/17/25	01/21/25	
Total Xylenes	ND	0.0250	1	01/17/25	01/21/25	
Surrogate: Bromofluorobenzene		98.9 %	70-130	01/17/25	01/21/25	
Surrogate: 1,2-Dichloroethane-d4		104 %	70-130	01/17/25	01/21/25	
Surrogate: Toluene-d8		104 %	70-130	01/17/25	01/21/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2503114
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/25	01/21/25	
Surrogate: Bromofluorobenzene		98.9 %	70-130	01/17/25	01/21/25	
Surrogate: 1,2-Dichloroethane-d4		104 %	70-130	01/17/25	01/21/25	
Surrogate: Toluene-d8		104 %	70-130	01/17/25	01/21/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2503112
Diesel Range Organics (C10-C28)	ND	25.0	1	01/17/25	01/18/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/17/25	01/18/25	
Surrogate: n-Nonane		113 %	50-200	01/17/25	01/18/25	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2503097
Chloride	ND	20.0	1	01/17/25	01/17/25	



## Sample Data

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

Project Name: Black Mamba 15 State COM #008  
Project Number: 01058-0007  
Project Manager: Haleigh Blume

**Reported:**  
1/23/2025 1:16:14PM

SC04 0-0.25'

E501098-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2503114
Benzene	ND	0.0250	1	01/17/25	01/21/25	
Ethylbenzene	ND	0.0250	1	01/17/25	01/21/25	
Toluene	ND	0.0250	1	01/17/25	01/21/25	
o-Xylene	ND	0.0250	1	01/17/25	01/21/25	
p,m-Xylene	ND	0.0500	1	01/17/25	01/21/25	
Total Xylenes	ND	0.0250	1	01/17/25	01/21/25	
Surrogate: Bromofluorobenzene		102 %	70-130	01/17/25	01/21/25	
Surrogate: 1,2-Dichloroethane-d4		99.7 %	70-130	01/17/25	01/21/25	
Surrogate: Toluene-d8		103 %	70-130	01/17/25	01/21/25	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2503114
Gasoline Range Organics (C6-C10)	ND	20.0	1	01/17/25	01/21/25	
Surrogate: Bromofluorobenzene		102 %	70-130	01/17/25	01/21/25	
Surrogate: 1,2-Dichloroethane-d4		99.7 %	70-130	01/17/25	01/21/25	
Surrogate: Toluene-d8		103 %	70-130	01/17/25	01/21/25	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2503112
Diesel Range Organics (C10-C28)	ND	25.0	1	01/17/25	01/18/25	
Oil Range Organics (C28-C36)	ND	50.0	1	01/17/25	01/18/25	
Surrogate: n-Nonane		111 %	50-200	01/17/25	01/18/25	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2503097
Chloride	ND	20.0	1	01/17/25	01/17/25	



## QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State COM #008	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	1/23/2025 1:16:14PM

## Volatile Organic Compounds by EPA 8260B

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 (2503114-BLK1)

Prepared: 01/17/25 Analyzed: 01/20/25

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	0.507		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.524		0.500		105	70-130			
Surrogate: Toluene-d8	0.517		0.500		103	70-130			

## LCS (2503114-BS1)

Prepared: 01/17/25 Analyzed: 01/20/25

Benzene	2.26	0.0250	2.50		90.5	70-130			
Ethylbenzene	2.41	0.0250	2.50		96.4	70-130			
Toluene	2.31	0.0250	2.50		92.4	70-130			
o-Xylene	2.51	0.0250	2.50		100	70-130			
p,m-Xylene	4.94	0.0500	5.00		98.9	70-130			
Total Xylenes	7.45	0.0250	7.50		99.3	70-130			
Surrogate: Bromofluorobenzene	0.517		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.515		0.500		103	70-130			
Surrogate: Toluene-d8	0.528		0.500		106	70-130			

## Matrix Spike (2503114-MS1)

Source: E501111-02

Prepared: 01/17/25 Analyzed: 01/20/25

Benzene	2.25	0.0250	2.50	ND	90.0	48-131			
Ethylbenzene	2.41	0.0250	2.50	ND	96.3	45-135			
Toluene	2.31	0.0250	2.50	ND	92.5	48-130			
o-Xylene	2.48	0.0250	2.50	ND	99.1	43-135			
p,m-Xylene	4.85	0.0500	5.00	ND	97.0	43-135			
Total Xylenes	7.33	0.0250	7.50	ND	97.7	43-135			
Surrogate: Bromofluorobenzene	0.507		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.510		0.500		102	70-130			
Surrogate: Toluene-d8	0.525		0.500		105	70-130			

## Matrix Spike Dup (2503114-MSD1)

Source: E501111-02

Prepared: 01/17/25 Analyzed: 01/20/25

Benzene	2.24	0.0250	2.50	ND	89.6	48-131	0.468	23	
Ethylbenzene	2.45	0.0250	2.50	ND	97.9	45-135	1.73	27	
Toluene	2.34	0.0250	2.50	ND	93.7	48-130	1.29	24	
o-Xylene	2.54	0.0250	2.50	ND	101	43-135	2.31	27	
p,m-Xylene	5.02	0.0500	5.00	ND	100	43-135	3.42	27	
Total Xylenes	7.55	0.0250	7.50	ND	101	43-135	3.04	27	
Surrogate: Bromofluorobenzene	0.520		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.516		0.500		103	70-130			
Surrogate: Toluene-d8	0.530		0.500		106	70-130			



## QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State COM #008	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	1/23/2025 1:16:14PM

## 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 (2503114-BLK1)

Prepared: 01/17/25 Analyzed: 01/20/25

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.507		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.524		0.500		105	70-130			
Surrogate: Toluene-d8	0.517		0.500		103	70-130			

## LCS (2503114-BS2)

Prepared: 01/17/25 Analyzed: 01/20/25

Gasoline Range Organics (C6-C10)	64.1	20.0	50.0		128	70-130			
Surrogate: Bromofluorobenzene	0.531		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.508		0.500		102	70-130			
Surrogate: Toluene-d8	0.541		0.500		108	70-130			

## Matrix Spike (2503114-MS2)

Source: E501111-02

Prepared: 01/17/25 Analyzed: 01/20/25

Gasoline Range Organics (C6-C10)	60.6	20.0	50.0	ND	121	70-130			
Surrogate: Bromofluorobenzene	0.504		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.514		0.500		103	70-130			
Surrogate: Toluene-d8	0.528		0.500		106	70-130			

## Matrix Spike Dup (2503114-MSD2)

Source: E501111-02

Prepared: 01/17/25 Analyzed: 01/20/25

Gasoline Range Organics (C6-C10)	62.0	20.0	50.0	ND	124	70-130	2.24	20	
Surrogate: Bromofluorobenzene	0.527		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.505		0.500		101	70-130			
Surrogate: Toluene-d8	0.541		0.500		108	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State COM #008	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	1/23/2025 1:16:14PM

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 (2503112-BLK1)					Prepared: 01/17/25 Analyzed: 01/18/25				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	59.5		50.0		119	50-200			

LCS (2503112-BS1)					Prepared: 01/17/25 Analyzed: 01/18/25				
Diesel Range Organics (C10-C28)	286	25.0	250		114	38-132			
Surrogate: n-Nonane	58.2		50.0		116	50-200			

Matrix Spike (2503112-MS1)					Source: E501098-04		Prepared: 01/17/25 Analyzed: 01/18/25		
Diesel Range Organics (C10-C28)	293	25.0	250	ND	117	38-132			
Surrogate: n-Nonane	56.5		50.0		113	50-200			

Matrix Spike Dup (2503112-MSD1)					Source: E501098-04		Prepared: 01/17/25 Analyzed: 01/18/25		
Diesel Range Organics (C10-C28)	293	25.0	250	ND	117	38-132	0.180	20	
Surrogate: n-Nonane	56.6		50.0		113	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State COM #008	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	1/23/2025 1:16:14PM

Anions by EPA 300.0/9056A

Analyst: JM

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 (2503097-BLK1)					Prepared: 01/17/25 Analyzed: 01/17/25				
Chloride	ND	20.0							
LCS (2503097-BS1)					Prepared: 01/17/25 Analyzed: 01/17/25				
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2503097-MS1)					Source: E501105-02		Prepared: 01/17/25 Analyzed: 01/17/25		
Chloride	284	100	250	ND	113	80-120			
Matrix Spike Dup (2503097-MSD1)					Source: E501105-02		Prepared: 01/17/25 Analyzed: 01/17/25		
Chloride	273	100	250	ND	109	80-120	3.74	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:	Black Mamba 15 State COM #008	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Haleigh Blume	01/23/25 13:16

- 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 Energy Production Company, LP	<b>Bill To</b>		<b>Lab Use Only</b>				<b>TAT</b>				<b>EPA Program</b>					
Project: Black Mamba 15 State COM #008	Attention: Jim Raley		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA				
Project Manager: Haleigh Blume	Address: 5315 Buena Vista Dr.		E501098		01058-0007					X						
Address: 13000 W County Rd 100	City, State, Zip: Carlsbad, NM, 88220		Analysis and Method									RCRA				
City, State, Zip_Odessa,TX, 79765	Phone: 575-885-7502				by						NM		TX		State	
Phone: 432-305-6416	Email: jim.raley@dvn.com															
Email: Devon-team@etechenv.com	WBS/WO: 21206816															
Collected by: Haleigh Blume	Incident ID: nJXK1534548184															

[illegible]

## Additional Instructions:

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: HB

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>Habish Blume</i>	Date 11/15/2025	Time 18:00	Received by: (Signature) <i>Michelle Gonzales</i>	Date 1-15-25	Time 1800	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 Gonzales</i>	Date 1-16-25	Time 1500	Received by: (Signature) <i>John M.</i>	Date 1.16.23	Time 1630	
Relinquished by: (Signature) <i>John M.</i>	Date 1.16.23	Time 2230	Received by: (Signature) <i>Caitlin Mann</i>	Date 1.17.25	Time 815	

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: 1/17/2025 10:24:41AM

## 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	Date Received:	01/17/25 08:15	Work Order ID:	E501098
Phone:	(575) 748-0176	Date Logged In:	01/16/25 13:21	Logged In By:	Caitlin Mars
Email:	devon-team@etechnv.com	Due Date:	01/23/25 17:00 (4 day TAT)		

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? No

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.

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## APPENDIX E

### Correspondance & Notifications

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P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213



Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS

Action 418685

**QUESTIONS**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 418685
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nJXK1534548184
Incident Name	NJXK1534548184 BLACK MAMBA 15 STATE COM #008H @ 30-025-42630
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved
Incident Well	[30-025-42630] BLACK MAMBA 15 STATE COM #008H

Location of Release Source	
Site Name	BLACK MAMBA 15 STATE COM #008H
Date Release Discovered	12/11/2015
Surface Owner	State

Sampling Event General Information	
<i>Please answer all the questions in this group.</i>	
What is the sampling surface area in square feet	800
What is the estimated number of samples that will be gathered	4
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/15/2025
Time sampling will commence	07:00 AM
Please provide any information necessary for observers to contact samplers	Please contact Erick Herrera at 432-305-6416 with any questions.
Please provide any information necessary for navigation to sampling site	From US Hwy 285 S, turn left onto NM-31, keep straight for 7.7 miles then turn right onto NM-128 E. Drive for 32 miles, then turn left onto Delaware Basin Rd, continue for 6.1 miles, turn left onto for 2.4miles, and turn right for 2 miles to reach the Black Mamba #008 sampling location.

Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 418685

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 418685
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jralej	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	1/8/2025

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# APPENDIX F

## Archived Reports

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P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213





## CLOSURE REQUEST REPORT

*Prepared For:*

*Devon Energy Production Company, LP*

5315 Buena Vista Dr.

Carlsbad, NM 88220

*Site Information:*

**Black Mamba 15 State Com 8H**

**Incident Number nJXK1534548184**

*Unit D, Section 11, Township 23 South, Range 33 East*

*Lea County, New Mexico*

*(32.326320°, -103.550600°)*

Carlsbad • Houston • Midland • San Antonio • Lubbock • Hobbs • Lafayette



## SYNOPSIS

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Devon Energy Production Company, LP (Devon), presents the following Closure Request Report (CRR) detailing delineation and excavation soil sampling activities and subsequent reclamation activities for an area subject to an inadvertent release of produced water at the Black Mamba 15 State Com 8H (Site). Based on laboratory analytical results from final confirmation soil sampling activities at the Site, Devon is requesting No Further Remedial Action (NFRA) for Incident Number nJXK1534548184.

## SITE LOCATION AND RELEASE BACKGROUND

The Site is associated with oil and gas exploration and production operations on State Land managed by the State Land Office (SLO). The subject release is located  $\frac{3}{4}$  of a mile north of production well (API 30-025-42630) at (32.326320°, -103.550600°), as provided on a Corrective Action Form C-141 (Form C-141), which is depicted on **Figure 1 in Appendix A**.

On December 8, 2015, it was discovered that a mobile water transfer pump failed and resulted in the release of approximately 10 barrels (bbls) of produced water into the pasture. A vacuum truck was immediately dispatched and recovered approximately 2 bbls of produced water. Devon reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Form C-141, which was received by the NMOCD on December 11, 2015, and was subsequently assigned Incident Number nJXK1534548184.

Shortly after the discovery of the release, a third-party environmental contractor was retained to conduct delineation activities to assess the presence and/or absence of soil impacts at the Site. As documented in a previously submitted Remediation Work Plan (RWP), delineation soil sample laboratory analytical results indicated the presence of residual chloride soil impacts exceeding 1,000 milligram per kilogram (mg/kg) would be excavated to an anticipated depth range of 0.5 to 2 feet below ground surface (bgs). **Figure 2 in Appendix A** depicts the estimated release area, hereafter referred to as the Area of Concern (AOC), overlain the satellite imagery used in the RWP from the year 2015. The RWP proposed collecting confirmation soil samples from the excavated areas(s) for chloride analysis. The RWP was approved by the NMOCD on March 14, 2016, under the condition that the proposed excavation depths would be verified by photographic documentation.

Due to recent, updated NMOCD confirmation soil sampling requirements, Etech prepared a Sampling Variance Request (SVR) that proposed to collect 5-point composite confirmation soil samples throughout the AOC to confirm absence of any residually impacted soil at the Site, specifically for areas not proposed to be excavated as per the RWP. On August 9, 2024, and August 13, 2024, a SVR was submitted to the NMOCD, and SLO requesting a sampling variance for 5-point composite confirmation soil samples to represent a maximum of 400 square feet (sqft) from the AOC footprint and 200 sqft from the edges of the AOC. was approved on August 9, 2024, by the NMOCD and on August 13, 2024, by the SLO.

On June 26, 2024, a copy of the approved RWP was submitted to the SLO for review. SLO requested an addendum to propose reclamation activities for any surface disturbance of State Trust Land, which was submitted to NMSLO on July 24, 2024, and subsequently approved on August 27, 2024.

## SITE CHARACTERIZATION AND CLOSURE CRITERIA

Based on the desktop review for the Site according to 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) considering depth to groundwater and the proximity to:

- Any continuously flowing watercourse or any other significant watercourse;
- Any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark);
- An occupied permanent residence, school, hospital, institution or church;

- A spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes;
- Any freshwater well or spring;
- Incorporated municipal boundaries or a defined municipal fresh water well field covered under a municipal ordinance;
- A wetland;
- A subsurface mine;
- An unstable area (i.e. high karst potential); and
- A 100-year floodplain.

As summarized in the SVR report, depth to groundwater at the Site is estimated to be between 51 and 100 feet below bgs, based off a nearby soil boring advanced by Vision Resources for Devon, located approximately 0.3 miles northwest of the Site. Soil boring (C-04767 POD1) was advanced on December 13, 2023, via a truck mounted drill rig equipped with air rotary to a total depth of 55 feet bgs. No fluids were observed throughout the drilling process nor after a 72-hour observation period. Following the observation period, the boring was plugged and abandoned according to the appropriate regulations. The soil boring location may be referenced on **Figure 1A** in **Appendix A**. The well log and plugging record for the referenced soil boring are included in **Appendix B**.

All other potential receptors are not within the established buffers in NMAC 19.15.29.12. Receptor details from the site characterization are included in **Figure 1B** and **Figure 1C** in **Appendix A**.

Based on the results from the desktop review and estimated regional depth to groundwater at the Site, the following Closure Criteria was applied:

Constituents of Concern (COCs)	Laboratory Analytical Method	Closure Criteria <sup>†</sup>
Chloride	Environmental Protection Agency (EPA) 300.0	10,000 milligram per kilogram (mg/kg)
TPH (Total Petroleum Hydrocarbon)	EPA 8015 M/D	2,500 mg/kg
TPH-Gasoline Range Organics (GRO) + TPH-Diesel Range Organics (DRO)	EPA 8015 M/D	1,000 mg/kg
Benzene	EPA 8021B/8260B	10 mg/kg
Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA 8021B/8260B	50 mg/kg

<sup>†</sup>The reclamation concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.

## **CULTURAL PROPERTIES PROTECTION RULE AND BIOLOGICAL AREAS**

To comply with the requirements set by the SLO Cultural Properties Protection (CPP) Rule, (19.2.24 NMAC), Etech, on behalf of Devon, contracted Lone Mountain Archaeological Services, Inc. (Lone Mountain) to conduct an Archaeological Records Management Section (ARMS) review, of the Area of Potential Effect (APE), which covered approximately 1.21 acres on SLO managed land. On May 5, 2024, Lone Mountain notified Etech that the entire APE was previously surveyed under New Mexico Cultural Resource Investigation (NMCRI) Activity Number 131178 (**Appendix C**), and the survey(s) were negative for archaeological sites, and/or historic properties within the APE buffer.

Based on the ARMS review, Lone Mountain concluded that an intensive pedestrian survey was not applicable. An NMSLO Cultural Resource Cover Sheet (CRC) letter was submitted along with a Right of Entry Permit (ROE), to the Commissioner of Public Lands, on May 10, 2024, and Right-of Entry Permit No: RE-7050, was subsequently approved on May 22, 2024.

Etech conducted a desktop review of the Site and according to the U.S Fish and Wildlife Service (USFWS) and National Marine Fisheries Services (NMFS), no critical habitats that support endangered or threatened species were identified (**Appendix D**).

### DELINEATION SOIL SAMPLING ACTIVITIES

On February 1, 2024, Etech evaluated the AOC based on information provided by Devon on the Form C-141, the previously approved RWP, and visual observations estimated by apparent vegetative stress via handheld Global Positioning System (GPS). Five delineation locations (BH01 through BH05) were advanced via hand auger within the AOC to reassess residual soil impacts associated with the AOC previously identified in the approved RWP. Delineation activities were driven in accordance with Site Closure Criteria by field screening soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips or until refusal, whichever was encountered first. A minimum of two soil samples were collected from each delineation soil sampling location, representing the highest observed field screening concentrations and the greatest depth. Field screening results and soil descriptions are included on soil sampling logs shown in **Appendix E**. The delineation soil sample locations are shown in **Figure 3** in **Appendix A**. Photographic documentation of delineation activities is included in **Appendix F**.

Delineation soil samples were placed directly into lab provided pre-cleaned glass jars, packaged with minimal void space, labeled, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures, to Envirotech, Inc. Laboratories (Envirotech) in Farmington, New Mexico, for analysis of COCs.

### DELINEATION LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for soil samples (BH02 to BH05) were compliant with the Site Closure Criteria and/or reclamation standard.

Laboratory analytical results for all soil samples indicated BTEX and TPH concentrations were compliant with the Site Closure Criteria and/or reclamation standard.

Laboratory analytical results for the remaining sample (BH01) indicated that TPH concentrations exceeded the Site Closure Criteria within the top 0.5-foot bgs, characterized by a concentration of 9,610 mg/kg. Laboratory analytical results are summarized in Table 1 included in **Appendix G**. The executed chain-of-custody form and laboratory reports are provided in **Appendix H**.

### CONFIRMATION SOIL SAMPLING ACTIVITIES

On September 11, 2024, Etech collected 5-point composite confirmation soil samples throughout the AOC footprint (FS01 through FS35), at the approved sampling frequency of 400 sqft. Confirmation soil samples were collected along the edge of the AOC (SW01 through SW08), representing no more than 200 sqft per soil sample. The confirmation soil samples were comprised of five equivalent aliquots homogenized in a 1-gallon, resealable plastic bag. Confirmation soil samples were field screened, handled, and analyzed as previously described. The location of the confirmation soil samples are shown in **Figure 4** in **Appendix A**. Photographic documentation during soil sampling activities is included in **Appendix F**.

### EXCAVATION SOIL SAMPLING ACTIVITIES

On November 12, 2024, Etech directed the removal of identified soil impacts via heavy equipment based on recent delineation laboratory analytical results, proposed corrective actions detailed in the approved RWP, and visual observation. The excavation was driven by field screening soil for VOCs and chloride as previously described.

Following the removal of impacted soil, Etech collected 5-point composite confirmation excavation soil samples from the floors (FS01 through FS04) and sidewalls (SW01 through SW04) of the excavations, representing no more than 200 square feet per composite soil sample. The 5-point composite soil samples were comprised of five equivalent aliquots homogenized in a 1-gallon, resealable plastic bag. Final confirmation excavation soil samples were field screened, handled and analyzed as previously described.

Approximately 80 cubic yards (CY) of impacted soil was removed from the Site. Impacted soil was transported to the R360 Red Bluff Landfill Facility in Orla, Texas under Devon approved manifests. The excavation extents and location of confirmation excavation soil samples are shown in **Figure 5** and in **Appendix A**. Photographic documentation of excavation activities is included in **Appendix F**.

## **CONFIRMATION AND EXCAVATION LABORATORY ANALYTICAL RESULTS**

Laboratory analytical results indicated that concentrations of COCs for all confirmation soil samples and excavation confirmation soil samples were below the applicable Site Closure Criteria and/or reclamation standard. Laboratory analytical results are summarized in **Table 1** included in **Appendix G**.

## **RECLAMATION**

On November 15, 2024, the excavations, which totaled approximately 975 sqft, were backfilled with 80 CY of clean, locally sourced soil and the Site was restored to “as close to its original state” as possible. The final soil cover was contoured to match the Site’s pre-existing grade to prevent ponding of water and erosion. SLO Seed Mix for Sandy Loam (SL) will be hand-broadcasted over the entire disturbed area in the next favorable growing season following SLO guidelines (**Appendix I**). The selected seed blend will provide the maximum results of vegetation regrowth and ground surface coverage to match pre-existing conditions at the Site. Site inspections will be performed annually to assess the revegetation progress and evaluate the Site for the presence or absence of primary and/or secondary noxious weeds. If no growth is shown within a year of the next favorable growing season, the Site will be reseeded accordingly. If noxious weeds are identified, Devon will address them accordingly.

Concurrently with backfilling activities, Etech assessed the backfill material for its capacity to host vegetative growth. Three 5-point composite soil samples were collected from the backfill stockpile to use as soil cover material for the excavation areas (SC01 through SC03). One discrete soil sample was collected outside of the excavation disturbance area (BG01) at 0.25-foot bgs via hand shovel. The soil samples were field screened for VOCs and chloride, as previously described, and qualitatively evaluated for nutrient density of pH, Nitrogen (N), Phosphorus (P), and Potassium (K) utilizing a HoldAll® Soil Test Kit according to the operating manual, which is included in **Appendix J**.

Field screening results indicated the backfill material appears to correlate with surrounding soil conditions currently supporting native vegetative growth, as summarized in **Table 2** included in **Appendix G**. The location of the restoration area and field screened soil sample locations are shown in **Figure 5** in **Appendix A**. Photographic documentation of restoration activities is included in **Appendix F**.

## **CLOSURE REQUEST**

Based on laboratory analytical results, Devon believes that residual soil impacts associated with the inadvertent release have been excavated and removed from Site and the remediation area(s) subsequently reclaimed “as close to its original state” as possible. Concentrations of COCs for all confirmation soil samples and confirmation excavation soil samples were below the Site Closure Criteria and/or reclamation standard. As such, NFRA appears warranted until the next favorable growing season and this CRR associated with Incident Number nJXK1534548184 should be respectfully considered for Closure by the NMOCD.

If you have any questions or comments, please do not hesitate to contact Joseph Hernandez at (432) 305-6413 or [joseph@etechnv.com](mailto:joseph@etechnv.com) or Erick Herrera at (432) 305-6416 or [erick@etechnv.com](mailto:erick@etechnv.com). **Appendix K** provides correspondence email notification receipts from NMOCD and SLO associated with the subject release. Previous remediation activities and soil sample analytical results for the subject release can be referenced in the approved RWP in **Appendix L**.

Sincerely,  
Etech Environmental and Safety Solutions, Inc.



Erick Herrera  
Project Geologist



Joseph S. Hernandez  
Senior Managing Geologist

cc: Jim Raley, Devon  
New Mexico Oil Conservation Division  
State Land Office

**Appendices:**

- Appendix A:** Figure 1: Site Map  
Figure 1A: Site Characterization Map – Groundwater  
Figure 1B: Site Characterization Map – Surficial Receptors  
Figure 1C: Site Characterization Map – Subsurface Receptors  
Figure 2: Area of Concern  
Figure 3: Delineation Soil Sample Locations  
Figure 4: Confirmation Soil Sample Locations  
Figure 5: Excavation Soil Sample Locations  
Figure 6: Future Restoration Areas
- Appendix B:** Referenced Well Records
- Appendix C:** NMSLO Cultural Cover Sheet
- Appendix D:** U.S. Fish & Wildlife Service Threatened and Endangered Species Report
- Appendix E:** Soil Sampling Logs
- Appendix F:** Photographic Log
- Appendix G:** Tables
- Appendix H:** Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix I:** NMSLO Sandy Loam Site Seed Mixture
- Appendix J:** HoldAll® Operating Manual
- Appendix K:** Correspondence & Notifications
- Appendix L:** Archived Reports

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# APPENDIX A

## Figures



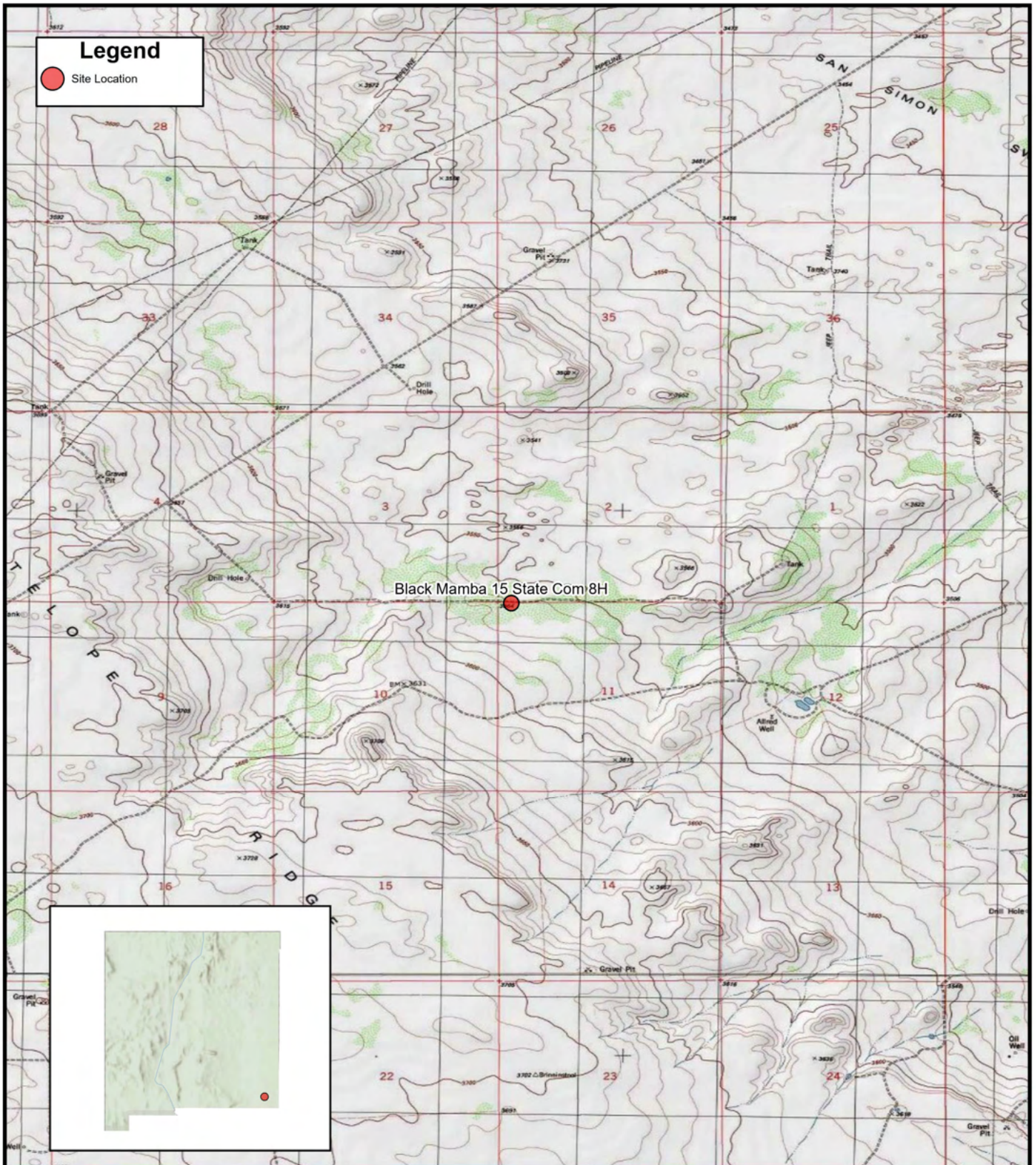


FIGURE 1

## Site Location Map

Devon Energy Production Company, LP  
Black Mamba 15 State Com 8H  
Unit D Sec 11 T23S R33E  
Lea County, New Mexico

eTECH



0 2,000 4,000 Feet



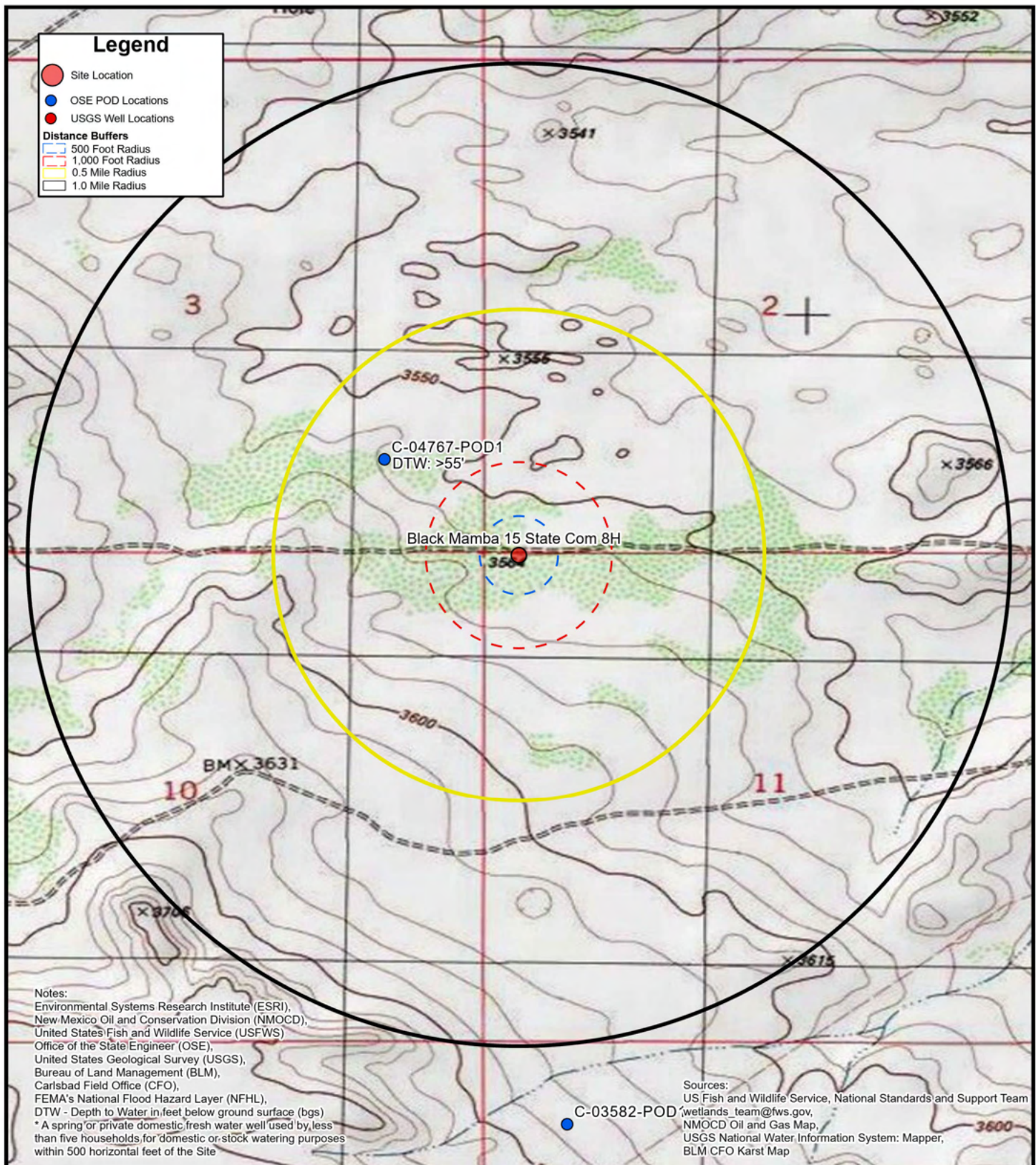


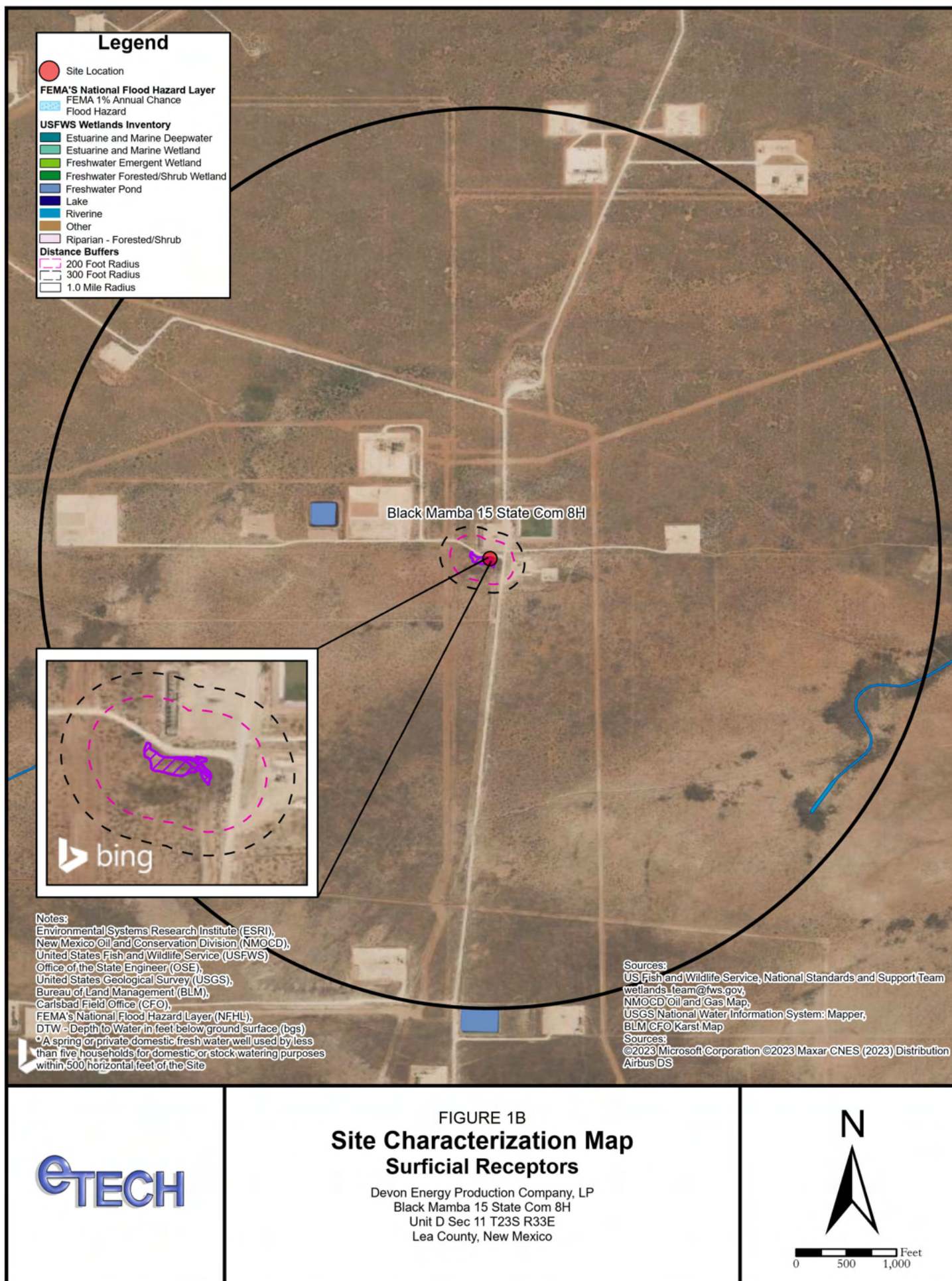
FIGURE 1A  
**Site Characterization Map  
 Groundwater**

Devon Energy Production Company, LP  
 Black Mamba 15 State Com 8H  
 Unit D Sec 11 T23S R33E  
 Lea County, New Mexico

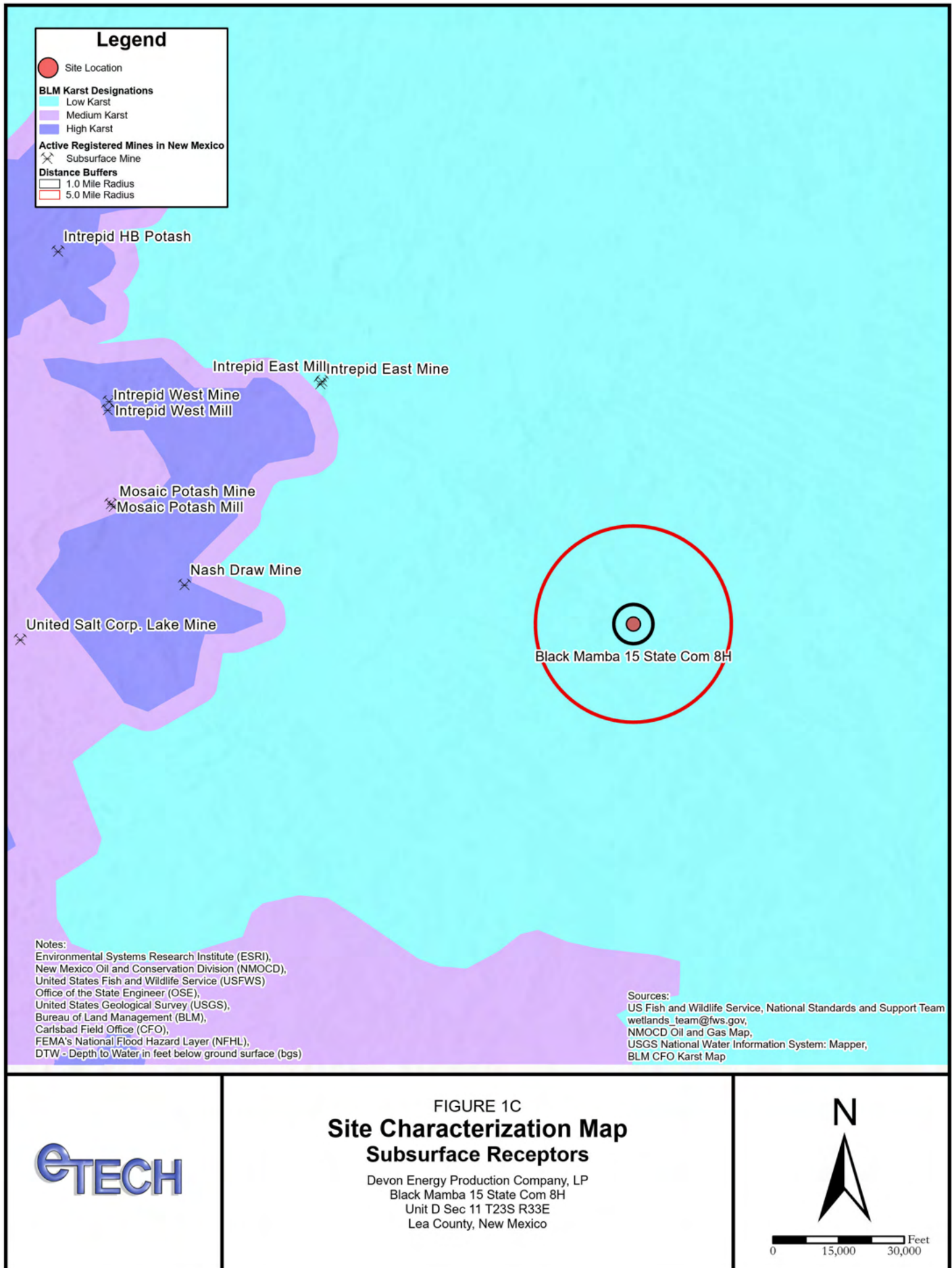
**eTECH**



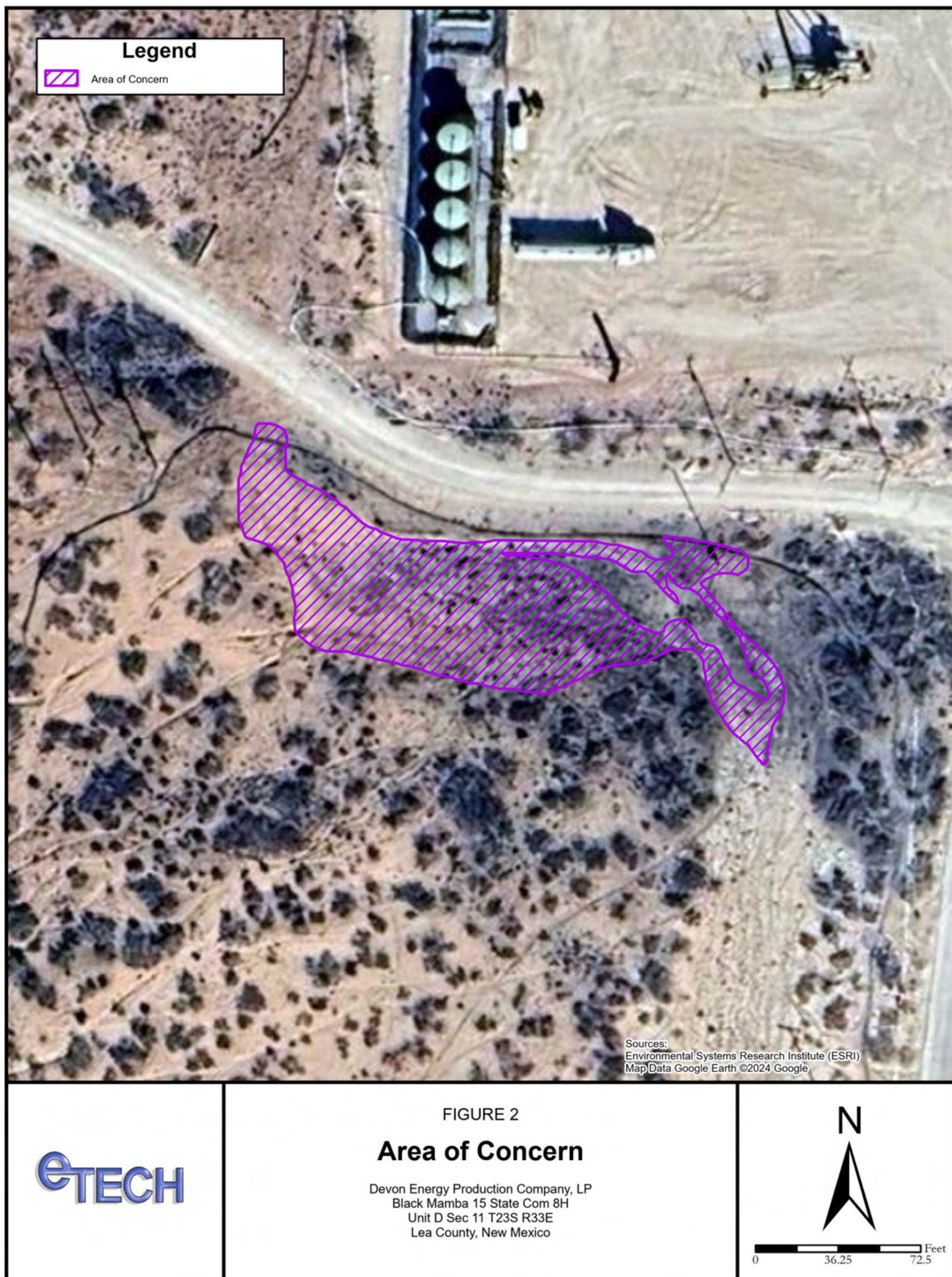




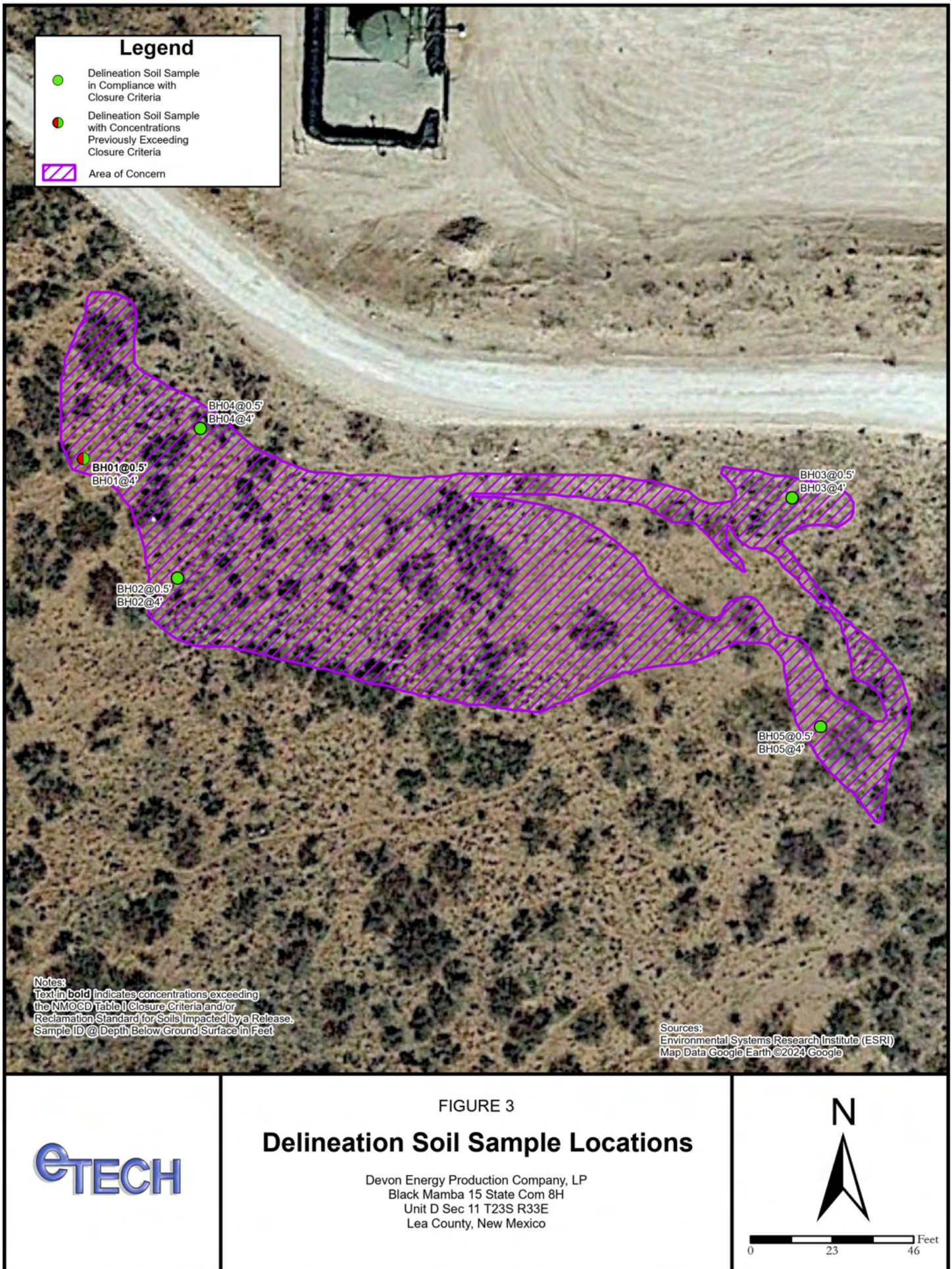














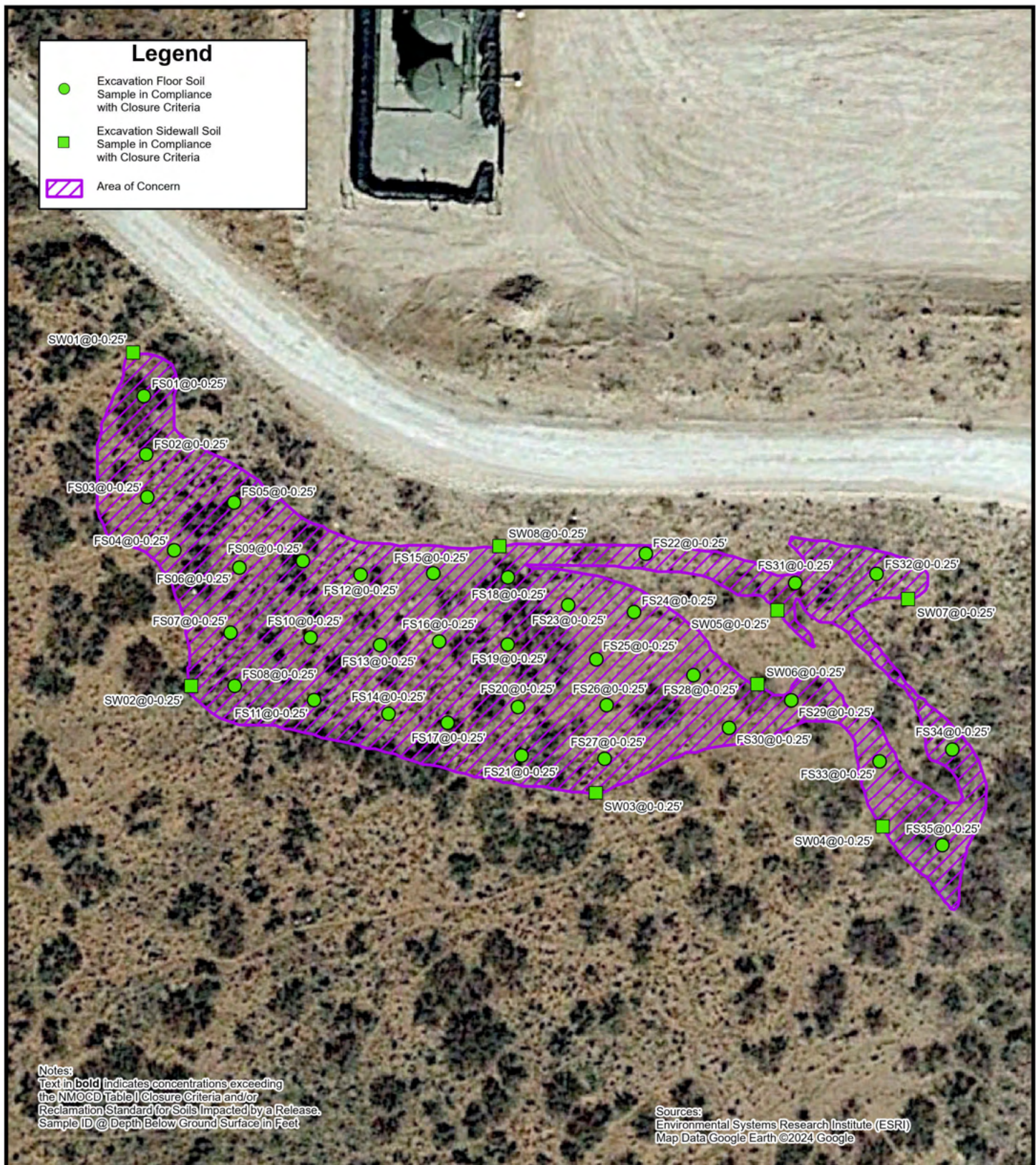


FIGURE 4

## Confirmation Soil Sample Locations

Devon Energy Production Company, LP  
 Black Mamba 15 State Com 8H  
 Unit D Sec 11 T23S R33E  
 Lea County, New Mexico

eTECH



0 24 48 Feet



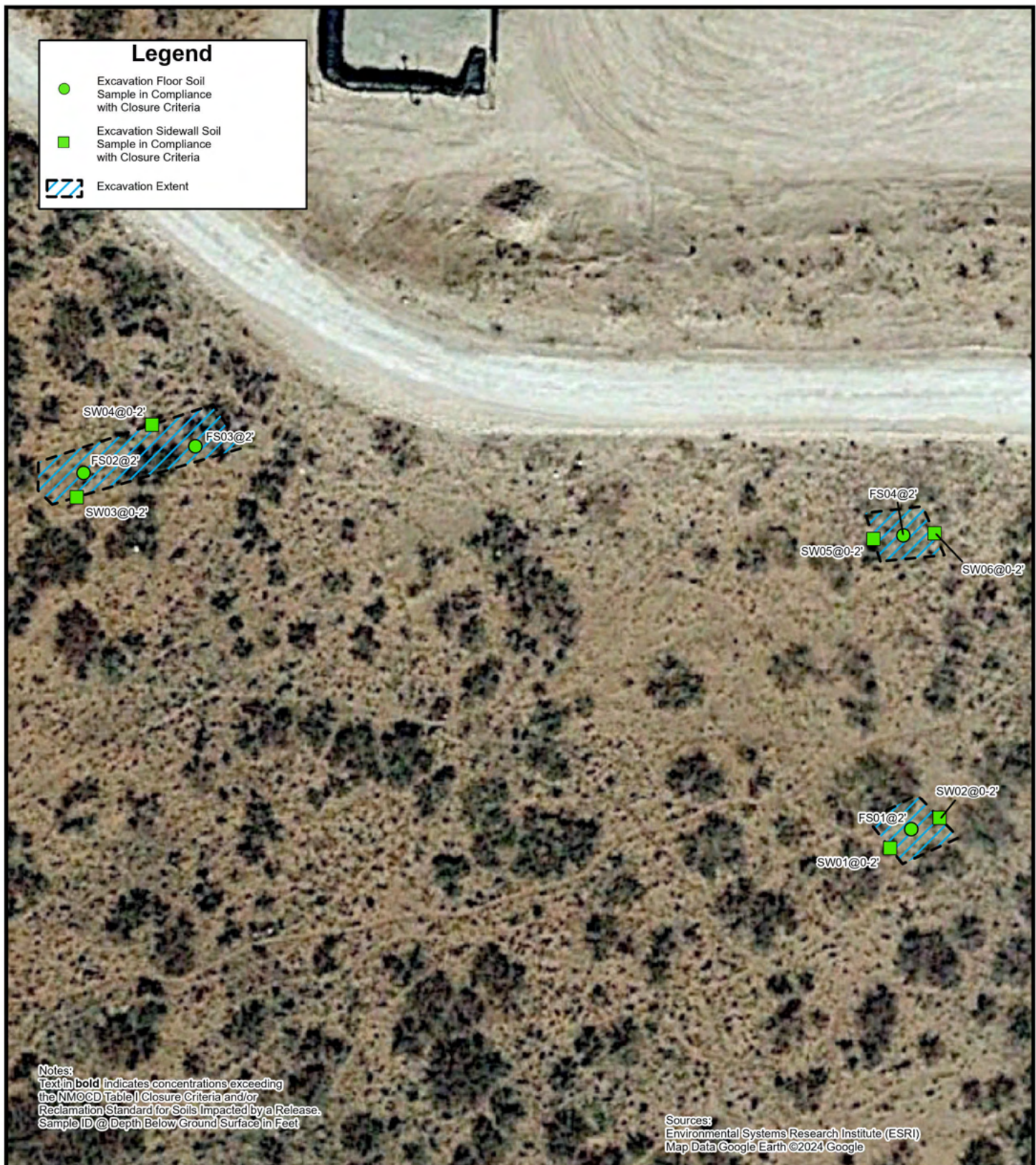


FIGURE 5

## Excavation Soil Sample Locations

Devon Energy Production Company, LP  
 Black Mamba 15 State Com 8  
 Unit D Sec 11 T23S R33E  
 Lea County, New Mexico

eTECH



0 20.5 41 Feet



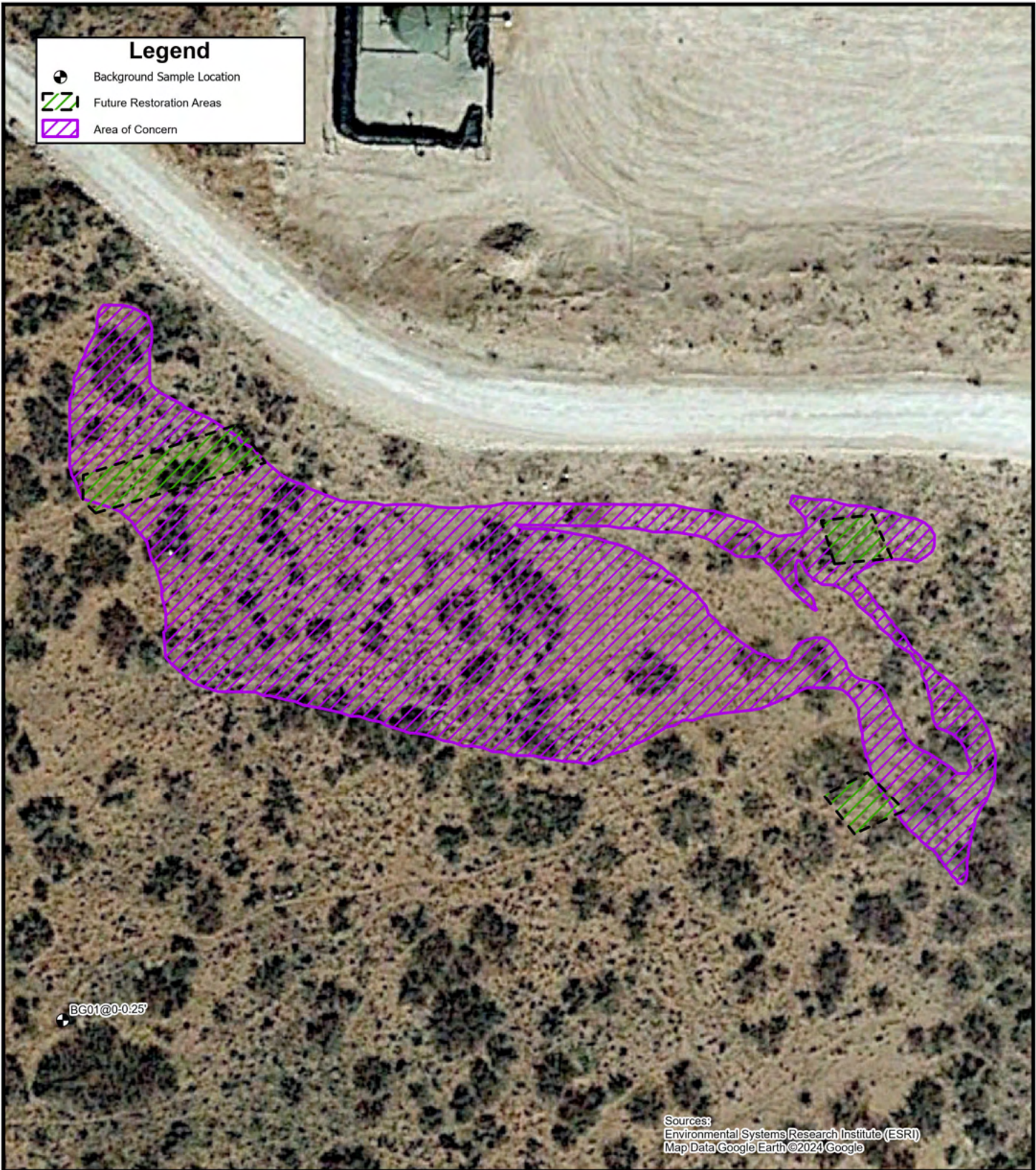
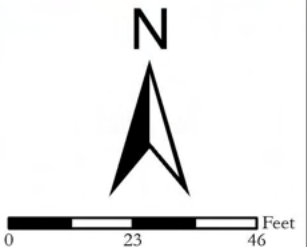


FIGURE 6

**Future Restoration Areas**

Devon Energy Production Company, LP  
Black Mamba 15 State Com 8H  
Unit D Sec 11 T23S R33E  
Lea County, New Mexico



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## APPENDIX B

### Referenced Well Records





# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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

N. Thistle

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) C-4767 POD1		WELL TAG ID NO.		OSE FILE NO(S) C-4767			
	WELL OWNER NAME(S) Devon Energy Resources				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 205 E. Bender Road #150				CITY Hobbs	STATE NM	ZIP 88240	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 19	SECONDS 44.92	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
		LONGITUDE 103	33	16.43	W	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1833		NAME OF LICENSED DRILLER Jason Maley			NAME OF WELL DRILLING COMPANY Vision Resources		
	DRILLING STARTED 12-13-23	DRILLING ENDED 12-13-23	DEPTH OF COMPLETED WELL (FT) 55'	BORE HOLE DEPTH (FT) 55'	DEPTH WATER FIRST ENCOUNTERED (FT) Dry			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN *add Centralizer info below <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) Dry		DATE STATIC MEASURED 12-18-23	
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:				CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>			
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	45'	6"	2" PVC SCH40	Thread	2"	SCH40	N/A
	45'	55'	6"	2" PVC SCH40	Thread	2"	SCH 40	.02
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE- RANGE BY INTERVAL *(if using Centralizers for Artesian wells- indicate the spacing below)	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
				None pulled and plugged0				
FOR OSE INTERNAL USE								
FILE NO.			POD NO.		WR-20 WELL RECORD & LOG (Version 09/22/2022)			
LOCATION			WELL TAG ID NO.		PAGE 1 OF 2			

DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
FROM	TO				
0	15'	15'	Red fine sand	Y    ✓ N	
15'	20'	5'	Brown sand with caliche	Y    ✓ N	
20'	55'	35'	Red sand with coarse rock	Y    ✓ N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
				Y    N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER – SPECIFY: Dry hole				TOTAL ESTIMATED WELL YIELD (gpm): 0	

WELL TEST		TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
MISCELLANEOUS INFORMATION:		
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:		

6. SIGNATURE	
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:	
SIGNATURE OF DRILLER / PRINT SIGNEE NAME	DATE

FOR USE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 09/22/2022)	
FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2



# PLUGGING RECORD



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

## I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-04767

Well owner: Devon Energy Resources

Phone No.: \_\_\_\_\_

Mailing address: 205 E Bender Road #105

City: Hobbs

State: NM

Zip code: 88240

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Vision resources
- 2) New Mexico Well Driller License No.: 1833 Expiration Date: 10-7-25
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Jason Maley
- 4) Date well plugging began: 12-19-23 Date well plugging concluded: 12-19-23
- 5) GPS Well Location: Latitude: 32 deg, 19 min, 44.92 sec  
Longitude: 103 deg, 33 min, 16.43 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 55 ft below ground level (bgl),  
by the following manner: Tape
- 7) Static water level measured at initiation of plugging: Dry ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 8-18-23
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):



- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

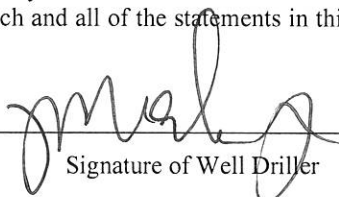
For each interval plugged, describe within the following columns:

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0		77.50	77.50	Tremie pipe Open hole	
	Wyoming Bentonite				
55'					

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

### III. SIGNATURE:

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

  
Signature of Well Driller

  
Date

---

## APPENDIX C

### NMSLO Cultural Cover Sheet

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P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213





Stephanie Garcia Richard, Commissioner of Public Lands  
State of New Mexico

## NMSLO Cultural Resources Cover Sheet Exhibit A

NMCRIS Activity Number: 131178

(if applicable)

Exhibit Type (select one)

☒ **ARMS Inspection/Review** - Summarize the results (select one):

- ☒ (A) The entire area of potential effect or project area has been previously surveyed to current standards and **no cultural properties** were found within the survey area.
- ☐ (B) The entire area of potential effect or project area has been previously surveyed to current standards and **cultural properties were found** within the survey area.
- ☐ (C) The entire area of potential effect or project area has **not** been previously surveyed or **has not been surveyed** to current standards. A complete archaeological survey will be conducted and submitted for review.

☐ **Archaeological Survey**

Findings:

☐ **Negative** - No further archaeological review is required.

☐ **Positive** - Have avoidance and protection measures been devised? Select one:

**Comments:** Sixteen surveys conducted within the last ten years and one site are located within the search parameters. LA 133857 is located approximately 425 m west of the spill area and will not be impacted by the undertaking. Several surveys have taken place in the project location and have

**Project Details:**

NMSLO Lease Number (if available): GT3124, HP00370000, \

Cultural Resources Consultant: Lone Mountain Archaeological Services, Inc.

Project Proponent (Applicant): Devon Energy Production Company

Project Title/Description: Black Mamba 15 State Com Spill Remediation

**Project Location:**

County(ies): Lea

PLSS/Section/Township/Range: T23S, R33E, S2 and 11

**For NMSLO Agency Use Only:**

NMSLO Lease Number:

Acknowledgment-Only: ☐

Lease Analyst:

Date Exhibit Routed to Cultural Resources Office:

No person may alter the wording of the questions or layout of the cover sheet. The completion of this cover sheet by itself does not authorize anyone to engage in new surface disturbing activity before the review and approvals required by the Cultural Properties Protections Rule.

Form Revised 12 22

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## APPENDIX D

### U.S. Fish & Wildlife Service Threatened and Endangered Species Report

**IPaC****U.S. Fish & Wildlife Service**

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Lea County, New Mexico



## Local office

New Mexico Ecological Services Field Office

☎ (505) 346-2525

📠 (505) 346-2542



2105 Osuna Road Ne  
Albuquerque, NM 87113-1001

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Birds

NAME	STATUS
Lesser Prairie-chicken <i>Tympanuchus pallidicinctus</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/1924">https://ecos.fws.gov/ecp/species/1924</a>	Endangered
Northern Aplomado Falcon <i>Falco femoralis septentrionalis</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/1923">https://ecos.fws.gov/ecp/species/1923</a>	<a href="#">EXPN</a>

## Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds  
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

**What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?**

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

**What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

**What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.



# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The [data](#) in this location indicates there are no migratory [birds of conservation concern](#) expected to occur in this area.

There may be migratory birds in your project area, but we don't have any survey data available to provide further direction. For additional information, please refer to the links above for recommendations to minimize impacts to migratory birds or contact your local FWS office.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).



Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

## Fish hatcheries

There are no fish hatcheries at this location.

## Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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## APPENDIX E

### Soil Sampling Logs



Sample Name: BH01

Date: 02/01/2024

Site Name: Black Mamba 15 State Com 8H

Incident Number: nJXK1534548184

Job Number: 19285

**LITHOLOGIC / SOIL SAMPLING LOG**

Logged By: EK

Method: Hand Auger

Site Coordinates: 32.326375, -103.551211

Hole Diameter: 4 inches

Total Depth: 4 feet

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 (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<128	-	No	BH01	0.5	0	SP-SM	(0-4') SAND, dry, brown, poorly graded with silt, very fine to fine grain, some organic matter, no stain, no odor.
Dry	<128	-	No		1	1		@1.5' No more organic matter
Dry	<128	-	No		2	2		
Dry	<128	-	No	BH01	4	4		

Total Depth





Sample Name: BH02

Date: 02/01/2024

Site Name: Black Mamba 15 State Com 8H

Incident Number: nJXK1534548184

Job Number: 19285

**LITHOLOGIC / SOIL SAMPLING LOG**

Logged By: EK

Method: Hand Auger

Site Coordinates: 32.326268, -103.551169

Hole Diameter: 4 inches

Total Depth: 4 feet

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 (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<128	-	No	BH02	0.5	0	SP-SM	(0-4') SAND, dry, brown, poorly graded with silt, very fine to fine grain, some organic matter, no stain, no odor.
Dry	<128	-	No		1	1		@1.5' No more organic matter
Dry	<128	-	No		2	2		
Dry	<128	-	No	BH02	4	4		

Total Depth



Sample Name: BH03

Date: 02/01/2024

Site Name: Black Mamba 15 State Com 8H

Incident Number: nJXK1534548184

Job Number: 19285

**LITHOLOGIC / SOIL SAMPLING LOG**

Logged By: EK

Method: Hand Auger

Site Coordinates: 32.326338, -103.550567

Hole Diameter: 4 inches

Total Depth: 4 feet

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 (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<128	-	No	BH03	0.5	0	SP-SM	(0-4') SAND, dry, brown, poorly graded with silt, very fine to fine grain, some organic matter, no stain, no odor.
Dry	<128	-	No		1	1		@1.5' No more organic matter
Dry	<128	-	No		2	2		
Dry	<128	-	No	BH03	4	4		

Total Depth



Sample Name: BH04

Date: 02/01/2024

Site Name: Black Mamba 15 State Com 8H

Incident Number: nJXK1534548184

Job Number: 19285

**LITHOLOGIC / SOIL SAMPLING LOG**

Logged By: EK

Method: Hand Auger

Site Coordinates: 32.326402, -103.551108

Hole Diameter: 4 inches

Total Depth: 4 feet

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 (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	592	-	No	BH04	0.5	0	SP-SM	(0-4') SAND, dry, brown, poorly graded with silt, very fine to fine grain, some organic matter, no stain, no odor.
Dry	300	-	No		1	1		@1.5' No more organic matter
Dry	<128	-	No		2	2		
Dry	<128	-	No	BH04	4	4		

Total Depth



Sample Name: BH05

Date: 02/01/2024

Site Name: Black Mamba 15 State Com 8H

Incident Number: nJXK1534548184

Job Number: 19285

**LITHOLOGIC / SOIL SAMPLING LOG**

Logged By: EK

Method: Hand Auger

Site Coordinates: 32.326130, -103.550555

Hole Diameter: 4 inches

Total Depth: 4 feet

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 (feet bgs)	Depth (feet bgs)	USCS/Rock Symbol	Lithologic Descriptions/Notes
Dry	<128	-	No	BH05	0.5	0	SP-SM	(0-4') SAND, dry, brown, poorly graded with silt, very fine to fine grain, some organic matter, no stain, no odor.
Dry	<128	-	No		1	1		@1.5' No more organic matter
Dry	<128	-	No		2	2		
Dry	<128	-	No	BH05	4	4		

Total Depth

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# APPENDIX F

## Photographic Log



**PHOTOGRAPHIC LOG**

Devon Energy Production Company, LP

Black Mamba 15 State Com 8H

Incident Number: NJXK1534548184

**Photograph 1****Date: 02/01/2024**

Description: Northeastern view of delineation activities.

**Photograph 2****Date: 02/01/2024**

Description: Southwestern view of delineation activities.

**Photograph 3****Date: 09/11/2024**

Description: Northeastern view of confirmation activities.

**Photograph 4****Date: 09/11/2024**

Description: Southwestern view of confirmation activities.





# PHOTOGRAPHIC LOG

Devon Energy Production Company LP

Black Mamba 15 State Com 8H

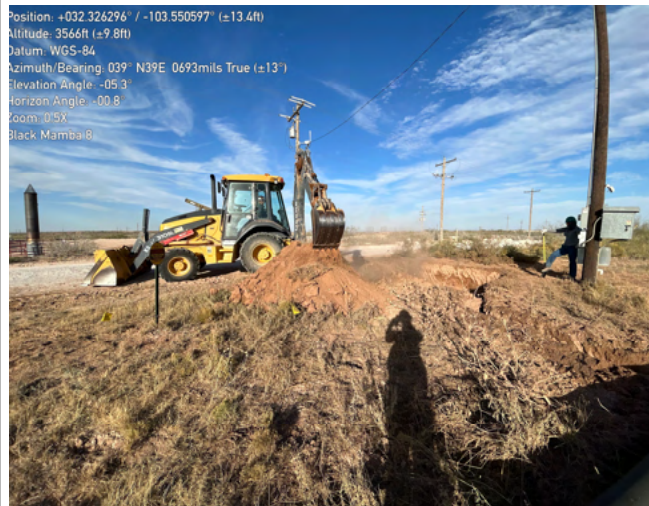
Incident Number: NJXK1534548184



**Photograph 5**

**Date: 11/11/2024**

Description: Northwestern view of excavation activities.



**Photograph 6**

**Date: 11/11/2024**

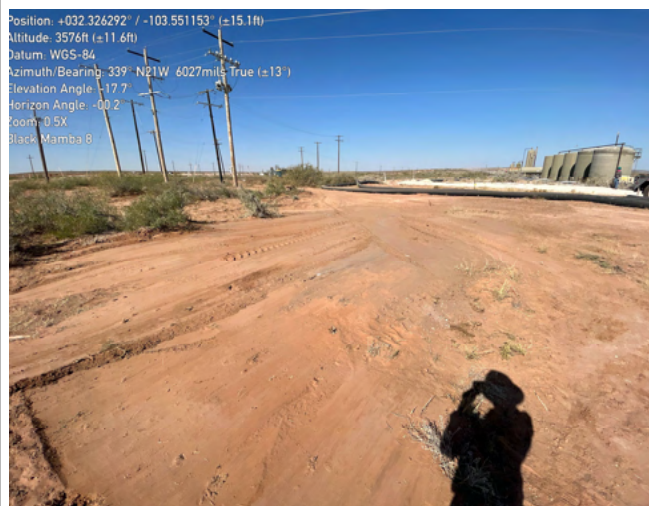
Description: Northeastern view of excavation activities.



**Photograph 7**

**Date: 11/15/2024**

Description: Southeastern view of nutrient testing results for backfill material SC02.



**Photograph 8**

**Date: 11/15/2024**

Description: Northwestern view of completed restoration.

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# APPENDIX G

## Tables



**Table 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Devon Energy Production Company, LP  
 Black Mamba 15 State Com 8H  
 Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	DRO+GRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria for Soils Impacted by a Release (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Delineation Soil Samples - Incident Number nJXK1534548184										
BH01	02/01/2024	0.5	<0.0250	<0.0500	43.6	6,080	3,490	6,120	9,610	64.3 <sup>†</sup>
BH01	02/01/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH02	02/01/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	213 <sup>†</sup>
BH02	02/01/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH03	02/01/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
BH03	02/01/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH04	02/01/2024	0.5	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
BH04	02/01/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
BH05	02/01/2024	0.5	<0.0250	0.0335	<20.0	<25.0	<50.0	<25.0	<50.0	248 <sup>†</sup>
BH05	02/01/2024	4	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0
Confirmation Soil Samples - Incident Number nJXK1534548184										
FS01	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS02	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS03	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS04	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS05	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS06	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS07	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	119 <sup>†</sup>
FS08	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	413 <sup>†</sup>
FS09	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS10	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS11	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	21.6 <sup>†</sup>
FS12	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS13	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS14	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS15	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS16	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS17	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS18	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	110 <sup>†</sup>
FS19	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	171 <sup>†</sup>

FS20	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS21	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS22	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	50.0 <sup>†</sup>
FS23	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS24	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS25	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS26	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS27	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS28	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS29	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS30	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS31	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	367 <sup>†</sup>
FS32	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS33	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS34	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS35	09/11/2024	0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW01	09/11/2024	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW02	09/11/2024	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW03	09/11/2024	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW04	09/11/2024	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW05	09/11/2024	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW06	09/11/2024	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW07	09/11/2024	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW08	09/11/2024	0-0.25	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	31.7 <sup>†</sup>
Excavation Soil Samples - Incident Number nJXK1534548184										
FS01	11/12/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS02	11/12/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
FS03	11/12/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	41.1 <sup>†</sup>
FS04	11/12/2024	2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW01	11/12/2024	0-2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW02	11/12/2024	0-2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW03	11/12/2024	0-2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	163 <sup>†</sup>
SW04	11/12/2024	0-2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW05	11/12/2024	0-2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>
SW06	11/12/2024	0-2	<0.0250	<0.0500	<20.0	<25.0	<50.0	<25.0	<50.0	<20.0 <sup>†</sup>

## Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

Text in "grey" represents excavated soil samples

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria and/or Reclamation Standard<sup>†</sup> for Soils Impacted by a Release<sup>†</sup> The reclamation concentration requirements of 600 mg/kg chloride and 100 mg/kg TPH apply to the top 4 feet of areas to be immediately reclaimed following remediation pursuant to NMAC 19.15.17.13.





**Table 2**  
**SOIL SAMPLE FIELD SCREENING RESULTS**  
**Devon Energy Production Company, LP**  
**Black Mamba 15 State Com 8H**  
**Lea County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Nitrogen	Potash	Phosphorous	PH (ppm)	Chloride (ppm)
Restoration Soil Samples							
SC01	11/15/2024	-	Very Low	Low	Very Low	7.5	<124
SC02	11/15/2024	-	Very Low	Low	Very Low	7.5	<124
SC03	11/15/2024	-	Very Low	Low	Very Low	7.5	<124
BG01	11/15/2024	0-0.25	Very Low	Low	Very Low	7.5	<124

**Notes:**

bgs: below ground surface

ppm: parts per million

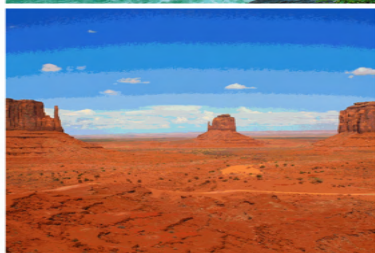
"-" symbol: sample depth is not applicable

---

## APPENDIX H

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

Report to:  
Gilbert Moreno



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E402058

Job Number: 01058-0007

Received: 2/6/2024

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

Gilbert Moreno  
6488 7 Rivers Hwy  
Artesia, NM 88210



Project Name: Black Mamba 15 State Com 8H  
Workorder: E402058  
Date Received: 2/6/2024 12:07:00PM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/6/2024 12:07:00PM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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  
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[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

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

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Sample Summary

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	02/13/24 15:01

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH01 0.5'	E402058-01A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.
BH01 4'	E402058-02A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.



## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Gilbert Moreno	<b>Reported:</b> 2/13/2024 3:01:13PM
---	--	---

**BH01 0.5'**

**E402058-01**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
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	121 %	70-130		02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4	90.1 %	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: 2406069
Gasoline Range Organics (C6-C10)	43.6	20.0	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene	121 %	70-130		02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4	90.1 %	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: 2406076
Diesel Range Organics (C10-C28)	6080	125	5	02/08/24	02/08/24	
Oil Range Organics (C28-C36)	3490	250	5	02/08/24	02/08/24	
Surrogate: n-Nonane	111 %	50-200		02/08/24	02/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2406060
Chloride	64.3	20.0	1	02/06/24	02/08/24	



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Gilbert Moreno

**Reported:**  
2/13/2024 3:01:13PM

BH01 4'

E402058-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
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		114 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		93.8 %	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: 2406069
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene		114 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		93.8 %	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: 2406076
Diesel Range Organics (C10-C28)	ND	25.0	1	02/08/24	02/08/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/08/24	02/08/24	
Surrogate: n-Nonane		100 %	50-200	02/08/24	02/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2406060
Chloride	ND	20.0	1	02/06/24	02/08/24	



## QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:01:13PM

## 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 (2406069-BLK1)

Prepared: 02/07/24 Analyzed: 02/10/24

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	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

## LCS (2406069-BS1)

Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.42	0.0250	2.50		96.7	70-130			
Ethylbenzene	2.58	0.0250	2.50		103	70-130			
Toluene	2.49	0.0250	2.50		99.6	70-130			
o-Xylene	2.61	0.0250	2.50		104	70-130			
p,m-Xylene	5.17	0.0500	5.00		103	70-130			
Total Xylenes	7.78	0.0250	7.50		104	70-130			
Surrogate: Bromofluorobenzene	0.585		0.500		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.456		0.500		91.1	70-130			
Surrogate: Toluene-d8	0.530		0.500		106	70-130			

## LCS Dup (2406069-BSD1)

Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.51	0.0250	2.50		100	70-130	3.74	23	
Ethylbenzene	2.63	0.0250	2.50		105	70-130	2.05	27	
Toluene	2.54	0.0250	2.50		102	70-130	2.01	24	
o-Xylene	2.71	0.0250	2.50		109	70-130	4.00	27	
p,m-Xylene	5.32	0.0500	5.00		106	70-130	2.74	27	
Total Xylenes	8.03	0.0250	7.50		107	70-130	3.16	27	
Surrogate: Bromofluorobenzene	0.618		0.500		124	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		97.0	70-130			
Surrogate: Toluene-d8	0.550		0.500		110	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:01:13PM

Nonhalogenated Organics by EPA 8015D - GRO

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 (2406069-BLK1) Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

LCS (2406069-BS2) Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	53.8	20.0	50.0		108	70-130			
Surrogate: Bromofluorobenzene	0.569		0.500		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		90.0	70-130			
Surrogate: Toluene-d8	0.553		0.500		111	70-130			

LCS Dup (2406069-BSD2) Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	52.9	20.0	50.0		106	70-130	1.51	20	
Surrogate: Bromofluorobenzene	0.576		0.500		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		89.9	70-130			
Surrogate: Toluene-d8	0.533		0.500		107	70-130			





QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:01:13PM

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
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

Blank (2406076-BLK1) Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	55.9		50.0		112	50-200			

LCS (2406076-BS1) Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	314	25.0	250		125	38-132			
Surrogate: n-Nonane	57.4		50.0		115	50-200			

Matrix Spike (2406076-MS1) Source: E402073-03 Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	310	25.0	250	ND	124	38-132			
Surrogate: n-Nonane	57.6		50.0		115	50-200			

Matrix Spike Dup (2406076-MSD1) Source: E402073-03 Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	309	25.0	250	ND	124	38-132	0.249	20	
Surrogate: n-Nonane	57.8		50.0		116	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:01:13PM

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 (2406060-BLK1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	ND	20.0							
LCS (2406060-BS1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	259	20.0	250		104	90-110			
Matrix Spike (2406060-MS1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120			
Matrix Spike Dup (2406060-MSD1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120	0.0418	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:	Black Mamba 15 State Com 8H	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Gilbert Moreno	02/13/24 15:01

- 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.



**envirotech**



## Envirotech Analytical Laboratory

Printed: 2/7/2024 12:18:54PM

## 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	Date Received:	02/06/24 12:07	Work Order ID:	E402058
Phone:	(575) 748-0176	Date Logged In:	02/06/24 12:06	Logged In By:	Angelina Pineda
Email:		Due Date:	02/12/24 17:00 (4 day TAT)		

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.

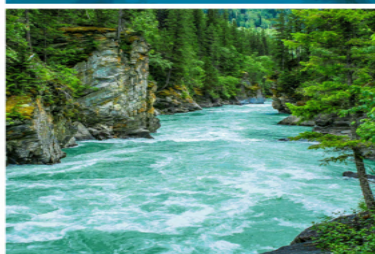
Date



envirotech Inc.

Report to:

Gilbert Moreno



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E402059

Job Number: 01058-0007

Received: 2/6/2024

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.  
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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

Gilbert Moreno  
6488 7 Rivers Hwy  
Artesia, NM 88210



Project Name: Black Mamba 15 State Com 8H  
Workorder: E402059  
Date Received: 2/6/2024 12:07:00PM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/6/2024 12:07:00PM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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  
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**Alexa Michaels**  
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Field Offices:

**Southern New Mexico Area**

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Sample Summary

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	02/13/24 15:02

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH02 0.5'	E402059-01A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.
BH02 4'	E402059-02A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Gilbert Moreno

**Reported:**  
2/13/2024 3:02:07PM

BH02 0.5'

E402059-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2406069	
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	91.7 %	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: 2406069	
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	91.7 %	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: 2406077	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/08/24	02/08/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/08/24	02/08/24	
Surrogate: n-Nonane	86.0 %	50-200		02/08/24	02/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: DT		Batch: 2406060	
Chloride	213	20.0	1	02/06/24	02/08/24	



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Gilbert Moreno

**Reported:**  
2/13/2024 3:02:07PM

## BH02 4'

## E402059-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
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		111 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		91.2 %	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: 2406069
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene		111 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		91.2 %	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: 2406077
Diesel Range Organics (C10-C28)	ND	25.0	1	02/08/24	02/08/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/08/24	02/08/24	
Surrogate: n-Nonane		91.6 %	50-200	02/08/24	02/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2406060
Chloride	ND	20.0	1	02/06/24	02/08/24	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:02:07PM

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 (2406069-BLK1)

Prepared: 02/07/24 Analyzed: 02/10/24

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	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

LCS (2406069-BS1)

Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.42	0.0250	2.50		96.7	70-130			
Ethylbenzene	2.58	0.0250	2.50		103	70-130			
Toluene	2.49	0.0250	2.50		99.6	70-130			
o-Xylene	2.61	0.0250	2.50		104	70-130			
p,m-Xylene	5.17	0.0500	5.00		103	70-130			
Total Xylenes	7.78	0.0250	7.50		104	70-130			
Surrogate: Bromofluorobenzene	0.585		0.500		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.456		0.500		91.1	70-130			
Surrogate: Toluene-d8	0.530		0.500		106	70-130			

LCS Dup (2406069-BSD1)

Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.51	0.0250	2.50		100	70-130	3.74	23	
Ethylbenzene	2.63	0.0250	2.50		105	70-130	2.05	27	
Toluene	2.54	0.0250	2.50		102	70-130	2.01	24	
o-Xylene	2.71	0.0250	2.50		109	70-130	4.00	27	
p,m-Xylene	5.32	0.0500	5.00		106	70-130	2.74	27	
Total Xylenes	8.03	0.0250	7.50		107	70-130	3.16	27	
Surrogate: Bromofluorobenzene	0.618		0.500		124	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		97.0	70-130			
Surrogate: Toluene-d8	0.550		0.500		110	70-130			





## QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:02:07PM

## 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 (2406069-BLK1)

Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

## LCS (2406069-BS2)

Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	53.8	20.0	50.0		108	70-130			
Surrogate: Bromofluorobenzene	0.569		0.500		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		90.0	70-130			
Surrogate: Toluene-d8	0.553		0.500		111	70-130			

## LCS Dup (2406069-BSD2)

Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	52.9	20.0	50.0		106	70-130	1.51	20	
Surrogate: Bromofluorobenzene	0.576		0.500		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		89.9	70-130			
Surrogate: Toluene-d8	0.533		0.500		107	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:02:07PM

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 (2406077-BLK1) Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	47.0		50.0		94.0	50-200			

LCS (2406077-BS1) Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	245	25.0	250		98.1	38-132			
Surrogate: n-Nonane	46.8		50.0		93.6	50-200			

Matrix Spike (2406077-MS1) Source: E402074-03 Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	258	25.0	250	ND	103	38-132			
Surrogate: n-Nonane	49.3		50.0		98.6	50-200			

Matrix Spike Dup (2406077-MSD1) Source: E402074-03 Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	260	25.0	250	ND	104	38-132	0.773	20	
Surrogate: n-Nonane	47.0		50.0		94.1	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:02:07PM

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 (2406060-BLK1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	ND	20.0							
LCS (2406060-BS1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	259	20.0	250		104	90-110			
Matrix Spike (2406060-MS1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120			
Matrix Spike Dup (2406060-MSD1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120	0.0418	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:	Black Mamba 15 State Com 8H	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Gilbert Moreno	02/13/24 15:02

- 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.





## Project Information

## Chain of Custody

Page 1 of 1

Client: Devon Energy Production Co LP				Bill To				Lab Use Only				TAT				EPA Program					
Project: Black Mamba 15 State Com 8H				Attention: Jim Raley				Lab WO# E 402059				Job Number 005360007				1D	2D	3D	Standard	CWA	SDWA
Project Manager: Gilbert Moreno				Address: 5315 Buena Vista Dr.															5 day TAT		
Address: 13000 W County Rd 100				City, State, Zip: Carlsbad, NM, 88220				Analysis and Method												RCRA	
City, State, Zip: Odessa, TX, 79765				Phone: 575-885-7502																	
Phone: 832-541-7719				Email: jlm.raley@devn.com																	
Email: Devon-team@etechnv.com				WO: 21206816																	
				Incident ID: NJKK1534548184																	
Collected by: Edyte Konan																					
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth (ft.)	TPH GAO/DRO/CHO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	SGDOC NM	SGDOC TX	State							
														NM	CO	UT	AZ	TX			
																			Remarks		
10:20	02.01.24	S	1	BH02	1	0.5'						X									
10:30	02.01.24	S	1	BH02	2	4'						X									
02/05/2024																					
Additional Instructions:																					
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 5 °C on subsequent days.											
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time		Lab Use Only									
<i>[Signature]</i>		02/05/24		12:00		Michelle Gonzales		2-5-24		1200		Received on ice: <input checked="" type="radio"/> N									
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time		T1 T2 T3									
Michelle Gonzales		2-5-24		1730		<i>[Signature]</i>		2-6-24		1207											
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time		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

## Envirotech Analytical Laboratory

Printed: 2/7/2024 12:24:03PM

## 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	Date Received:	02/06/24 12:07	Work Order ID:	E402059
Phone:	(575) 748-0176	Date Logged In:	02/06/24 12:15	Logged In By:	Angelina Pineda
Email:		Due Date:	02/12/24 17:00 (4 day TAT)		

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.

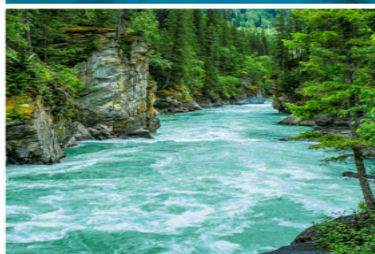
Date



envirotech Inc.

Report to:

Gilbert Moreno



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E402060

Job Number: 01058-0007

Received: 2/6/2024

Revision: 2

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
3/13/24

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: 3/13/24

Gilbert Moreno  
6488 7 Rivers Hwy  
Artesia, NM 88210



Project Name: Black Mamba 15 State Com 8H  
Workorder: E402060  
Date Received: 2/6/2024 12:07:00PM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/6/2024 12:07:00PM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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  
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Sample Summary

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	03/13/24 15:22

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH03 0.5'	E402060-01A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.
BH03 4'	E402060-02A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Gilbert Moreno

**Reported:**  
3/13/2024 3:22:51PM

**BH03 0.5'**

**E402060-01**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
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	
<i>Surrogate: Bromofluorobenzene</i>		109 %	70-130	02/07/24	02/09/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		90.8 %	70-130	02/07/24	02/09/24	
<i>Surrogate: Toluene-d8</i>		109 %	70-130	02/07/24	02/09/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/09/24	
<i>Surrogate: Bromofluorobenzene</i>		109 %	70-130	02/07/24	02/09/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		90.8 %	70-130	02/07/24	02/09/24	
<i>Surrogate: Toluene-d8</i>		109 %	70-130	02/07/24	02/09/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2406077
Diesel Range Organics (C10-C28)	ND	25.0	1	02/08/24	02/08/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/08/24	02/08/24	
<i>Surrogate: n-Nonane</i>		89.1 %	50-200	02/08/24	02/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2406060
Chloride	ND	20.0	1	02/06/24	02/08/24	



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Gilbert Moreno

**Reported:**  
3/13/2024 3:22:51PM

BH03 4'

E402060-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
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		111 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		91.4 %	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: 2406069
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene		111 %	70-130	02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4		91.4 %	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: 2406077
Diesel Range Organics (C10-C28)	ND	25.0	1	02/08/24	02/08/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/08/24	02/08/24	
Surrogate: n-Nonane		90.7 %	50-200	02/08/24	02/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2406060
Chloride	ND	20.0	1	02/06/24	02/08/24	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	3/13/2024 3:22:51PM

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 (2406069-BLK1) Prepared: 02/07/24 Analyzed: 02/10/24

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	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

LCS (2406069-BS1) Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.42	0.0250	2.50		96.7	70-130			
Ethylbenzene	2.58	0.0250	2.50		103	70-130			
Toluene	2.49	0.0250	2.50		99.6	70-130			
o-Xylene	2.61	0.0250	2.50		104	70-130			
p,m-Xylene	5.17	0.0500	5.00		103	70-130			
Total Xylenes	7.78	0.0250	7.50		104	70-130			
Surrogate: Bromofluorobenzene	0.585		0.500		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.456		0.500		91.1	70-130			
Surrogate: Toluene-d8	0.530		0.500		106	70-130			

LCS Dup (2406069-BSD1) Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.51	0.0250	2.50		100	70-130	3.74	23	
Ethylbenzene	2.63	0.0250	2.50		105	70-130	2.05	27	
Toluene	2.54	0.0250	2.50		102	70-130	2.01	24	
o-Xylene	2.71	0.0250	2.50		109	70-130	4.00	27	
p,m-Xylene	5.32	0.0500	5.00		106	70-130	2.74	27	
Total Xylenes	8.03	0.0250	7.50		107	70-130	3.16	27	
Surrogate: Bromofluorobenzene	0.618		0.500		124	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		97.0	70-130			
Surrogate: Toluene-d8	0.550		0.500		110	70-130			





QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	3/13/2024 3:22:51PM

Nonhalogenated Organics by EPA 8015D - GRO

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 (2406069-BLK1) Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

LCS (2406069-BS2) Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	53.8	20.0	50.0		108	70-130			
Surrogate: Bromofluorobenzene	0.569		0.500		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		90.0	70-130			
Surrogate: Toluene-d8	0.553		0.500		111	70-130			

LCS Dup (2406069-BSD2) Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	52.9	20.0	50.0		106	70-130	1.51	20	
Surrogate: Bromofluorobenzene	0.576		0.500		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		89.9	70-130			
Surrogate: Toluene-d8	0.533		0.500		107	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	3/13/2024 3:22:51PM

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 (2406077-BLK1) Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	47.0		50.0		94.0	50-200			

LCS (2406077-BS1) Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	245	25.0	250		98.1	38-132			
Surrogate: n-Nonane	46.8		50.0		93.6	50-200			

Matrix Spike (2406077-MS1) Source: E402074-03 Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	258	25.0	250	ND	103	38-132			
Surrogate: n-Nonane	49.3		50.0		98.6	50-200			

Matrix Spike Dup (2406077-MSD1) Source: E402074-03 Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	260	25.0	250	ND	104	38-132	0.773	20	
Surrogate: n-Nonane	47.0		50.0		94.1	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	3/13/2024 3:22:51PM

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 (2406060-BLK1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	ND	20.0							
LCS (2406060-BS1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	259	20.0	250		104	90-110			
Matrix Spike (2406060-MS1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120			
Matrix Spike Dup (2406060-MSD1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120	0.0418	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:	Black Mamba 15 State Com 8H	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Gilbert Moreno	03/13/24 15:22

- 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.







## Envirotech Analytical Laboratory

Printed: 2/7/2024 12:34:52PM

## 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	Date Received:	02/06/24 12:07	Work Order ID:	E402060
Phone:	(575) 748-0176	Date Logged In:	02/06/24 12:21	Logged In By:	Angelina Pineda
Email:		Due Date:	02/12/24 17:00 (4 day TAT)		

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.

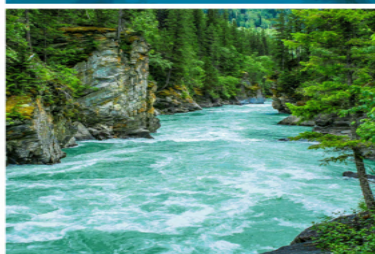
Date



envirotech Inc.

Report to:

Gilbert Moreno



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E402061

Job Number: 01058-0007

Received: 2/6/2024

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

Gilbert Moreno  
6488 7 Rivers Hwy  
Artesia, NM 88210



Project Name: Black Mamba 15 State Com 8H  
Workorder: E402061  
Date Received: 2/6/2024 12:07:00PM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/6/2024 12:07:00PM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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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QC - Nonhalogenated Organics by EPA 8015D - DRO/ORO	9
QC - Anions by EPA 300.0/9056A	10
Definitions and Notes	11
Chain of Custody etc.	12

Sample Summary

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	02/13/24 15:03

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH04 0.5'	E402061-01A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.
BH04 4'	E402061-02A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.





## Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Gilbert Moreno	<b>Reported:</b> 2/13/2024 3:03:43PM
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**BH04 0.5'**

**E402061-01**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
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<b>Volatile Organic Compounds by EPA 8260B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2406069	
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	

<i>Surrogate: Bromofluorobenzene</i>	112 %	70-130	02/07/24	02/09/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	91.0 %	70-130	02/07/24	02/09/24	
<i>Surrogate: Toluene-d8</i>	110 %	70-130	02/07/24	02/09/24	

Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY		Batch: 2406069
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	91.0 %	70-130		02/07/24	02/09/24
Surrogate: Toluene-d8	110 %	70-130		02/07/24	02/09/24

Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2406077
Diesel Range Organics (C10-C28)	ND	25.0	1	02/08/24	02/08/24
Oil Range Organics (C28-C36)	ND	50.0	1	02/08/24	02/08/24
Surrogate: n-Nonane	89.5 %	50-200		02/08/24	02/08/24

<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2406060	
Chloride	ND	20.0	1	02/06/24	02/08/24	



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Gilbert Moreno

**Reported:**  
2/13/2024 3:03:43PM

BH04 4'

E402061-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
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		88.9 %	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: 2406069
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		88.9 %	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: 2406077
Diesel Range Organics (C10-C28)	ND	25.0	1	02/08/24	02/08/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/08/24	02/08/24	
Surrogate: n-Nonane		91.3 %	50-200	02/08/24	02/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2406060
Chloride	ND	20.0	1	02/06/24	02/08/24	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:03:43PM

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 (2406069-BLK1) Prepared: 02/07/24 Analyzed: 02/10/24

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	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

LCS (2406069-BS1) Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.42	0.0250	2.50		96.7	70-130			
Ethylbenzene	2.58	0.0250	2.50		103	70-130			
Toluene	2.49	0.0250	2.50		99.6	70-130			
o-Xylene	2.61	0.0250	2.50		104	70-130			
p,m-Xylene	5.17	0.0500	5.00		103	70-130			
Total Xylenes	7.78	0.0250	7.50		104	70-130			
Surrogate: Bromofluorobenzene	0.585		0.500		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.456		0.500		91.1	70-130			
Surrogate: Toluene-d8	0.530		0.500		106	70-130			

LCS Dup (2406069-BSD1) Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.51	0.0250	2.50		100	70-130	3.74	23	
Ethylbenzene	2.63	0.0250	2.50		105	70-130	2.05	27	
Toluene	2.54	0.0250	2.50		102	70-130	2.01	24	
o-Xylene	2.71	0.0250	2.50		109	70-130	4.00	27	
p,m-Xylene	5.32	0.0500	5.00		106	70-130	2.74	27	
Total Xylenes	8.03	0.0250	7.50		107	70-130	3.16	27	
Surrogate: Bromofluorobenzene	0.618		0.500		124	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		97.0	70-130			
Surrogate: Toluene-d8	0.550		0.500		110	70-130			



## QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:03:43PM

## 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 (2406069-BLK1)

Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

## LCS (2406069-BS2)

Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	53.8	20.0	50.0		108	70-130			
Surrogate: Bromofluorobenzene	0.569		0.500		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		90.0	70-130			
Surrogate: Toluene-d8	0.553		0.500		111	70-130			

## LCS Dup (2406069-BSD2)

Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	52.9	20.0	50.0		106	70-130	1.51	20	
Surrogate: Bromofluorobenzene	0.576		0.500		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		89.9	70-130			
Surrogate: Toluene-d8	0.533		0.500		107	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:03:43PM

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 (2406077-BLK1) Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	47.0		50.0		94.0	50-200			

LCS (2406077-BS1) Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	245	25.0	250		98.1	38-132			
Surrogate: n-Nonane	46.8		50.0		93.6	50-200			

Matrix Spike (2406077-MS1) Source: E402074-03 Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	258	25.0	250	ND	103	38-132			
Surrogate: n-Nonane	49.3		50.0		98.6	50-200			

Matrix Spike Dup (2406077-MSD1) Source: E402074-03 Prepared: 02/08/24 Analyzed: 02/08/24

Diesel Range Organics (C10-C28)	260	25.0	250	ND	104	38-132	0.773	20	
Surrogate: n-Nonane	47.0		50.0		94.1	50-200			





QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 3:03:43PM

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 (2406060-BLK1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	ND	20.0							
LCS (2406060-BS1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	259	20.0	250		104	90-110			
Matrix Spike (2406060-MS1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120			
Matrix Spike Dup (2406060-MSD1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120	0.0418	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:	Black Mamba 15 State Com 8H	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Gilbert Moreno	02/13/24 15:03

- 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.



(3)

## Envirotech Analytical Laboratory

Printed: 2/7/2024 12:39:35PM

## 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	Date Received:	02/06/24 12:07	Work Order ID:	E402061
Phone:	(575) 748-0176	Date Logged In:	02/06/24 12:40	Logged In By:	Angelina Pineda
Email:		Due Date:	02/12/24 17:00 (4 day TAT)		

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.

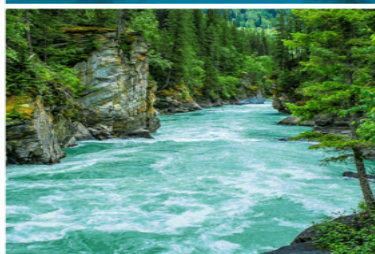
Date



envirotech Inc.

Report to:

Gilbert Moreno



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E402062

Job Number: 01058-0007

Received: 2/6/2024

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.  
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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



Gilbert Moreno  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Black Mamba 15 State Com 8H  
Workorder: E402062  
Date Received: 2/6/2024 12:07:00PM

Gilbert Moreno,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/6/2024 12:07:00PM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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  
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Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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**Alexa Michaels**  
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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	02/13/24 14:43

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH05 0.5'	E402062-01A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.
BH05 4'	E402062-02A	Soil	02/01/24	02/06/24	Glass Jar, 2 oz.



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Gilbert Moreno

**Reported:**  
2/13/2024 2:43:44PM

BH05 0.5'

E402062-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
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	109 %	70-130		02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4	91.0 %	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: 2406069
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/09/24	
Surrogate: Bromofluorobenzene	109 %	70-130		02/07/24	02/09/24	
Surrogate: 1,2-Dichloroethane-d4	91.0 %	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: 2406077
Diesel Range Organics (C10-C28)	ND	25.0	1	02/08/24	02/08/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/08/24	02/08/24	
Surrogate: n-Nonane	93.4 %	50-200		02/08/24	02/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2406060
Chloride	ND	20.0	1	02/06/24	02/08/24	



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Gilbert Moreno

**Reported:**  
2/13/2024 2:43:44PM

BH05 4'

E402062-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
Benzene	ND	0.0250	1	02/07/24	02/10/24	
Ethylbenzene	ND	0.0250	1	02/07/24	02/10/24	
Toluene	ND	0.0250	1	02/07/24	02/10/24	
o-Xylene	ND	0.0250	1	02/07/24	02/10/24	
p,m-Xylene	ND	0.0500	1	02/07/24	02/10/24	
Total Xylenes	ND	0.0250	1	02/07/24	02/10/24	
Surrogate: Bromofluorobenzene		109 %	70-130	02/07/24	02/10/24	
Surrogate: 1,2-Dichloroethane-d4		89.8 %	70-130	02/07/24	02/10/24	
Surrogate: Toluene-d8		106 %	70-130	02/07/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2406069
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/07/24	02/10/24	
Surrogate: Bromofluorobenzene		109 %	70-130	02/07/24	02/10/24	
Surrogate: 1,2-Dichloroethane-d4		89.8 %	70-130	02/07/24	02/10/24	
Surrogate: Toluene-d8		106 %	70-130	02/07/24	02/10/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2406077
Diesel Range Organics (C10-C28)	ND	25.0	1	02/08/24	02/08/24	
Oil Range Organics (C28-C36)	ND	50.0	1	02/08/24	02/08/24	
Surrogate: n-Nonane		93.7 %	50-200	02/08/24	02/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2406060
Chloride	ND	20.0	1	02/06/24	02/08/24	





## QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 2:43:44PM

## 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 (2406069-BLK1)

Prepared: 02/07/24 Analyzed: 02/10/24

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	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

## LCS (2406069-BS1)

Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.42	0.0250	2.50		96.7	70-130			
Ethylbenzene	2.58	0.0250	2.50		103	70-130			
Toluene	2.49	0.0250	2.50		99.6	70-130			
o-Xylene	2.61	0.0250	2.50		104	70-130			
p,m-Xylene	5.17	0.0500	5.00		103	70-130			
Total Xylenes	7.78	0.0250	7.50		104	70-130			
Surrogate: Bromofluorobenzene	0.585		0.500		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.456		0.500		91.1	70-130			
Surrogate: Toluene-d8	0.530		0.500		106	70-130			

## LCS Dup (2406069-BSD1)

Prepared: 02/07/24 Analyzed: 02/10/24

Benzene	2.51	0.0250	2.50		100	70-130	3.74	23	
Ethylbenzene	2.63	0.0250	2.50		105	70-130	2.05	27	
Toluene	2.54	0.0250	2.50		102	70-130	2.01	24	
o-Xylene	2.71	0.0250	2.50		109	70-130	4.00	27	
p,m-Xylene	5.32	0.0500	5.00		106	70-130	2.74	27	
Total Xylenes	8.03	0.0250	7.50		107	70-130	3.16	27	
Surrogate: Bromofluorobenzene	0.618		0.500		124	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		97.0	70-130			
Surrogate: Toluene-d8	0.550		0.500		110	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 2:43:44PM

Nonhalogenated Organics by EPA 8015D - GRO

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 (2406069-BLK1) Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.453		0.500		90.5	70-130			
Surrogate: Toluene-d8	0.537		0.500		107	70-130			

LCS (2406069-BS2) Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	53.8	20.0	50.0		108	70-130			
Surrogate: Bromofluorobenzene	0.569		0.500		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		90.0	70-130			
Surrogate: Toluene-d8	0.553		0.500		111	70-130			

LCS Dup (2406069-BSD2) Prepared: 02/07/24 Analyzed: 02/10/24

Gasoline Range Organics (C6-C10)	52.9	20.0	50.0		106	70-130	1.51	20	
Surrogate: Bromofluorobenzene	0.576		0.500		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		89.9	70-130			
Surrogate: Toluene-d8	0.533		0.500		107	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 2:43:44PM

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 (2406077-BLK1)					Prepared: 02/08/24 Analyzed: 02/08/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	47.0		50.0		94.0	50-200			

LCS (2406077-BS1)					Prepared: 02/08/24 Analyzed: 02/08/24				
Diesel Range Organics (C10-C28)	245	25.0	250		98.1	38-132			
Surrogate: n-Nonane	46.8		50.0		93.6	50-200			

Matrix Spike (2406077-MS1)					Source: E402074-03		Prepared: 02/08/24 Analyzed: 02/08/24		
Diesel Range Organics (C10-C28)	258	25.0	250	ND	103	38-132			
Surrogate: n-Nonane	49.3		50.0		98.6	50-200			

Matrix Spike Dup (2406077-MSD1)					Source: E402074-03		Prepared: 02/08/24 Analyzed: 02/08/24		
Diesel Range Organics (C10-C28)	260	25.0	250	ND	104	38-132	0.773	20	
Surrogate: n-Nonane	47.0		50.0		94.1	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Gilbert Moreno	2/13/2024 2:43:44PM

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 (2406060-BLK1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	ND	20.0							
LCS (2406060-BS1)					Prepared: 02/06/24 Analyzed: 02/08/24				
Chloride	259	20.0	250		104	90-110			
Matrix Spike (2406060-MS1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120			
Matrix Spike Dup (2406060-MSD1)					Source: E402054-21		Prepared: 02/06/24 Analyzed: 02/08/24		
Chloride	256	20.0	250	ND	102	80-120	0.0418	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:	Black Mamba 15 State Com 8H	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Gilbert Moreno	02/13/24 14:43

- 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.





## Project Information

## Chain of Custody

Page 1 of 1

Client: Devon Energy Production Co LP				Bill To		Lab Use Only				TAT				EPA Program											
Project: Black Mamba 15 State Com 8H				Attention: Jim Raley		Lab WO# E 402062		Job Number 010580007		1D	2D	3D	Standard	CWA	SDWA										
Project Manager: Gilbert Moreno				Address: 5315 Buena Vista Dr.									5 day TAT												
Address: 13000 W County Rd 100				City, State, Zip: Carlsbad, NM, 88220										RCRA											
City, State, Zip: Odessa, TX, 79765				Phone: 575-885-7502																					
Phone: 832-541-7719				Email: jim.raley@devn.com																					
Email: Devon-team@etechnv.com				WO: 21206816																					
				Incident ID: nJXX1534548184																					
Collected by: Edyte Konan																									
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth (ft)	TPH GRO/DRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300 D	BGDOC NM	GDOC TX	State											
														<table border="1"> <tr> <td>NM</td> <td>CO</td> <td>UT</td> <td>AZ</td> <td>TX</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		NM	CO	UT	AZ	TX					
NM	CO	UT	AZ	TX																					
11:20	02.01.24	S	1	BH05	1	0.5'						X		Remarks											
11:30	02.01.24	S	1	BH05	2	4'						X													
02/05/2024																									
Additional Instructions:																									
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. Sampled by: <u>LL</u>																									
Samples requiring thermal preservation must be returned 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													
<u>[Signature]</u>		02/05/24		12:00		<u>Michelle Gonzales</u>		2-5-24		1200		Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N													
Relinquished by (Signature)		Date		Time		Received by (Signature)		Date		Time		T1 T2 T3													
<u>Michelle Gonzales</u>		2-5-24		1730		<u>[Signature]</u>		2/6/24		1707															
Relinquished by (Signature)		Date		Time		Received by (Signature)		Date		Time		AVG Temp °C <u>4</u>													
Sample Matrix: S - Soil, Sd - Solid, Sl - 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

## Envirotech Analytical Laboratory

Printed: 2/7/2024 1:19:41PM

## 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	Date Received:	02/06/24 12:07	Work Order ID:	E402062
Phone:	(575) 748-0176	Date Logged In:	02/06/24 12:45	Logged In By:	Angelina Pineda
Email:		Due Date:	02/12/24 17:00 (4 day TAT)		

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:  
Anna Byers



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

WPX Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E409095

Job Number: 01058-0007

Received: 9/13/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
9/18/24

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: 9/18/24



Anna Byers  
5315 Buena Vista Dr  
Carlsbad, NM 88220

Project Name: Black Mamba 15 State Com 8H  
Workorder: E409095  
Date Received: 9/13/2024 7:45:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 9/13/2024 7:45:00AM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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## Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 09/18/24 08:07
--	--	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS01 0.25'	E409095-01A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS02 0.25'	E409095-02A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS03 0.25'	E409095-03A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS04 0.25'	E409095-04A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS05 0.25'	E409095-05A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS06 0.25'	E409095-06A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS07 0.25'	E409095-07A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS08 0.25'	E409095-08A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS09 0.25'	E409095-09A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS10 0.25'	E409095-10A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS11 0.25'	E409095-11A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS12 0.25'	E409095-12A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS13 0.25'	E409095-13A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS14 0.25'	E409095-14A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS15 0.25'	E409095-15A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS16 0.25'	E409095-16A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS17 0.25'	E409095-17A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS18 0.25'	E409095-18A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS19 0.25'	E409095-19A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS20 0.25'	E409095-20A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS01 0.25'

E409095-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		90.1 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		96.7 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>		75.7 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:07:22AM
--	--	----------------------------------

FS02 0.25'  
E409095-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	90.6 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	96.7 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	75.9 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS03 0.25'

E409095-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	89.3 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	96.3 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	76.5 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	





Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:07:22AM
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FS04 0.25'  
E409095-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID	90.2 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.3 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane	79.8 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS05 0.25'

E409095-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	91.3 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	96.2 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437090
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	77.9 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2437099
Chloride	ND	20.0	1	09/16/24	09/16/24	



Sample Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	<b>Reported:</b> 9/18/2024 8:07:22AM
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	

FS06 0.25'  
E409095-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	89.2 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	93.9 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	73.6 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS07 0.25'

E409095-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	90.5 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.0 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437090
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	72.0 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2437099
Chloride	119	20.0	1	09/16/24	09/16/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS08 0.25'

E409095-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	91.0 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.3 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437090
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	75.7 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2437099
Chloride	413	20.0	1	09/16/24	09/16/24	



Sample Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	<b>Reported:</b> 9/18/2024 8:07:22AM
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	

FS09 0.25'  
E409095-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	90.7 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.1 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	153 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	





## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS10 0.25'

E409095-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	88.6 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.7 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437090
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	76.5 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2437099
Chloride	ND	20.0	1	09/16/24	09/16/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS11 0.25'

E409095-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	89.2 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.8 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437090
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	81.0 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2437099
Chloride	21.6	20.0	1	09/16/24	09/16/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:07:22AM
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FS12 0.25'  
E409095-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	90.1 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.5 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	79.3 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS13 0.25'

E409095-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	89.5 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.5 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437090
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	79.7 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2437099
Chloride	ND	20.0	1	09/16/24	09/16/24	



Sample Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported: 9/18/2024 8:07:22AM
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	

FS14 0.25'  
E409095-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID	90.1 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	96.0 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane	82.3 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS15 0.25'

E409095-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	87.9 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.2 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	79.7 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	





## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:07:22AM

FS16 0.25'

E409095-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	88.9 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: CG		Batch: 2437076
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.5 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437090
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	83.2 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2437099
Chloride	ND	20.0	1	09/16/24	09/16/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:07:22AM
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FS17 0.25'  
E409095-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID	88.9 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.6 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane	77.3 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	



Sample Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	<b>Reported:</b> 9/18/2024 8:07:22AM
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	

FS18 0.25'  
E409095-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID	89.2 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.7 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane	85.1 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	110	20.0	1	09/16/24	09/16/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:07:22AM
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FS19 0.25'  
E409095-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	87.9 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.1 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	75.8 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	171	20.0	1	09/16/24	09/16/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:07:22AM
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FS20 0.25'  
E409095-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	86.6 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: CG		Batch: 2437076	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	96.2 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2437090	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	86.7 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: JM		Batch: 2437099	
Chloride	ND	20.0	1	09/16/24	09/16/24	



QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 8:07:22AM

Volatile Organics by EPA 8021B

Analyst: CG

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 (2437076-BLK1) Prepared: 09/13/24 Analyzed: 09/14/24

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	7.18		8.00		89.7	70-130			

LCS (2437076-BS1) Prepared: 09/13/24 Analyzed: 09/14/24

Benzene	4.73	0.0250	5.00		94.5	70-130			
Ethylbenzene	4.51	0.0250	5.00		90.2	70-130			
Toluene	4.63	0.0250	5.00		92.6	70-130			
o-Xylene	4.48	0.0250	5.00		89.7	70-130			
p,m-Xylene	9.15	0.0500	10.0		91.5	70-130			
Total Xylenes	13.6	0.0250	15.0		90.9	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.19		8.00		89.9	70-130			

Matrix Spike (2437076-MS1) Source: E409095-10 Prepared: 09/13/24 Analyzed: 09/14/24

Benzene	4.60	0.0250	5.00	ND	92.0	54-133			
Ethylbenzene	4.39	0.0250	5.00	ND	87.9	61-133			
Toluene	4.51	0.0250	5.00	ND	90.3	61-130			
o-Xylene	4.36	0.0250	5.00	ND	87.3	63-131			
p,m-Xylene	8.91	0.0500	10.0	ND	89.1	63-131			
Total Xylenes	13.3	0.0250	15.0	ND	88.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.17		8.00		89.6	70-130			

Matrix Spike Dup (2437076-MSD1) Source: E409095-10 Prepared: 09/13/24 Analyzed: 09/14/24

Benzene	4.87	0.0250	5.00	ND	97.3	54-133	5.58	20	
Ethylbenzene	4.64	0.0250	5.00	ND	92.8	61-133	5.42	20	
Toluene	4.77	0.0250	5.00	ND	95.3	61-130	5.46	20	
o-Xylene	4.60	0.0250	5.00	ND	92.0	63-131	5.25	20	
p,m-Xylene	9.40	0.0500	10.0	ND	94.0	63-131	5.41	20	
Total Xylenes	14.0	0.0250	15.0	ND	93.3	63-131	5.36	20	
Surrogate: 4-Bromochlorobenzene-PID	7.12		8.00		89.0	70-130			





QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 8:07:22AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: CG

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 (2437076-BLK1) Prepared: 09/13/24 Analyzed: 09/14/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.60		8.00		95.0	70-130			

LCS (2437076-BS2) Prepared: 09/13/24 Analyzed: 09/14/24

Gasoline Range Organics (C6-C10)	42.5	20.0	50.0		85.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.69		8.00		96.2	70-130			

Matrix Spike (2437076-MS2) Source: E409095-10 Prepared: 09/13/24 Analyzed: 09/14/24

Gasoline Range Organics (C6-C10)	42.2	20.0	50.0	ND	84.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.61		8.00		95.2	70-130			

Matrix Spike Dup (2437076-MSD2) Source: E409095-10 Prepared: 09/13/24 Analyzed: 09/14/24

Gasoline Range Organics (C6-C10)	41.8	20.0	50.0	ND	83.6	70-130	0.912	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.65		8.00		95.6	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 8:07:22AM

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 (2437090-BLK1) Prepared: 09/13/24 Analyzed: 09/14/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	41.1		50.0		82.2	50-200			

LCS (2437090-BS1) Prepared: 09/13/24 Analyzed: 09/14/24

Diesel Range Organics (C10-C28)	198	25.0	250		79.4	38-132			
Surrogate: n-Nonane	43.3		50.0		86.5	50-200			

Matrix Spike (2437090-MS1) Source: E409095-08 Prepared: 09/13/24 Analyzed: 09/14/24

Diesel Range Organics (C10-C28)	199	25.0	250	ND	79.7	38-132			
Surrogate: n-Nonane	42.4		50.0		84.9	50-200			

Matrix Spike Dup (2437090-MSD1) Source: E409095-08 Prepared: 09/13/24 Analyzed: 09/14/24

Diesel Range Organics (C10-C28)	199	25.0	250	ND	79.4	38-132	0.332	20	
Surrogate: n-Nonane	42.8		50.0		85.6	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 8:07:22AM

Anions by EPA 300.0/9056A

Analyst: JM

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

Blank (2437099-BLK1)					Prepared: 09/16/24 Analyzed: 09/16/24				
Chloride	ND	20.0							
LCS (2437099-BS1)					Prepared: 09/16/24 Analyzed: 09/16/24				
Chloride	253	20.0	250		101	90-110			
Matrix Spike (2437099-MS1)					Source: E409095-15		Prepared: 09/16/24 Analyzed: 09/16/24		
Chloride	271	20.0	250	ND	108	80-120			
Matrix Spike Dup (2437099-MSD1)					Source: E409095-15		Prepared: 09/16/24 Analyzed: 09/16/24		
Chloride	269	20.0	250	ND	108	80-120	0.409	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

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Anna Byers	09/18/24 08:07

- 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: WPX Energy Permian, LLC.					Bill To		Lab Use Only							TAT				EPA Program			
Project: Black Mamba 15 State Com 8H					Attention: Jim Raley		Lab WO#		Job Number					1D	2D	3D	Standard	CWA	SDWA		
Project Manager: Anna Byers					Address: 5315 Buena Vista Dr.		E409095		01058-0007								5 day TAT				
Address: 13000 W County Rd 100					City, State, Zip: Carlsbad, NM, 88220		Analysis and Method														RCRA
City, State, Zip: Odessa, TX, 79765					Phone: 575-885-7502		Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	State						
Phone: 432-305-6415					Email: jim.raley@dv.com										NM	CO	UT	AZ	TX		
Email: Devon-team@etechnv.com					WO: 21206816																
					Incident ID: nJXK1534548184																
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Remarks															
12:30	09.11.24	S	1	FS01	1	0.25'								X							
12:35	09.11.24	S	1	FS02	2	0.25'								X							
12:40	09.11.24	S	1	FS03	3	0.25'								X							
12:45	09.11.24	S	1	FS04	4	0.25'								X							
12:50	09.11.24	S	1	FS05	5	0.25'								X							
12:55	09.11.24	S	1	FS06	6	0.25'								X							
13:00	09.11.24	S	1	FS07	7	0.25'								X							
13:05	09.11.24	S	1	FS08	8	0.25'								X							
13:10	09.11.24	S	1	FS09	9	0.25'								X							
13:15	09.11.24	S	1	FS10	10	0.25'								X							

**Additional Instructions:**

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: HB

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		
<i>[Signature]</i>		09/12/24	06:00	Michelle Gonzales		9-12-24	06:00	Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N		
Michelle Gonzales		9-13-24	02:20	Cathy Mae		9-13-24	7:45	T1 _____ T2 _____ T3 _____		
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	AVG Temp °C <u>4</u>		

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.





Client: WPX Energy Permian, LLC.					<b>Bill To</b>		<b>Lab Use Only</b>						<b>TAT</b>			<b>EPA Program</b>				
Project: Black Mamba 15 State Com 8H					Attention: Jim Raley		Lab WO#		Job Number				1D	2D	3D	Standard	CWA	SDWA		
Project Manager: Anna Byers					Address: 5315 Buena Vista Dr.		E409095		01058-0007							5 day TAT				
Address: 13000 W County Rd 100					City, State, Zip: Carlsbad, NM, 88220		Analysis and Method													RCRA
City, State, Zip: Odessa, TX, 79765					Phone: 575-885-7502		Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	State					
Phone: 432-305-6415					Email: jim.raley@dmv.com										NM	CO	UT	AZ	TX	
Email: Devon-team@etechnv.com					WO: 21206816															
Collected by: Haleigh Blume					Incident ID: nJXK1534548184															
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number											Remarks				
13:20	09.11.24	S	1	FS11	11	0.25'							X							
13:25	09.11.24	S	1	FS12	12	0.25'							X							
13:30	09.11.24	S	1	FS13	13	0.25'							X							
13:35	09.11.24	S	1	FS14	14	0.25'							X							
13:40	09.11.24	S	1	FS15	15	0.25'							X							
13:45	09.11.24	S	1	FS16	16	0.25'							X							
13:50	09.11.24	S	1	FS17	17	0.25'							X							
13:55	09.11.24	S	1	FS18	18	0.25'							X							
14:00	09.11.24	S	1	FS19	19	0.25'							X							
14:10	09.11.24	S	1	FS20	20	0.25'							X							
<b>Additional Instructions:</b>																				
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								
<i>[Signature]</i>		09/12/24		06:00		Michelle Gonzales		9-12-24		0600		Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N								
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time		T1 _____ T2 _____ T3 _____								
Michelle Gonzales		9-13-24		0220		Caita Man		9-13-24		7:45										
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time		AVG Temp °C <u>4</u>								
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: 9/13/2024 9:03:17AM

## 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:	WPX Energy - Carlsbad	Date Received:	09/13/24 07:45	Work Order ID:	E409095
Phone:	(575) 200-6754	Date Logged In:	09/12/24 13:02	Logged In By:	Caitlin Mars
Email:	anna@etechnv.vom	Due Date:	09/19/24 17:00 (4 day TAT)		

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: CouierComments/Resolution

Project Black Mamba 15 State Com 8H  
has been separated into 2 workorders.  
E409095 & E409096.

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 Instruction

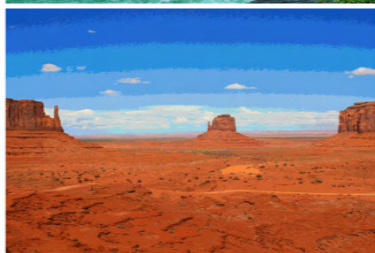
Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Anna Byers



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

WPX Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E409096

Job Number: 01058-0007

Received: 9/13/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
9/18/24

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.  
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Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 9/18/24



Anna Byers  
5315 Buena Vista Dr  
Carlsbad, NM 88220

Project Name: Black Mamba 15 State Com 8H  
Workorder: E409096  
Date Received: 9/13/2024 7:45:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 9/13/2024 7:45:00AM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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  
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Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

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

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## Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name:	Black Mamba 15 State Com 8H	<b>Reported:</b>  09/18/24 08:14
	Project Number:	01058-0007	
	Project Manager:	Anna Byers	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS21 0.25'	E409096-01A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS22 0.25'	E409096-02A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS23 0.25'	E409096-03A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS24 0.25'	E409096-04A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS25 0.25'	E409096-05A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS26 0.25'	E409096-06A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS27 0.25'	E409096-07A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS28 0.25'	E409096-08A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS29 0.25'	E409096-09A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS30 0.25'	E409096-10A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS31 0.25'	E409096-11A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS32 0.25'	E409096-12A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS33 0.25'	E409096-13A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS34 0.25'	E409096-14A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
FS35 0.25'	E409096-15A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.





## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:14:37AM

FS21 0.25'

E409096-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		100 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		93.2 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>		79.9 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/13/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:14:37AM

FS22 0.25'

E409096-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437077
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		101 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437077
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		93.0 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437089
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
		72.4 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437100
Chloride	50.0	20.0	1	09/13/24	09/14/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:14:37AM
--	--	----------------------------------

FS23 0.25'  
E409096-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID		101 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		93.0 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane		79.5 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:14:37AM

FS24 0.25'

E409096-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		101 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		93.6 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
		76.7 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/13/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:14:37AM
--	--	----------------------------------

FS25 0.25'  
E409096-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID	102 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.9 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane	74.3 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:14:37AM

FS26 0.25'

E409096-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		102 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		92.0 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
		76.9 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/14/24	





Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:14:37AM
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FS27 0.25'  
E409096-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID	101 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.6 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane	76.1 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/14/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:14:37AM
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FS28 0.25'  
E409096-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID	102 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.5 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane	74.7 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/14/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:14:37AM
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FS29 0.25'  
E409096-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID		102 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		92.6 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane		74.3 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:14:37AM

FS30 0.25'

E409096-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437077
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		101 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437077
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		93.1 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437089
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
		80.1 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437100
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:14:37AM

FS31 0.25'

E409096-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	99.6 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	93.6 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
	71.6 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	367	20.0	1	09/13/24	09/14/24	



Sample Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	<b>Reported:</b> 9/18/2024 8:14:37AM
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	

FS32 0.25'  
E409096-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID		102 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		92.3 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane		76.8 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/14/24	





## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 8:14:37AM

FS33 0.25'

E409096-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437077
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		100 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437077
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		92.0 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437089
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
		77.6 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437100
Chloride	ND	20.0	1	09/13/24	09/14/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:14:37AM
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FS34 0.25'  
E409096-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
Surrogate: 4-Bromochlorobenzene-PID	102 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.9 %	70-130		09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
Surrogate: n-Nonane	77.0 %	50-200		09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/14/24	



Sample Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:14:37AM
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FS35 0.25'  
E409096-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Benzene	ND	0.0250	1	09/13/24	09/14/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/14/24	
Toluene	ND	0.0250	1	09/13/24	09/14/24	
o-Xylene	ND	0.0250	1	09/13/24	09/14/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/14/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		101 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2437077	
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		92.4 %	70-130	09/13/24	09/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2437089	
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/14/24	
<i>Surrogate: n-Nonane</i>						
		73.3 %	50-200	09/13/24	09/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: DT		Batch: 2437100	
Chloride	ND	20.0	1	09/13/24	09/14/24	

## QC Summary Data

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 9/18/2024 8:14:37AM
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## Volatile Organics by EPA 8021B

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 (2437077-BLK1)

Prepared: 09/13/24 Analyzed: 09/14/24

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	8.01		8.00		100	70-130			

## LCS (2437077-BS1)

Prepared: 09/13/24 Analyzed: 09/14/24

Benzene	5.41	0.0250	5.00		108	70-130			
Ethylbenzene	5.15	0.0250	5.00		103	70-130			
Toluene	5.31	0.0250	5.00		106	70-130			
o-Xylene	5.17	0.0250	5.00		103	70-130			
p,m-Xylene	10.4	0.0500	10.0		104	70-130			
Total Xylenes	15.6	0.0250	15.0		104	70-130			
Surrogate: 4-Bromochlorobenzene-PID	8.12		8.00		102	70-130			

## Matrix Spike (2437077-MS1)

Source: E409096-11

Prepared: 09/13/24 Analyzed: 09/14/24

Benzene	4.99	0.0250	5.00	ND	99.8	54-133			
Ethylbenzene	4.78	0.0250	5.00	ND	95.6	61-133			
Toluene	4.90	0.0250	5.00	ND	97.9	61-130			
o-Xylene	4.78	0.0250	5.00	ND	95.6	63-131			
p,m-Xylene	9.73	0.0500	10.0	ND	97.3	63-131			
Total Xylenes	14.5	0.0250	15.0	ND	96.7	63-131			
Surrogate: 4-Bromochlorobenzene-PID	8.10		8.00		101	70-130			

## Matrix Spike Dup (2437077-MSD1)

Source: E409096-11

Prepared: 09/13/24 Analyzed: 09/16/24

Benzene	5.67	0.0250	5.00	ND	113	54-133	12.8	20	
Ethylbenzene	5.47	0.0250	5.00	ND	109	61-133	13.5	20	
Toluene	5.59	0.0250	5.00	ND	112	61-130	13.3	20	
o-Xylene	5.46	0.0250	5.00	ND	109	63-131	13.2	20	
p,m-Xylene	11.1	0.0500	10.0	ND	111	63-131	13.5	20	
Total Xylenes	16.6	0.0250	15.0	ND	111	63-131	13.4	20	
Surrogate: 4-Bromochlorobenzene-PID	8.04		8.00		101	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 8:14:37AM

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 (2437077-BLK1) Prepared: 09/13/24 Analyzed: 09/14/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.44		8.00		93.1	70-130			

LCS (2437077-BS2) Prepared: 09/13/24 Analyzed: 09/14/24

Gasoline Range Organics (C6-C10)	43.0	20.0	50.0		86.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.61		8.00		95.1	70-130			

Matrix Spike (2437077-MS2) Source: E409096-11 Prepared: 09/13/24 Analyzed: 09/16/24

Gasoline Range Organics (C6-C10)	49.9	20.0	50.0	ND	99.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.61		8.00		95.1	70-130			

Matrix Spike Dup (2437077-MSD2) Source: E409096-11 Prepared: 09/13/24 Analyzed: 09/16/24

Gasoline Range Organics (C6-C10)	46.4	20.0	50.0	ND	92.9	70-130	7.22	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.64		8.00		95.5	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 8:14:37AM

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 (2437089-BLK1) Prepared: 09/13/24 Analyzed: 09/14/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	39.0		50.0		78.0	50-200			

LCS (2437089-BS1) Prepared: 09/13/24 Analyzed: 09/14/24

Diesel Range Organics (C10-C28)	196	25.0	250		78.5	38-132			
Surrogate: n-Nonane	40.9		50.0		81.8	50-200			

Matrix Spike (2437089-MS1) Source: E409096-07 Prepared: 09/13/24 Analyzed: 09/14/24

Diesel Range Organics (C10-C28)	218	25.0	250	ND	87.1	38-132			
Surrogate: n-Nonane	41.9		50.0		83.8	50-200			

Matrix Spike Dup (2437089-MSD1) Source: E409096-07 Prepared: 09/13/24 Analyzed: 09/14/24

Diesel Range Organics (C10-C28)	197	25.0	250	ND	78.9	38-132	9.96	20	
Surrogate: n-Nonane	39.0		50.0		78.0	50-200			





QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 8:14:37AM

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 (2437100-BLK1)					Prepared: 09/13/24 Analyzed: 09/13/24				
Chloride	ND	20.0							
LCS (2437100-BS1)					Prepared: 09/13/24 Analyzed: 09/13/24				
Chloride	253	20.0	250		101	90-110			
Matrix Spike (2437100-MS1)					Source: E409096-04		Prepared: 09/13/24 Analyzed: 09/13/24		
Chloride	254	20.0	250	ND	102	80-120			
Matrix Spike Dup (2437100-MSD1)					Source: E409096-04		Prepared: 09/13/24 Analyzed: 09/13/24		
Chloride	255	20.0	250	ND	102	80-120	0.0848	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

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Anna Byers	09/18/24 08:14

- 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: WPX Energy Permian, LLC.					Bill To		Lab Use Only						TAT				EPA Program		
Project: Black Mamba 15 State Com 8H					Attention: Jim Raley		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA			
Project Manager: Anna Byers					Address: 5315 Buena Vista Dr.		E4090916		010580007					5 day TAT					
Address: 13000 W County Rd 100					City, State, Zip: Carlsbad, NM, 88220		Analysis and Method												RCRA
City, State, Zip: Odessa, TX, 79765					Phone: 575-885-7502		Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	State				
Phone: 432-305-6415					Email: jim.raley@dmv.com										NM	CO	UT	AZ	TX
Email: Devon-team@etechnv.com					WO: 21206816														
					Incident ID: NJXK1534548184														
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Remarks													
14:25	09.11.24	S	1	FS21	1	0.25'							X						
14:45	09.11.24	S	1	FS22	2	0.25'							X						
14:50	09.11.24	S	1	FS23	3	0.25'							X						
14:55	09.11.24	S	1	FS24	4	0.25'							X						
15:00	09.11.24	S	1	FS25	5	0.25'							X						
15:05	09.11.24	S	1	FS26	6	0.25'							X						
15:10	09.11.24	S	1	FS27	7	0.25'							X						
15:15	09.11.24	S	1	FS28	8	0.25'							X						
15:20	09.11.24	S	1	FS29	9	0.25'							X						
15:25	09.11.24	S	1	FS30	10	0.25'							X						

Additional Instructions:									
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: HB									
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only	
<i>[Signature]</i>		09/11/24	06:00	Michelle Gonzales		9-12-24	06:00	Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N	
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 T2 T3	
Michelle Gonzales		9-13-24	02:20	Cathy Man		9-13-24	7:45		
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	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.									





Released to Imaging: 3/17/2025 12:26:23 PM

Received by OCD: 2/17/2025 12:17:55 PM

Client: WPX Energy Permian, LLC.				Bill To		Lab Use Only						TAT			EPA Program			
Project: Black Mamba 15 State Com 8H				Attention: Jim Raley		Lab WO#		Job Number				1D	2D	3D	Standard	CWA	SDWA	
Project Manager: Anna Byers				Address: 5315 Buena Vista Dr.		E409096		0058-0007							5 day TAT			
Address: 13000 W County Rd 100				City, State, Zip: Carlsbad, NM, 88220		Analysis and Method												RCRA
City, State, Zip: Odessa, TX, 79765				Phone: 575-885-7502		Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	State				
Phone: 432-305-6415				Email: jim.raley@dmv.com										NM	CO	UT	AZ	TX
Email: Devon-team@etechnv.com				WO: 21206816														
				Incident ID: nJXK1534548184														
Collected by: Haleigh Blume																	Remarks	
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number													
15:35	09.11.24	S	1	FS31	11	0.25'								X				
15:40	09.11.24	S	1	FS32	12	0.25'								X				
15:45	09.11.24	S	1	FS33	13	0.25'								X				
15:50	09.11.24	S	1	FS34	14	0.25'								X				
15:55	09.11.24	S	1	FS35	15	0.25'								X				
Additional Instructions:																		
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: HB																		
Relinquished by: (Signature) Haleigh Blume						Received by: (Signature) Michelle Gonzales						Lab Use Only						
Date: 09/11/24 Time: 20:10						Date: 9-12-24 Time: 0600						Received on ice: (Y) / N						
Relinquished by: (Signature) Michelle Gonzales						Received by: (Signature) Contz Man						T1 T2 T3						
Date: 9-13-24 Time: 0220						Date: 9-13-24 Time: 7:45						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: 9/13/2024 9:04:05AM

## 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:	WPX Energy - Carlsbad	Date Received:	09/13/24 07:45	Work Order ID:	E409096
Phone:	(575) 200-6754	Date Logged In:	09/12/24 13:04	Logged In By:	Caitlin Mars
Email:	anna@etechnv.vom	Due Date:	09/19/24 17:00 (4 day TAT)		

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: CouierComments/Resolution

Project Black Mamba 15 State Com 8H  
has been separated into 2 workorders.  
E409095 & E409096.

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? No

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

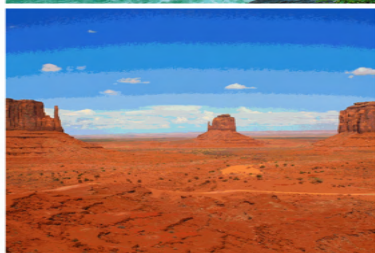
Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Anna Byers



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

WPX Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E409097

Job Number: 01058-0007

Received: 9/13/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
9/18/24

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.  
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Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 9/18/24



Anna Byers  
5315 Buena Vista Dr  
Carlsbad, NM 88220

Project Name: Black Mamba 15 State Com 8H  
Workorder: E409097  
Date Received: 9/13/2024 7:45:00AM

Anna Byers,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 9/13/2024 7:45:00AM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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  
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Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

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

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## Sample Summary

WPX Energy - Carlsbad 5315 Buena Vista Dr Carlsbad NM, 88220	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Anna Byers	Reported: 09/18/24 15:40
--	--	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW01 0.25'	E409097-01A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
SW02 0.25'	E409097-02A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
SW03 0.25'	E409097-03A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
SW04 0.25'	E409097-04A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
SW05 0.25'	E409097-05A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
SW06 0.25'	E409097-06A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
SW07 0.25'	E409097-07A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.
SW08 0.25'	E409097-08A	Soil	09/11/24	09/13/24	Glass Jar, 2 oz.



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 3:40:23PM

**SW01 0.25'**

**E409097-01**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Benzene	ND	0.0250	1	09/13/24	09/16/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/16/24	
Toluene	ND	0.0250	1	09/13/24	09/16/24	
o-Xylene	ND	0.0250	1	09/13/24	09/16/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/16/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/16/24	
<i>Surrogate: Bromofluorobenzene</i>		105 %	70-130	09/13/24	09/16/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.1 %	70-130	09/13/24	09/16/24	
<i>Surrogate: Toluene-d8</i>		106 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/16/24	
<i>Surrogate: Bromofluorobenzene</i>		105 %	70-130	09/13/24	09/16/24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		98.1 %	70-130	09/13/24	09/16/24	
<i>Surrogate: Toluene-d8</i>		106 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437088
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/13/24	
<i>Surrogate: n-Nonane</i>		80.0 %	50-200	09/13/24	09/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437097
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 3:40:23PM

SW02 0.25'

E409097-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Benzene	ND	0.0250	1	09/13/24	09/16/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/16/24	
Toluene	ND	0.0250	1	09/13/24	09/16/24	
o-Xylene	ND	0.0250	1	09/13/24	09/16/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/16/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		103 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		93.1 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		108 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		103 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		93.1 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		108 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437088
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/13/24	
Surrogate: n-Nonane		74.7 %	50-200	09/13/24	09/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437097
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 3:40:23PM

SW03 0.25'

E409097-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Benzene	ND	0.0250	1	09/13/24	09/16/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/16/24	
Toluene	ND	0.0250	1	09/13/24	09/16/24	
o-Xylene	ND	0.0250	1	09/13/24	09/16/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/16/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		102 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		96.3 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		108 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		102 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		96.3 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		108 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437088
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/13/24	
Surrogate: n-Nonane		72.9 %	50-200	09/13/24	09/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437097
Chloride	ND	20.0	1	09/13/24	09/14/24	





## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 3:40:23PM

SW04 0.25'

E409097-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Benzene	ND	0.0250	1	09/13/24	09/16/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/16/24	
Toluene	ND	0.0250	1	09/13/24	09/16/24	
o-Xylene	ND	0.0250	1	09/13/24	09/16/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/16/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		103 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		96.1 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		107 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		103 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		96.1 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		107 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437088
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/13/24	
Surrogate: n-Nonane		70.1 %	50-200	09/13/24	09/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437097
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 3:40:23PM

SW05 0.25'

E409097-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Benzene	ND	0.0250	1	09/13/24	09/16/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/16/24	
Toluene	ND	0.0250	1	09/13/24	09/16/24	
o-Xylene	ND	0.0250	1	09/13/24	09/16/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/16/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		103 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		96.0 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		109 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		103 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		96.0 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		109 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437088
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/13/24	
Surrogate: n-Nonane		75.8 %	50-200	09/13/24	09/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437097
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 3:40:23PM

SW06 0.25'

E409097-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Benzene	ND	0.0250	1	09/13/24	09/16/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/16/24	
Toluene	ND	0.0250	1	09/13/24	09/16/24	
o-Xylene	ND	0.0250	1	09/13/24	09/16/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/16/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		103 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		96.3 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		110 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		103 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		96.3 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		110 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437088
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/13/24	
Surrogate: n-Nonane		73.1 %	50-200	09/13/24	09/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437097
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 3:40:23PM

SW07 0.25'

E409097-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Benzene	ND	0.0250	1	09/13/24	09/16/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/16/24	
Toluene	ND	0.0250	1	09/13/24	09/16/24	
o-Xylene	ND	0.0250	1	09/13/24	09/16/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/16/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		104 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		92.9 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		107 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/16/24	
Surrogate: Bromofluorobenzene		104 %	70-130	09/13/24	09/16/24	
Surrogate: 1,2-Dichloroethane-d4		92.9 %	70-130	09/13/24	09/16/24	
Surrogate: Toluene-d8		107 %	70-130	09/13/24	09/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437088
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/13/24	
Surrogate: n-Nonane		76.9 %	50-200	09/13/24	09/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437097
Chloride	ND	20.0	1	09/13/24	09/14/24	



## Sample Data

WPX Energy - Carlsbad  
5315 Buena Vista Dr  
Carlsbad NM, 88220

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Anna Byers

**Reported:**  
9/18/2024 3:40:23PM

SW08 0.25'

E409097-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Benzene	ND	0.0250	1	09/13/24	09/18/24	
Ethylbenzene	ND	0.0250	1	09/13/24	09/18/24	
Toluene	ND	0.0250	1	09/13/24	09/18/24	
o-Xylene	ND	0.0250	1	09/13/24	09/18/24	
p,m-Xylene	ND	0.0500	1	09/13/24	09/18/24	
Total Xylenes	ND	0.0250	1	09/13/24	09/18/24	
Surrogate: Bromofluorobenzene		101 %	70-130	09/13/24	09/18/24	
Surrogate: 1,2-Dichloroethane-d4		95.9 %	70-130	09/13/24	09/18/24	
Surrogate: Toluene-d8		108 %	70-130	09/13/24	09/18/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2437079
Gasoline Range Organics (C6-C10)	ND	20.0	1	09/13/24	09/18/24	
Surrogate: Bromofluorobenzene		101 %	70-130	09/13/24	09/18/24	
Surrogate: 1,2-Dichloroethane-d4		95.9 %	70-130	09/13/24	09/18/24	
Surrogate: Toluene-d8		108 %	70-130	09/13/24	09/18/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2437088
Diesel Range Organics (C10-C28)	ND	25.0	1	09/13/24	09/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	09/13/24	09/13/24	
Surrogate: n-Nonane		75.5 %	50-200	09/13/24	09/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2437097
Chloride	31.7	20.0	1	09/13/24	09/14/24	



## QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 3:40:23PM

## 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 (2437079-BLK1)

Prepared: 09/13/24 Analyzed: 09/16/24

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	0.525		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.451		0.500		90.1	70-130			
Surrogate: Toluene-d8	0.544		0.500		109	70-130			

## LCS (2437079-BS1)

Prepared: 09/13/24 Analyzed: 09/16/24

Benzene	2.32	0.0250	2.50		92.6	70-130			
Ethylbenzene	2.34	0.0250	2.50		93.7	70-130			
Toluene	2.38	0.0250	2.50		95.2	70-130			
o-Xylene	2.32	0.0250	2.50		92.7	70-130			
p,m-Xylene	4.67	0.0500	5.00		93.3	70-130			
Total Xylenes	6.98	0.0250	7.50		93.1	70-130			
Surrogate: Bromofluorobenzene	0.524		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.479		0.500		95.7	70-130			
Surrogate: Toluene-d8	0.535		0.500		107	70-130			

## Matrix Spike (2437079-MS1)

Source: E409098-04

Prepared: 09/13/24 Analyzed: 09/16/24

Benzene	2.33	0.0250	2.50	ND	93.3	48-131			
Ethylbenzene	2.35	0.0250	2.50	ND	94.1	45-135			
Toluene	2.39	0.0250	2.50	ND	95.6	48-130			
o-Xylene	2.31	0.0250	2.50	ND	92.3	43-135			
p,m-Xylene	4.63	0.0500	5.00	ND	92.6	43-135			
Total Xylenes	6.94	0.0250	7.50	ND	92.5	43-135			
Surrogate: Bromofluorobenzene	0.523		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.464		0.500		92.8	70-130			
Surrogate: Toluene-d8	0.532		0.500		106	70-130			

## Matrix Spike Dup (2437079-MSD1)

Source: E409098-04

Prepared: 09/13/24 Analyzed: 09/16/24

Benzene	2.34	0.0250	2.50	ND	93.6	48-131	0.321	23	
Ethylbenzene	2.36	0.0250	2.50	ND	94.2	45-135	0.0849	27	
Toluene	2.39	0.0250	2.50	ND	95.6	48-130	0.0419	24	
o-Xylene	2.36	0.0250	2.50	ND	94.5	43-135	2.31	27	
p,m-Xylene	4.76	0.0500	5.00	ND	95.2	43-135	2.71	27	
Total Xylenes	7.12	0.0250	7.50	ND	94.9	43-135	2.57	27	
Surrogate: Bromofluorobenzene	0.523		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.472		0.500		94.3	70-130			
Surrogate: Toluene-d8	0.528		0.500		106	70-130			





## QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 3:40:23PM

## 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 (2437079-BLK1)

Prepared: 09/13/24 Analyzed: 09/16/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.525		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.451		0.500		90.1	70-130			
Surrogate: Toluene-d8	0.544		0.500		109	70-130			

## LCS (2437079-BS2)

Prepared: 09/13/24 Analyzed: 09/16/24

Gasoline Range Organics (C6-C10)	53.0	20.0	50.0		106	70-130			
Surrogate: Bromofluorobenzene	0.528		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.467		0.500		93.3	70-130			
Surrogate: Toluene-d8	0.546		0.500		109	70-130			

## Matrix Spike (2437079-MS2)

Source: E409098-04

Prepared: 09/13/24 Analyzed: 09/16/24

Gasoline Range Organics (C6-C10)	51.6	20.0	50.0	ND	103	70-130			
Surrogate: Bromofluorobenzene	0.521		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.477		0.500		95.3	70-130			
Surrogate: Toluene-d8	0.549		0.500		110	70-130			

## Matrix Spike Dup (2437079-MSD2)

Source: E409098-04

Prepared: 09/13/24 Analyzed: 09/16/24

Gasoline Range Organics (C6-C10)	52.5	20.0	50.0	ND	105	70-130	1.63	20	
Surrogate: Bromofluorobenzene	0.523		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.467		0.500		93.3	70-130			
Surrogate: Toluene-d8	0.556		0.500		111	70-130			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 3:40:23PM

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 (2437088-BLK1) Prepared: 09/13/24 Analyzed: 09/13/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	38.7		50.0		77.5	50-200			

LCS (2437088-BS1) Prepared: 09/13/24 Analyzed: 09/13/24

Diesel Range Organics (C10-C28)	193	25.0	250		77.2	38-132			
Surrogate: n-Nonane	39.5		50.0		79.1	50-200			

Matrix Spike (2437088-MS1) Source: E409097-06 Prepared: 09/13/24 Analyzed: 09/13/24

Diesel Range Organics (C10-C28)	204	25.0	250	ND	81.7	38-132			
Surrogate: n-Nonane	40.3		50.0		80.7	50-200			

Matrix Spike Dup (2437088-MSD1) Source: E409097-06 Prepared: 09/13/24 Analyzed: 09/13/24

Diesel Range Organics (C10-C28)	215	25.0	250	ND	85.9	38-132	4.95	20	
Surrogate: n-Nonane	38.4		50.0		76.7	50-200			



QC Summary Data

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
5315 Buena Vista Dr	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Anna Byers	9/18/2024 3:40:23PM

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 (2437097-BLK1)					Prepared: 09/13/24 Analyzed: 09/13/24				
Chloride	ND	20.0							
LCS (2437097-BS1)					Prepared: 09/13/24 Analyzed: 09/13/24				
Chloride	255	20.0	250		102	90-110			
Matrix Spike (2437097-MS1)					Source: E409094-04		Prepared: 09/13/24 Analyzed: 09/14/24		
Chloride	404	40.0	250	149	102	80-120			
Matrix Spike Dup (2437097-MSD1)					Source: E409094-04		Prepared: 09/13/24 Analyzed: 09/14/24		
Chloride	401	40.0	250	149	101	80-120	0.599	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

WPX Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	
5315 Buena Vista Dr	Project Number:	01058-0007	Reported:
Carlsbad NM, 88220	Project Manager:	Anna Byers	09/18/24 15:40

- 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: WPX Energy Permian, LLC.	Bill To	Lab Use Only	TAT	EPA Program										
Project: Black Mamba 15 State Com 8H	Attention: Jim Raley	Lab WO#	1D 2D 3D	CWA SDWA										
Project Manager: Anna Byers	Address: 5315 Buena Vista Dr.	Job Number	Standard											
Address: 13000 W County Rd 100	City, State, Zip: Carlsbad, NM, 88220		5 day TAT											
City, State, Zip: Odessa, TX, 79765	Phone: 575-885-7502	Analysis and Method												
Phone: 432-305-6415	Email: jim.raley@dvn.com	Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	State				
Email: Devon-team@etechnv.com	WO: 21206816									NM	CO	UT	AZ	TX
Incident ID: NJXK1534548184														
Collected by: Haleigh Blume										Remarks				

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	GDOC TX	Remarks
10:30	09.11.24	S	1	SW01	1	0.25'						X		
10:35	09.11.24	S	1	SW02	2	0.25'						X		
10:40	09.11.24	S	1	SW03	3	0.25'						X		
10:45	09.11.24	S	1	SW04	4	0.25'						X		
10:50	09.11.24	S	1	SW05	5	0.25'						X		
10:55	09.11.24	S	1	SW06	6	0.25'						X		
11:00	09.11.24	S	1	SW07	7	0.25'						X		
11:05	09.11.24	S	1	SW08	8	0.25'						X		

Additional Instructions:					
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: HB					
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
<i>[Signature]</i>	09/12/24	06:00	<i>Michelle Gonzales</i>	9-12-24	0600
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
<i>Michelle Gonzales</i>	9-13-24	0220	<i>Cathy Mae</i>	9-13-24	7:45
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
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: 9/13/2024 9:04:52AM

## 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:	WPX Energy - Carlsbad	Date Received:	09/13/24 07:45	Work Order ID:	E409097
Phone:	(575) 200-6754	Date Logged In:	09/12/24 13:06	Logged In By:	Caitlin Mars
Email:	anna@etechnv.vom	Due Date:	09/19/24 17:00 (4 day TAT)		

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: CouierComments/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.

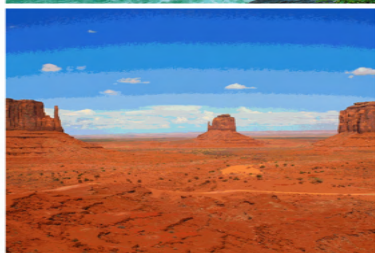
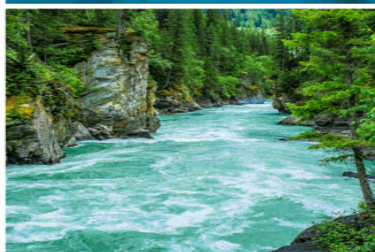
Date



envirotech Inc.



Report to:  
Haleigh Blume



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E411137

Job Number: 01058-0007

Received: 11/14/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
11/15/24

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: 11/15/24



Haleigh Blume  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Black Mamba 15 State Com 8H  
Workorder: E411137  
Date Received: 11/14/2024 8:00:57AM

Haleigh Blume,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 11/14/2024 8:00:57AM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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  
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Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

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

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Sample Summary

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/24 14:30

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
FS01 2'	E411137-01A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.
FS02 2'	E411137-02A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.
FS03 2'	E411137-03A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.
FS04 2'	E411137-04A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.

## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Haleigh Blume

**Reported:**  
11/15/2024 2:30:24PM

FS01 2'

E411137-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		86.0 %	70-130	11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		90.9 %	70-130	11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: AF		Batch: 2446115	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
<i>Surrogate: n-Nonane</i>		112 %	50-200	11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: WF		Batch: 2446112	
Chloride	ND	20.0	1	11/14/24	11/14/24	



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Haleigh Blume

**Reported:**  
11/15/2024 2:30:24PM

FS02 2'

E411137-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	86.4 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.2 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: AF		Batch: 2446115	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
<i>Surrogate: n-Nonane</i>						
	116 %	50-200		11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: WF		Batch: 2446112	
Chloride	ND	20.0	1	11/14/24	11/14/24	





Sample Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported: 11/15/2024 2:30:24PM
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	

FS03 2'

E411137-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
Surrogate: 4-Bromochlorobenzene-PID	87.5 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	89.8 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: AF		Batch: 2446115	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
Surrogate: n-Nonane	110 %	50-200		11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: WF		Batch: 2446112	
Chloride	41.1	20.0	1	11/14/24	11/14/24	



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Haleigh Blume	Reported: 11/15/2024 2:30:24PM
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FS04 2'

E411137-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	86.5 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.4 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: AF		Batch: 2446115	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
<i>Surrogate: n-Nonane</i>						
	112 %	50-200		11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: WF		Batch: 2446112	
Chloride	ND	20.0	1	11/14/24	11/14/24	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/2024 2:30:24PM

Volatile Organics by EPA 8021B

Analyst: SL

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 (2446117-BLK1) Prepared: 11/14/24 Analyzed: 11/14/24

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	7.10		8.00		88.7	70-130			

LCS (2446117-BS1) Prepared: 11/14/24 Analyzed: 11/14/24

Benzene	4.61	0.0250	5.00		92.2	70-130			
Ethylbenzene	4.64	0.0250	5.00		92.8	70-130			
Toluene	4.69	0.0250	5.00		93.7	70-130			
o-Xylene	4.67	0.0250	5.00		93.4	70-130			
p,m-Xylene	9.45	0.0500	10.0		94.5	70-130			
Total Xylenes	14.1	0.0250	15.0		94.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.21		8.00		90.1	70-130			

LCS Dup (2446117-BSD1) Prepared: 11/14/24 Analyzed: 11/14/24

Benzene	4.93	0.0250	5.00		98.6	70-130	6.73	20	
Ethylbenzene	4.98	0.0250	5.00		99.5	70-130	7.04	20	
Toluene	5.01	0.0250	5.00		100	70-130	6.68	20	
o-Xylene	5.00	0.0250	5.00		100	70-130	6.77	20	
p,m-Xylene	10.1	0.0500	10.0		101	70-130	6.89	20	
Total Xylenes	15.1	0.0250	15.0		101	70-130	6.85	20	
Surrogate: 4-Bromochlorobenzene-PID	7.23		8.00		90.4	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/2024 2:30:24PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

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 (2446117-BLK1) Prepared: 11/14/24 Analyzed: 11/14/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.21		8.00		90.1	70-130			

LCS (2446117-BS2) Prepared: 11/14/24 Analyzed: 11/14/24

Gasoline Range Organics (C6-C10)	38.7	20.0	50.0		77.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.27		8.00		90.9	70-130			

LCS Dup (2446117-BSD2) Prepared: 11/14/24 Analyzed: 11/14/24

Gasoline Range Organics (C6-C10)	40.8	20.0	50.0		81.6	70-130	5.27	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.31		8.00		91.4	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/2024 2:30:24PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: AF

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

Blank (2446115-BLK1)					Prepared: 11/14/24 Analyzed: 11/14/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	57.7		50.0		115	50-200			

LCS (2446115-BS1)					Prepared: 11/14/24 Analyzed: 11/14/24				
Diesel Range Organics (C10-C28)	254	25.0	250		102	38-132			
Surrogate: n-Nonane	53.0		50.0		106	50-200			

Matrix Spike (2446115-MS1)					Source: E411137-03		Prepared: 11/14/24 Analyzed: 11/14/24		
Diesel Range Organics (C10-C28)	272	25.0	250	ND	109	38-132			
Surrogate: n-Nonane	56.6		50.0		113	50-200			

Matrix Spike Dup (2446115-MSD1)					Source: E411137-03		Prepared: 11/14/24 Analyzed: 11/15/24		
Diesel Range Organics (C10-C28)	288	25.0	250	ND	115	38-132	5.44	20	
Surrogate: n-Nonane	60.5		50.0		121	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/2024 2:30:24PM

Anions by EPA 300.0/9056A

Analyst: WF

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

Blank (2446112-BLK1)					Prepared: 11/13/24 Analyzed: 11/14/24				
Chloride	ND	20.0							
LCS (2446112-BS1)					Prepared: 11/13/24 Analyzed: 11/14/24				
Chloride	257	20.0	250		103	90-110			
LCS Dup (2446112-BSD1)					Prepared: 11/13/24 Analyzed: 11/14/24				
Chloride	257	20.0	250		103	90-110	0.230	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:	Black Mamba 15 State Com 8H	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/24 14:30

- 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.



## Project Information

## Chain of Custody

Client: Devon Energy				<b>Bill To</b>		<b>Lab Use Only</b>				<b>TAT</b>				<b>EPA Program</b>		
Project: Black Mamba 15 State Com 8H				Attention: Jim Raley		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA	
Project Manager: Haleigh Blume				Address: 5315 Buena Vista Dr.		E411137		0105810007					24 Hr TAT			
Address: 13000 W County Rd 100				City, State, Zip: Carlsbad, NM, 88220		Analysis and Method									RCRA	
City, State, Zip: Odessa, TX, 79765				Phone: 575-885-7502											State	
Phone: 432-305-6415				Email: jim.raley@dmv.com												
Email: Devon-team@etechnv.com				WBS/WO: 21206816												
Collected by: Haleigh Blume				Incident ID: NJKK1534548184												

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC	TX	Remarks
11:00	11.12.24	S	1	FS01	1	0-2'						X		
13:50	11.12.24	S	1	FS02	2	0-2'						X		
14:35	11.12.24	S	1	FS03	3	0-2'						X		
15:25	11.12.24	S	1	FS04	4	0-2'						X		

## Additional Instructions:

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: HB

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>Palish McDermott</i>	Date 11/12/2024	Time	Received by: (Signature) <i>Michelle Gonzales</i>	Date 11-13-24	Time 1140	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 Gonzales</i>	Date 11-13-24	Time 1525	Received by: (Signature) <i>Michelle Gonzales</i>	Date 11-13-24	Time 1630	
Relinquished by: (Signature) <i>Michelle Gonzales</i>	Date 11-13-24	Time 2230	Received by: (Signature) <i>Michelle Gonzales</i>	Date 11-13-24	Time 8:00	

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

## Envirotech Analytical Laboratory

Printed: 11/14/2024 8:51:25AM

## 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	Date Received:	11/14/24 08:00	Work Order ID:	E411137
Phone:	(575) 748-0176	Date Logged In:	11/13/24 14:17	Logged In By:	Caitlin Mars
Email:	devon-team@etechnv.com	Due Date:	11/14/24 17:00 (0 day TAT)		

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? No

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.

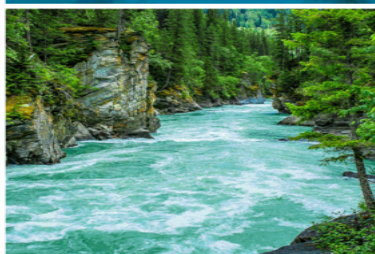




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Report to:  
Haleigh Blume



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Devon Energy - Carlsbad

Project Name: Black Mamba 15 State Com 8H

Work Order: E411138

Job Number: 01058-0007

Received: 11/14/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
11/15/24

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: 11/15/24



Haleigh Blume  
6488 7 Rivers Hwy  
Artesia, NM 88210

Project Name: Black Mamba 15 State Com 8H  
Workorder: E411138  
Date Received: 11/14/2024 8:00:57AM

Haleigh Blume,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 11/14/2024 8:00:57AM, under the Project Name: Black Mamba 15 State Com 8H.

The analytical test results summarized in this report with the Project Name: Black Mamba 15 State Com 8H 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  
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Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

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Sample Summary

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/24 14:32

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW01 0-2'	E411138-01A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.
SW02 0-2'	E411138-02A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.
SW03 0-2'	E411138-03A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.
SW04 0-2'	E411138-04A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.
SW05 0-2'	E411138-05A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.
SW06 0-2'	E411138-06A	Soil	11/12/24	11/14/24	Glass Jar, 2 oz.



## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Haleigh Blume

**Reported:**  
11/15/2024 2:32:05PM

SW01 0-2'

E411138-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		87.3 %	70-130	11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		90.4 %	70-130	11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: AF		Batch: 2446115	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
<i>Surrogate: n-Nonane</i>		114 %	50-200	11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: WF		Batch: 2446112	
Chloride	ND	20.0	1	11/14/24	11/14/24	



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Haleigh Blume	Reported: 11/15/2024 2:32:05PM
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SW02 0-2'  
E411138-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
Surrogate: 4-Bromochlorobenzene-PID	97.9 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.2 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: AF		Batch: 2446115	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
Surrogate: n-Nonane	110 %	50-200		11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: WF		Batch: 2446112	
Chloride	ND	20.0	1	11/14/24	11/14/24	



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Haleigh Blume	Reported: 11/15/2024 2:32:05PM
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SW03 0-2'  
E411138-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
Surrogate: 4-Bromochlorobenzene-PID	98.2 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.1 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: AF		Batch: 2446115	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
Surrogate: n-Nonane	106 %	50-200		11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: WF		Batch: 2446112	
Chloride	163	20.0	1	11/14/24	11/14/24	



Sample Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported: 11/15/2024 2:32:05PM
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	

SW04 0-2'  
E411138-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
Surrogate: 4-Bromochlorobenzene-PID	98.1 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.6 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: AF		Batch: 2446115	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
Surrogate: n-Nonane	114 %	50-200		11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: WF		Batch: 2446112	
Chloride	ND	20.0	1	11/14/24	11/14/24	





## Sample Data

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

Project Name: Black Mamba 15 State Com 8H  
Project Number: 01058-0007  
Project Manager: Haleigh Blume

**Reported:**  
11/15/2024 2:32:05PM

SW05 0-2'

E411138-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2446117
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	98.4 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2446117
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	91.7 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: AF		Batch: 2446115
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
<i>Surrogate: n-Nonane</i>						
	109 %	50-200		11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: WF		Batch: 2446112
Chloride	ND	20.0	1	11/14/24	11/14/24	



Sample Data

Devon Energy - Carlsbad 6488 7 Rivers Hwy Artesia NM, 88210	Project Name: Black Mamba 15 State Com 8H Project Number: 01058-0007 Project Manager: Haleigh Blume	Reported: 11/15/2024 2:32:05PM
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SW06 0-2'  
E411138-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Benzene	ND	0.0250	1	11/14/24	11/14/24	
Ethylbenzene	ND	0.0250	1	11/14/24	11/14/24	
Toluene	ND	0.0250	1	11/14/24	11/14/24	
o-Xylene	ND	0.0250	1	11/14/24	11/14/24	
p,m-Xylene	ND	0.0500	1	11/14/24	11/14/24	
Total Xylenes	ND	0.0250	1	11/14/24	11/14/24	
Surrogate: 4-Bromochlorobenzene-PID	98.6 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: SL		Batch: 2446117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/14/24	11/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	91.6 %	70-130		11/14/24	11/14/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: AF		Batch: 2446115	
Diesel Range Organics (C10-C28)	ND	25.0	1	11/14/24	11/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	11/14/24	11/14/24	
Surrogate: n-Nonane	108 %	50-200		11/14/24	11/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: WF		Batch: 2446112	
Chloride	ND	20.0	1	11/14/24	11/14/24	



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/2024 2:32:05PM

Volatile Organics by EPA 8021B

Analyst: SL

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

Blank (2446117-BLK1)

Prepared: 11/14/24 Analyzed: 11/14/24

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	7.10		8.00		88.7	70-130			

LCS (2446117-BS1)

Prepared: 11/14/24 Analyzed: 11/14/24

Benzene	4.61	0.0250	5.00		92.2	70-130			
Ethylbenzene	4.64	0.0250	5.00		92.8	70-130			
Toluene	4.69	0.0250	5.00		93.7	70-130			
o-Xylene	4.67	0.0250	5.00		93.4	70-130			
p,m-Xylene	9.45	0.0500	10.0		94.5	70-130			
Total Xylenes	14.1	0.0250	15.0		94.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.21		8.00		90.1	70-130			

LCS Dup (2446117-BSD1)

Prepared: 11/14/24 Analyzed: 11/14/24

Benzene	4.93	0.0250	5.00		98.6	70-130	6.73	20	
Ethylbenzene	4.98	0.0250	5.00		99.5	70-130	7.04	20	
Toluene	5.01	0.0250	5.00		100	70-130	6.68	20	
o-Xylene	5.00	0.0250	5.00		100	70-130	6.77	20	
p,m-Xylene	10.1	0.0500	10.0		101	70-130	6.89	20	
Total Xylenes	15.1	0.0250	15.0		101	70-130	6.85	20	
Surrogate: 4-Bromochlorobenzene-PID	7.23		8.00		90.4	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/2024 2:32:05PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

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 (2446117-BLK1) Prepared: 11/14/24 Analyzed: 11/14/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.21		8.00		90.1	70-130			

LCS (2446117-BS2) Prepared: 11/14/24 Analyzed: 11/14/24

Gasoline Range Organics (C6-C10)	38.7	20.0	50.0		77.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.27		8.00		90.9	70-130			

LCS Dup (2446117-BSD2) Prepared: 11/14/24 Analyzed: 11/14/24

Gasoline Range Organics (C6-C10)	40.8	20.0	50.0		81.6	70-130	5.27	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.31		8.00		91.4	70-130			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/2024 2:32:05PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: AF

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 (2446115-BLK1)					Prepared: 11/14/24 Analyzed: 11/14/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	57.7		50.0		115	50-200			

LCS (2446115-BS1)					Prepared: 11/14/24 Analyzed: 11/14/24				
Diesel Range Organics (C10-C28)	254	25.0	250		102	38-132			
Surrogate: n-Nonane	53.0		50.0		106	50-200			

Matrix Spike (2446115-MS1)					Source: E411137-03		Prepared: 11/14/24 Analyzed: 11/14/24		
Diesel Range Organics (C10-C28)	272	25.0	250	ND	109	38-132			
Surrogate: n-Nonane	56.6		50.0		113	50-200			

Matrix Spike Dup (2446115-MSD1)					Source: E411137-03		Prepared: 11/14/24 Analyzed: 11/15/24		
Diesel Range Organics (C10-C28)	288	25.0	250	ND	115	38-132	5.44	20	
Surrogate: n-Nonane	60.5		50.0		121	50-200			



QC Summary Data

Devon Energy - Carlsbad	Project Name:	Black Mamba 15 State Com 8H	Reported:
6488 7 Rivers Hwy	Project Number:	01058-0007	
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/2024 2:32:05PM

Anions by EPA 300.0/9056A

Analyst: WF

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

Blank (2446112-BLK1)					Prepared: 11/13/24 Analyzed: 11/14/24				
Chloride	ND	20.0							
LCS (2446112-BS1)					Prepared: 11/13/24 Analyzed: 11/14/24				
Chloride	257	20.0	250		103	90-110			
LCS Dup (2446112-BSD1)					Prepared: 11/13/24 Analyzed: 11/14/24				
Chloride	257	20.0	250		103	90-110	0.230	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:	Black Mamba 15 State Com 8H	
6488 7 Rivers Hwy	Project Number:	01058-0007	Reported:
Artesia NM, 88210	Project Manager:	Haleigh Blume	11/15/24 14:32

- 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.

## Project Information

## Chain of Custody

Page 1 of 1

Client: Devon Energy				Bill To		Lab Use Only				TAT				EPA Program				
Project: Black Mamba 15 State Com 8H				Attention: Jim Raley		Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA			
Project Manager: Haleigh Blume				Address: 5315 Buena Vista Dr.		E 4111 38		01058-0007					24 Hr TAT					
Address: 13000 W County Rd 100				City, State, Zip: Carlsbad, NM, 88220		Analysis and Method								RCRA				
City, State, Zip: Odessa, TX, 79765				Phone: 575-885-7502		Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0		BGDOC	TX	GDOC	Remarks		
Phone: 432-305-6415				Email: jim.raley@dvn.com													State	
Email: Devon-team@etechnv.com				WBS/WO: 21206816													NM	CO
Collected by: Haleigh Blume				Incident ID: NJKK1534548184														

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Depth (ft.)	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0		BGDOC	TX	GDOC	Remarks
11:05	11.12.24	S	1	SW01	1	0-2'							X			
11:10	11.12.24	S	1	SW02	2	0-2'							X			
13:55	11.12.24	S	1	SW03	3	0-2'							X			
14:40	11.12.24	S	1	SW04	4	0-2'							X			
15:30	11.12.24	S	1	SW05	5	0-2'							X			
15:35	11.12.24	S	1	SW06	6	0-2'							X			

## Additional Instructions:

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: HB

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 Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Haleigh Blume	11/12/2024		Michelle Gonzales	11-13-24	1140	
Michelle Gonzales	11-13-24	1525	Andrew Hesse	11-13-24	1630	
Andrew Hesse	11-13-24	2230	Cathy Tran	11-15-24	8:00	

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

## Envirotech Analytical Laboratory

Printed: 11/14/2024 8:59:52AM

## 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	Date Received:	11/14/24 08:00	Work Order ID:	E411138
Phone:	(575) 748-0176	Date Logged In:	11/13/24 14:21	Logged In By:	Caitlin Mars
Email:	devon-team@etechnv.com	Due Date:	11/14/24 17:00 (0 day TAT)		

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? No

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.

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# APPENDIX I

## NMSLO SANDY LOAM SITE SEED MIXTURE

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P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213



**NMSLO Seed Mix****Sandy Loam (SL)****SANDY LOAM (SL) SITES SEED MIXTURE:**

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
<b>Grasses:</b>			
Galleta grass	Viva, VNS, So.	2.5	F
Little bluestem	Cimmaron, Pastura	2.5	F
Blue grama	Hachita, Lovington	2.0	D
Sideoats grama	Vaughn, El Reno	2.0	F
Sand dropseed	VNS, Southern	1.0	S
<b>Forbs:</b>			
Indian blanketflower	VNS, Southern	1.0	D
Parry penstemon	VNS, Southern	1.0	D
Blue flax	Appar	1.0	D
Desert globemallow	VNS, Southern	1.0	D
<b>Shrubs:</b>			
Fourwing saltbush	VNS, Southern	2.0	D
Common winterfat	VNS, Southern	1.0	F
Apache plume	VNS, Southern	0.75	F
<b>Total PLS/acre</b>		<b>17.75</b>	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box

- VNS, Southern – No Variety Stated, seed should be from a southern latitude collection of this species.
- Double above seed rates for broadcast or hydroseeding.
- If Parry penstemon is not available, substitute firecracker penstemon.
- If desert globemallow is not available, substitute scarlet globemallow or Nelson globemallow.
- If a species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.



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## APPENDIX J

### HoldAll® Operating Manual

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P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213





**HoldAll®**  
Decorative Plant Accessories

**40 TESTS**  
**DIRECTIONS INSIDE**

# SOIL TEST KIT



**Plants & Flowers**



**Grasses & Lawns**



**Fruits & Veggies**



**Trees & Shrubs**

**757860**



**HoldAll®**  
Decorative Plant Accessories

**757860**

# SOIL TEST KIT

**Tests Your Soil for a Healthy Garden**

• pH • Nitrogen(N) • Phosphorus(P) • Potassium(K) •

## PREPARING YOUR SOIL SAMPLES

For lawns, annuals or house plants, take the soil sample from about 2-3" below the surface. For perennials especially shrubs, vegetables and fruit, the sample should be from 4" deep.

Avoid touching the soil with your hands. Test different areas of your soil, as it may differ according to past cultivation, underlying soil differences or a localized condition. It is preferable to make individual tests on several samples from different areas, than to mix the samples together.

Place your soil sample into a clean container. Break the sample up with the trowel or spoon and allow it to dry out naturally. This is not essential, however it makes working with the sample easier. Remove any small stones, organic material such as grass, weeds or roots and hard particles of lime. Then crumble the sample finely and mix it thoroughly.



HOW TO TEST YOUR SOIL:

Tube caps and capsules are color-coded for simplicity:

Green = pH                      Purple = Nitrogen  
Blue = Phosphorus          Orange = Potash

pH TEST:

- 1. Remove cap from the green capped tube.
  - 2. Fill tube with soil to the first line.
  - 3. Carefully open a green capsule and pour powder into the tube.
  - 4. Add water (preferably distilled) to the fourth line.
  - 5. Cap tube and shake thoroughly.
  - 6. Allow soil to settle and color to develop for about a minute.
  - 7. Compare color of solution to the pH color chart.
- Repeat for remaining capsules.



pH 7.5 - Alkaline

pH 7.0 - Neutral

pH 6.5 - Slight A

pH 6.0 - Acid

pH 5.5 - Acid

pH 5.0 - Very Acid

pH 4.5 - Very Acid

NITROGEN, PHOSPHORUS & POTASH TESTS:

Fill a clean jar or can with 1 part soil and 5 parts water. Thoroughly shake or stir the soil and water together for at least one minute and then allow the mixture to stand undisturbed until it settles (30 minutes to 24 hours, dependent on soil). A fine clay soil will take much longer to settle out than a coarse sandy soil. The clarity of the solution will also vary, the clearer the better, however cloudiness will not affect the accuracy of the test.

PLANT FOOD CHART		
Nitrogen	Phosphorous	Potash
High	High	High
Medium	Medium	Medium
Low	Low	Low
Very Low	Very Low	Very Low

- 1. Remove the cap from the tube. (Please note that the color of the capsules should match the color of the tube cap.) Using dropper provided, fill the tube to the fourth line with liquid from your soil mixture. Avoid disturbing the sediment
- 2. Carefully separate the two halves of one of the capsules. Pour the powder into the tube.
- 3. Cap the tube and shake thoroughly. Allow color to develop for 10 minutes.
- 4. Compare color of solution to the appropriate portion of the plant food color chart. For best results allow daylight, not direct sunlight, to illuminate the solution. Note your results. Repeat for remaining capsules.

TO RAISE OR LOWER pH OF YOUR SOIL

Raising and lowering pH is not an exact science & most plants have a reasonably wide tolerance, certainly to within 1 pH point. Consult the pH Preference List and you will see that the majority can manage well on a pH around 6.5 but some need an alkaline soil

and some a particularly acid soil. Altering pH takes time so do not expect rapid changes; rather, work steadily towards giving a plant its ideal conditions.

ADJUSTING pH

pH can be adjusted to provide more suitable growing conditions for the different plants you wish to grow. Or, you can leave the pH of the soil as it is and select plants that like the level revealed by your test. Once you have your pH reading, check the pH Preference List for the pH levels of over 450 popular plants, trees, shrubs, vegetables and fruits. If your pH reading differs significantly from the list's recommended levels, follow instructions below for adjusting soil pH. You can correct pH at any time of the year but it

is best to start in the Fall and check progress in the Spring. After working to adjust your soil, retest for pH level in 40-60 days. If results are still significantly off, retreat your soil, not exceeding recommended application levels. Allow one month to pass between adding lime and adding fertilizers.

SOIL TYPES

Sandy Soils: A light, coarse soil comprised of crumbling and alluvial debris.  
Loam Soils: A medium friable soil, consisting of a blend of coarse (sand) alluvium and fine (clay) particles mixed within fairly broad limits with a little lime and humus.  
Clay Soils: A heavy, clinging, impermeable

soil, comprised of very fine particles with little lime and humus and tending to be waterlogged in winter and very dry in summer.

ADJUSTING SOIL pH - HOW MUCH TO APPLY

Material	phChange	Sandy	Loamy	Clay
Dolomitic or Calcic Limestone	+0.5 unit (0.5 pH)	2.5	2.5	2.5
	+1.0 unit (1.0 pH)	5.0	5.0	5.0
Hydrated Lime	+0.5 unit (0.5 pH)	1.25 - 2.0	1.25 - 2.0	1.25 - 2.0
	+1.0 unit (1.0 pH)	3.5 - 4.0	3.5 - 4.0	3.5 - 4.0
Iron Sulfate	-0.5 unit (0.5 pH)	0.75	0.75	0.75
	-1.0 unit (1.0 pH)	1.5	1.5	1.5
Aluminum Sulfate	-0.5 unit (0.5 pH)	0.5 - 0.75	0.5 - 0.75	0.5 - 0.75
	-1.0 unit (1.0 pH)	1 - 1.25	1 - 1.25	1 - 1.25

Amounts listed are pounds per 100 square feet. Do not add more than 5lbs. of lime or sulfur in one application.



## FERTILIZER RECOMMENDATIONS

### FEEDING PRIOR TO PLANTING

Adequate reserves of plant food should be available in the soil before planting vegetables, preparing a seed or flower bed, sodding or seeding a lawn, or planting shrubs and trees. To make up any deficiencies, apply fertilizers from the following chart according to your soil test result.

TEST RESULTS	Very Low	Low	Medium	High
<b>Nitrogen Fertilizers (%N)</b>				
Dried Blood (11%)	36	19	6	N/A
Nitrate of Soda (16%)	27	14	3	N/A
<b>Phosphate Fertilizers (%P)</b>				
Bone Meal (19%)	27	14	6	N/A
Triple Superphosphate (46%)	10.25	5.25-5.5	2.25	N/A
<b>Potash Fertilizers (%K)</b>				
Muriate of Potash (60%)	8.75-9	4.75-5	2.25-2.5	N/A

Amounts listed are ounces per 100 square feet. (Ounces referred to are by weight)

### FEEDING ESTABLISHED PLANTS AND BEDS

Based on your test results, apply the appropriate fertilizer(s) in the amounts recommended in the following chart.

### RECOMMENDATIONS FOR N, P AND K RESULTS

	Very Low			Low			Medium		
	N	P	K	N	P	K	N	P	K
Lawn	22.0-22.5	0.75-1.0	4.75-5.0	14.0-14.5	1.0-1.5	2.25-2.5	3.75-4.0	0	0
Fruit	14.0-14.5	6.5	13.5-14.0	7.75-8.0	4.0-4.25	8.75-9.0	3.75-4.0	2.25	4.75-5.0
Flower	14.0-14.25	6.5	13.5-14.0	7.75-8.0	4.0-4.25	8.75-9.0	3.75-4.0	2.25	4.75-5.0
Shrubs (flowering)	14.0-14.25	8.25-8.5	13.5-14.0	7.75-8.0	4.0-4.25	8.75-9.0	3.75-4.0	1.0-1.25	4.75-5.0
Shrubs (foliage)	22.0-22.5	10.5-10.75	8.75-9.0	14.0-14.5	5.25-5.5	4.75-5.0	3.75-4.0	2.25	2.25-2.5
Veggies (root)	14.0-14.25	12.0-12.25	8.75-9.0	14.0-14.5	5.25-5.5	4.75-5.0	3.75-4.0	3.0	2.25-2.5
Veggies (leafy)	28.25-29.0	10.25	8.75-9.0	14.0-14.5	5.25-5.5	4.75-5.0	7.75-8.0	2.25	2.25-2.5
Tree	14.0-14.5	10.25	8.75-9.0	7.75-8.0	5.25-5.5	4.75-5.0	3.75-4.0	2.25	2.25-2.5
General Feed	22.0-22.5	8.25-8.5	8.75-9.0	10.5-11.0	4.0-4.25	4.75-5.0	3.75-4.0	1.0-1.25	2.25-2.5

	High		
	N	P	K
Lawn	N/A	N/A	N/A
Fruit	N/A	N/A	N/A
Flower	N/A	N/A	N/A
Shrubs (flowering)	N/A	N/A	N/A
Shrubs (foliage)	N/A	N/A	N/A
Veggies (root)	N/A	N/A	N/A
Veggies (leafy)	N/A	N/A	N/A
Tree	N/A	N/A	N/A
General Feed	N/A	N/A	N/A

The recommendations are based on the following fertilizers sources: Nitrate of Soda (16% N), Triple Superphosphate (46% P<sub>2</sub>O<sub>5</sub>) and Muriate of Potassium (60% K<sub>2</sub>O). The amounts listed are in oz. /100 sq. ft. (Ounces referred to are by weight, not volume.) If you wish to use other fertilizer, simply check the package for the percentage of nutrients for N, P, & K and adjust the application level accordingly.

### SPECIAL RECOMMENDATIONS FOR LAWNS

For a new lawn, pay special attention to soil preparation before planting. Proper soil preparation for any size lawn will have a significant impact on the amount of water and care it demands in the future. Till the soil to a depth of at least 12" and incorporate plenty of organic material (9" or more). Test your soil for pH and adjust to the levels recommended on pH Preference List for your type of grass. Refer to the Adjusting Soil pH chart for recommended lime or sulfate applications.

For established lawns, Nitrogen is the most essential nutrient to promote lush growth and deep, green color. Phosphorus and Potassium, in lesser quantities, are also important for strong root formation and growth. Compound fertilizers will supply all 3 nutrients, or you can select an individual fertilizer, such as Nitrate of Soda. The following chart gives recommended application levels specifically for lawns, based on your Nitrogen soil test results.

### RECOMMENDATIONS FOR LAWNS

Fertilizer Type	Very Low	Low
24-4-4	4.0 lbs.	2.0 lbs.
24-3-4	3.1 lbs.	1.55 lbs.
30-4-4	3.0 lbs.	1.5 lbs.

	Medium	High
24-4-4	1.0 lbs.	N/A
24-3-4	.77 lbs.	N/A
30-4-4	.75 lbs.	N/A

Amounts listed are pounds per 1000 square feet.

### SAFETY & HYGIENE

Dispose of test solutions by rinsing down the sink. Empty gelatin capsules should be disposed of immediately with household waste. Wash the test tubes and caps in warm, soapy water immediately after each use. Make sure any sediment or color staining is removed. Rinse well and dry. Each bag of capsules should be stored inside the blister. Fit the caps on each test tube. Place all components back into the package. The blister pack has been specially designed to be reused as a storage container.

Store your kit in clean, dry conditions, indoors. The powders are safe in normal domestic terms but like all chemicals and pharmaceuticals, they should be put away and kept out of reach of children. Try to avoid touching the powders. Always wash your hands thoroughly after making your tests. Do not eat, drink or smoke while using the soil test kit. Keep powders away from food, drink and animal feed. If taken internally, drink copious amounts of water and seek medical advice.

### CAUTIONS

Where a lot of fertilizer is needed to correct one plant food, divide the applications over several weeks. Do not add lime and fertilizer together; lime first. Allow at least one month to pass before applying fertilizer. Retest 30 days after applying fertilizer.



# HoldAll®

Decorative Plant Accessories

## Plant pH Preference List

NAME	pH	NAME	pH	NAME	pH	NAME	pH	NAME	pH
FRUIT		VEGETABLES AND HERBS		HOUSE and GREENHOUSE PLANTS		FLOWERS, TREES AND SHRUBS		FLOWERS, TREES AND SHRUBS	
APPLE	5.0 - 6.5	SAGE	5.5 - 6.5	GENISTA	6.5 - 7.5	ASPERULA	6.0 - 8.0	LAUREL	6.5 - 7.5
APRICOT	6.0 - 7.0	SHALLOT	5.5 - 7.0	GERANIUM	6.0 - 8.0	ASPHODOLINE	6.0 - 8.0	LAVENDER	6.5 - 7.5
AVOCADO	6.0 - 7.5	SORGHUM	5.5 - 7.5	GLOXINIA	5.5 - 6.5	ASTER	5.5 - 7.5	LIATRIS	5.5 - 7.5
BANANA	5.0 - 7.0	SOYBEAN	5.5 - 6.5	GRAPE IVY	5.0 - 6.5	AUBRITA	6.0 - 7.5	LIGUSTRUM	5.0 - 7.5
BLACKBERRY	5.0 - 6.0	SPEARMINT	5.5 - 7.5	GRAPE HYACINTH	6.0 - 7.5	AZALEA	4.5 - 6.0	LILAC	6.0 - 7.5
BLUEBERRY	4.0 - 6.0	SPINACH	6.0 - 7.5	GREVILLEA	5.5 - 6.5	BALLOON FLOWER	6.0 - 6.5	LILY OF THE VALLEY	4.5 - 6.0
CANTALOUPE	6.5 - 7.5	SWEDE	5.0 - 7.0	GYNURA	5.5 - 6.5	BAYBERRY	4.0 - 6.0	LITHOSPERMUM	5.0 - 6.5
CHERRY	6.0 - 7.5	THYME	5.5 - 7.0	HEDERA (IVY)	6.0 - 8.0	BERGENIA	6.0 - 7.5	LOBELIA	6.5 - 7.5
CRANBERRY	5.5 - 6.5	TOMATO	5.5 - 7.5	HELIOTROPIUM	5.0 - 6.0	BLEEDING HEART	6.0 - 7.5	LUPINUS	5.5 - 7.0
CURRENT: Black	6.0 - 8.0	TURNIP	5.5 - 7.0	HENS AND CHICKENS	6.0 - 7.0	BLUEBELL	6.0 - 7.6	MAGNOLIA	5.0 - 6.0
Red	5.5 - 7.0	WATER CRESS	6.0 - 8.0	HERRINGBONE PLANT	6.0 - 6.0	BROOM	5.0 - 6.0	MAHONIA	6.0 - 7.0
White	6.0 - 8.0	HOUSE and GREENHOUSE PLANTS		HIBISCUS PLANT	6.0 - 8.0	BUDDLEIA	6.0 - 7.0	MARGOLD	5.5 - 7.0
DAMSON	6.0 - 7.5	ABUTILON	5.5 - 6.5	HOYA	5.0 - 6.5	BUPHTHALUM	6.0 - 8.0	MOLINIA	4.0 - 5.0
GOOSEBERRY	5.0 - 6.5	ACORUS	5.0 - 6.5	IMPATIENS	5.5 - 6.5	BUTTERFLY BUSH	4.0 - 6.0	MORAEA	5.5 - 6.5
GRAPEVINE	6.0 - 7.0	AECHMEA	5.0 - 5.5	IVY TREE	6.0 - 7.0	CALENDULA	5.5 - 7.0	MORNING GLORY	6.0 - 7.5
GRAPEFRUIT	6.0 - 7.5	AFRICAN VIOLET	6.0 - 7.0	JACARANDA	6.0 - 7.5	CAMASSIA	6.0 - 8.0	MOSS	6.0 - 8.0
HAZELNUT	6.0 - 7.0	AGLAONEMA	5.0 - 6.0	JAPANESE SEDGE	6.0 - 8.0	CANDYTUFT	6.0 - 7.5	MOSS, SPHAGNUM	3.5 - 5.0
HOP	6.0 - 7.5	AMARYLLIS	5.5 - 6.5	JASMINUM	5.5 - 7.0	CANNA	6.0 - 8.0	MYOSOTIS	6.0 - 7.0
HUCKLEBERRY	4.0 - 6.0	ANTHURIUM	5.0 - 6.0	JERUSALEM CHERRY	5.5 - 6.5	CANTERBURY BELLS	7.0 - 7.5	NARCISSUS	6.0 - 8.5
LEMON	6.0 - 7.0	APHELANDRA	5.0 - 6.0	JESSAMONE	5.0 - 6.0	CARDINAL FLOWER	4.0 - 6.0	NASTURTIUM	5.5 - 7.5
LYCHEE	6.0 - 7.0	ARAUCHARIA	5.0 - 6.0	KALANCHOE	6.0 - 7.5	CARNATION	6.0 - 7.5	NICOTIANA	5.5 - 6.5
MANGO	5.0 - 6.0	ASPARAGUS FERN	6.0 - 8.0	KANGAROO THORN	6.0 - 8.0	CATALPA	6.0 - 8.0	PACHYSANDRA	5.0 - 8.0
MELON	5.5 - 6.5	ASPIDISTRA	4.0 - 5.5	KANGAROO VINE	5.0 - 6.5	CELOSIA	6.0 - 7.0	PAEONIA	6.0 - 7.5
MULBERRY	6.0 - 7.5	AZALEA	4.5 - 6.0	LANTANA	5.5 - 7.0	CENTAUREA	5.0 - 6.5	PANSY	5.5 - 7.0
NECTARINE	6.0 - 7.5	BABY'S BREATH	6.0 - 7.5	LAURUS (BAY TREE)	5.0 - 6.0	CERASTIUM	6.0 - 7.0	PASSION FLOWER	6.0 - 8.0
PEACH	6.0 - 7.5	BABY'S TEARS	5.0 - 6.0	LEMON PLANT	6.0 - 7.5	CHRYSANTHEMUM	6.0 - 7.0	PASQUE FLOWER	5.0 - 6.0
PEAR	6.0 - 7.5	BEGONIA	5.5 - 7.0	MIMOSA	5.0 - 7.0	CISSUS	6.0 - 7.5	PAULOWNIA	6.0 - 8.0
PINEAPPLE	5.0 - 6.0	BIRD OF PARADISE	6.0 - 6.5	MIND YOUR OWN BUSINESS	5.0 - 5.5	CISTUS	6.0 - 7.5	PENSTEMON	5.5 - 7.0
PLUM	6.0 - 7.5	BISHOP'S CAP	5.0 - 6.0	MONSTERA	5.0 - 6.0	CLARKIA	6.0 - 6.5	PERIWINKLE	6.0 - 7.5
POMEGRANATE	5.5 - 6.5	BLACK-EYED SUSAN	5.5 - 7.5	MYRTLE	6.0 - 8.0	CLIANTHUS	6.0 - 7.5	PETUNIA	6.0 - 7.5
QUINCE	6.0 - 7.5	BLOOD LEAF	5.5 - 6.5	NEVER NEVER PLANT	5.0 - 6.0	CLEMATIS	5.5 - 7.0	PINKS	6.0 - 7.5
RASPBERRY	5.0 - 7.5	BOTTLEBRUSH	6.0 - 7.5	NICODEMIA (INDOOR OAK)	6.0 - 8.0	COLCHICUM	5.5 - 6.5	POLYGONUM	6.0 - 7.5
RHUBARB	5.5 - 7.0	BOUGAINVILLEA	5.5 - 7.5	NORFOLK ISLAND PINE	5.0 - 6.0	COLUMBINE	6.0 - 7.0	POLYANTHUS	6.0 - 7.5
STRAWBERRY	5.0 - 7.5	BOXWOOD	6.0 - 7.5	OLEANDER	6.0 - 7.5	CONVOLVULUS	6.0 - 8.0	POPPY	6.0 - 7.5
WATERMELON	5.5 - 6.5	BROMELIADS	5.0 - 7.5	OPLISMENUS	5.0 - 6.0	COREOPSIS	5.0 - 6.0	PORTULACA	5.5 - 7.5
VEGETABLES AND HERBS		BUTTERFLY FLOWER	6.0 - 7.5	ORCHID	4.5 - 5.5	CORONILLA	6.5 - 7.5	PRIMROSE	5.5 - 6.5
ARTICHOKE	6.5 - 7.5	CACTI	4.5 - 6.0	OXALIS	6.0 - 8.0	CORYDALIS	6.0 - 8.0	PRIMULA	6.0 - 7.5
ASPARAGUS	6.0 - 8.0	CALCAOLARIA	6.0 - 7.0	PALMS	6.0 - 7.5	COSMOS	5.0 - 8.0	PRIVET	5.0 - 7.5
BASIL	5.5 - 6.5	CALADIUM	5.0 - 6.0	PANDANUS	5.0 - 6.0	COTTONEASTER	6.0 - 8.0	PRUNELLA	6.0 - 7.5
BEAN	6.0 - 7.5	CALLA LILY	6.0 - 7.0	PEACOCK PLANT	5.0 - 6.0	CRAB APPLE	6.0 - 7.5	PRUNUS	6.5 - 7.5
(Runner, Broad, French)		CAMELIA	4.5 - 5.5	PELLIONIA	5.0 - 6.0	CROCUS	6.0 - 8.0	PYRETHRUM	6.0 - 7.5
BEETROOT	6.0 - 7.5	CAMPANULA	5.5 - 6.5	PEPEROMIA	5.0 - 6.0	CYNOGLOSSUM	6.0 - 7.5	RED HOT POKER	6.0 - 7.5
BROCCOLI	6.0 - 7.0	CAPSICUM	5.0 - 6.5	PHILODENDRON	5.0 - 6.0	DAFFODIL	6.0 - 6.5	RHODODENDRON	4.5 - 6.0
BRUSSELS SPROUTS	6.0 - 7.5	CARDINAL FLOWER	5.0 - 6.0	PILEA	6.0 - 8.0	DAHLIA	6.0 - 7.5	ROSES:	
CABBAGE	6.0 - 7.5	CASTOR OIL PLANT	5.5 - 6.5	PLUMBAGO	5.5 - 6.5	DAY LILY	6.0 - 8.0	HYBRID TEA	5.5 - 7.0
CALABRESE	6.5 - 7.5	CANTURY PLANT	5.0 - 6.5	PODACARPUS	5.0 - 6.5	DELPHINIUM	6.0 - 7.5	CLIMBING	6.0 - 7.0
CARROT	5.5 - 7.0	CHINESE EVERGREEN	5.0 - 6.0	POINTSETTIA	6.0 - 7.5	DEUTZIA	6.0 - 7.5	RAMBLING	5.5 - 7.0
CAULIFLOWER	5.5 - 7.5	CHINESE PRIMROSE	6.0 - 7.5	POLYCSIAS	6.0 - 7.5	DIANTHUS	6.0 - 7.5	SALVIA	6.0 - 7.5
CELERY	6.0 - 7.0	CHRISTMAS CACTUS	5.0 - 6.5	POTHOS	5.0 - 6.0	DOGWOOD	5.0 - 7.0	SCABIOSA	5.0 - 7.5
CHICORY	5.0 - 6.5	CINERARIA	5.5 - 7.0	PRAYER PLANT	5.0 - 6.0	EDELWEISS	6.5 - 7.5	SEDUM	6.0 - 7.5
CHINESE CABBAGE	6.0 - 7.5	CLERODENDRUM	5.0 - 6.0	PUNICA	5.5 - 6.5	ELAEAGNUS	5.0 - 7.5	SNAPDRAGON	5.5 - 7.0
CHIVES	6.0 - 7.0	CLIVIA	5.5 - 6.5	SANSERIERIA	4.5 - 7.0	ENKIANTHUS	5.0 - 6.0	SNOWDROP	6.0 - 8.0
CORN - SWEET	5.5 - 7.0	COCKSCOMB	6.0 - 7.0	SAXIFRAGA	6.0 - 8.0	ERICA	4.5 - 6.0	SOAPWORT	6.0 - 7.5
CRESS	6.0 - 7.0	COFFEE PLANT	5.0 - 6.0	SCINDAPSUS	5.0 - 6.0	EUPHORBIA	6.0 - 7.0	SPEEDWELL	5.5 - 6.5
COURGETTES	5.5 - 7.0	COLEUS	6.0 - 7.0	SHRIMP PLANT	6.0 - 7.0	EVERLASTINGS	5.0 - 6.0	SPIRAEA	6.0 - 7.5
CUCUMBER	5.5 - 7.5	COLUMNEA	4.5 - 5.5	SPANISH BAYONET	6.0 - 7.5	FIRETHORN	6.0 - 8.0	SPRUCE	4.0 - 5.0
FENNEL	5.0 - 6.0	CORAL BERRY	5.5 - 7.5	SPIDER PLANT	6.0 - 7.5	FORGET-ME-NOTS	6.0 - 7.0	STOCK	6.0 - 7.5
GARLIC	5.5 - 7.5	CRASSULA	5.0 - 6.0	SUCCULENTS	5.0 - 6.5	FORSYTHIA	6.0 - 8.0	STONECROP	6.5 - 7.5
GINGER	6.0 - 8.0	CREEPING FIG	5.0 - 6.0	SYNOGONIUM	5.0 - 6.0	FOXGLOVE	6.0 - 7.5	SUMACK	5.0 - 6.5
HORSERADISH	6.0 - 7.0	CROTON	5.0 - 6.0	TOLMIEA	5.0 - 6.0	FRITILLARIA	6.0 - 7.5	SUNFLOWER	5.0 - 7.0
KALE	6.0 - 7.5	CROWN OF THORNS	6.0 - 7.5	TRADESCANTIA	5.0 - 6.0	FUCHSIA	5.5 - 7.5	SWEET PEA	6.0 - 7.5
KOHLRABI	6.0 - 7.5	CUPHEA	6.0 - 7.5	UMBRELLA TREE	5.0 - 7.5	GAILLARDIA	6.0 - 7.5	SWEET WILLIAM	6.0 - 7.5
LEEK	6.0 - 8.0	CYCLAMEN	6.0 - 7.0	VENUS FLYTRAP	4.0 - 5.0	GAZANIA	5.5 - 7.0	TAMARIX	6.5 - 8.0
LENTIL	5.5 - 7.0	CYPERUS	5.0 - 7.5	WEeping FIG	5.0 - 6.0	GENTIANA	5.0 - 7.5	TRILLIUM	5.0 - 6.5
LETTUCE	6.0 - 7.0	DIEFFENBACHIA	5.0 - 6.0	YUCCA	6.0 - 7.5	GEUM	6.0 - 7.5	TULIP	6.0 - 7.0
MARJORAM	6.0 - 8.0	DIPLADENIA	6.0 - 7.5	ZEBRINA	5.0 - 6.0	GLADIOILI	6.0 - 7.0	VIBERNUM	5.0 - 7.5
MARROW	6.0 - 7.5	DIZGOTHECA	6.0 - 7.5	FLOWERS, TREES AND SHRUBS		GLOBULARIA	5.5 - 7.0	VIOLA	5.5 - 6.5
MILLET	6.0 - 6.5	DRACAENA	5.0 - 6.0	ABELIA	6.0 - 8.0	GODETIA	6.0 - 7.5	VIRGINIA CREEPER	5.0 - 7.5
MINT	7.0 - 8.0	EASTER LILY	6.0 - 7.0	ACACIA	6.0 - 8.0	GOLDEN ROD	5.0 - 7.0	WALLFLOWER	5.5 - 7.5
MUSHROOM	6.5 - 7.5	ELEPHANT'S EAR	5.0 - 6.0	ACANTHUS	6.0 - 7.0	GYPHOPHILIA	6.0 - 7.5	WATER LILY	5.5 - 6.5
MUSTARD	6.0 - 7.5	EPISCIA	6.0 - 7.0	ACONITUM	5.0 - 6.0	HAWTHORN	6.0 - 7.0	WEIGELIA	6.0 - 7.5
OLIVE	5.5 - 6.5	EUONYMUS	6.0 - 8.0	ADONIS	6.0 - 8.0	HEATHER	4.0 - 6.0	WISTARIA	6.0 - 8.0
ONION	6.0 - 7.0	FERNS:		AGERATUM	6.0 - 7.5	HELIANTHUS	5.0 - 7.0	ZINNIA	5.5 - 7.5
PAPRIKA	7.0 - 8.5	BIRD'S NEST	5.0 - 5.5	AILANTHUS	6.0 - 7.5	HELLEBORUS	6.0 - 7.5	TURF AND ORNAMENTAL GRASSES	
PARSLEY	5.0 - 7.0	BOSTON	5.5 - 6.5	AJUGA	4.0 - 6.0	HOLLY	5.0 - 6.5	BAHAI	6.5 - 7.5
PARSNIP	5.5 - 7.5	BUTTON	6.0 - 8.0	ALTHEA	6.0 - 7.5	HOLLYHOCK	6.0 - 7.5	BENT	5.5 - 6.5
PEA	6.0 - 7.5	CHRISTMAS	6.0 - 7.5	ALYSSUM	6.0 - 7.5	HONEYSUCKLE	6.0 - 7.5	BERMUDA	6.0 - 7.0
PEANUT	5.0 - 6.5	CLOAK	6.0 - 7.5	AMARANTHUS	6.0 - 6.5	HYACINTH	6.5 - 7.5	CANADA BLUE	4.5 - 6.4
PECAN	4.0 - 6.0	FEATHER	5.5 - 6.5	ANCHUSA	6.0 - 7.5	HYDRANGEA (Blue)	4.0 - 5.0	CLOVER	6.0 - 7.0
PEPPER	5.5 - 7.0	HART'S TONGUE	7.0 - 8.0	ANDROSACE	5.0 - 6.0	HYDRANGEA (Pink)	6.0 - 7.0	KENTUCKY BLUE	6.0 - 7.5
PEPPERMINT	6.0 - 7.5	HOLLY	4.5 - 6.0	ANEMONE	6.0 - 7.5	HYDRANGEA (White)	6.5 - 8.0	MEADOW	6.0 - 7.5
PISTACHIO	5.0 - 6.0	MAIDENHAIR	6.0 - 8.0	ANTHYLLIS	5.0 - 6.0	HYPERICUM	5.5 - 7.0	PAMPAS	6.0 - 8.0
POTATO	4.5 - 6.0	RABBITS FOOT	6.0 - 7.5	ARBUSUTUS	4.0 - 6.0	IRIS	5.0 - 6.5	RED TOP	6.0 - 6.5
POTATO - SWEET	5.5 - 6.0	SPLEENWORT	6.0 - 7.5	ARENARIA	6.0 - 8.0	IVY	6.0 - 7.5	RYE	6.0 - 7.0
PUMPKIN	5.5 - 7.5	FIG	5.0 - 6.0	ARISTEA	6.0 - 7.5	JUNIPER	5.0 - 6.5	ST. AUGUSTINE	6.5 - 7.5
RADISH	6.0 - 7.0	FITTONIA	5.5 - 6.5	ARMERIA	6.0 - 7.5	KALMIA	4.5 - 5.0	TALL FESCUE	6.0 - 7.0
RICE	5.0 - 6.5	FREESIA	6.0 - 7.5	ARNICA	5.0 - 6.5	KERRIA	6.0 - 7.0	VELVET BENT	5.0 - 6.0
ROSEMARY	5.0 - 6.0	GARDENIA	5.0 - 6.0			LABURNUM	6.0 - 7.0	ZOYSIA	6.0 - 7.0



## Soil Test Kit Questions and Answers

**Question:** I tested my soil, the pH test worked, but the rest of the results are clear. What's wrong?

1. An error has been made in the testing process.
2. Nutrient levels are too low for the test to indicate.
3. The capsules have absorbed too much moisture prior to being used. The reaction has already occurred within the capsule itself.

**Question:** My pH test result came out dark blue, there is no blue on the pH color chart.

1. The water being used to perform the test is alkaline. Recommend distilled water for the testing process.
2. The soil pH is higher than 7.5. The color results change from greens to blues to purples as the pH rises.

**Question:** I got results on all but the Nitrogen portion of the kit.

1. Nitrogen leaches out of the soil very quickly, especially in sandy soil.
2. The form of Nitrogen the kit tests for is Nitrate, the form used by plants. Nitrate is formed through the natural Nitrogen cycle within the soil. It is possible to have Nitrogen present in the soil in a non-testable form.

**Question:** I tested fertilizer with the kit and still got no reaction!

The kit detects only the form of the nutrient used by the plant. These nutrients must break down to the form tested for, through the natural bacterial action and decay processes in the soil. In most cases fertilizers will not test correctly.

**Question:** I fertilized my soil as recommended in your instructions and then re-tested. My readings didn't change.

Because the nutrients need to break down, we recommend two to four weeks between fertilizing and re-testing.

**Question:** My soil will not settle to the bottom in the soil/water solution I've mixed.

Although the directions read the soil and water should settle for at least 10 minutes before proceeding, there is no harm in letting the soil settle much longer. Suggest the consumer mix the soil and water the evening or even the day before testing. Some very fine clay soil will not settle. For these few homeowners, the kit will not work.

**Question:** The testing capsule didn't dissolve.

The capsules must be opened and the testing powder poured into the test tube. There isn't enough water present to dissolve the capsule.

**Question:** The color result I got doesn't match any on the color chart.

1. If the result is the same "color" but a different "shade" it's a matter of a judgment decision between the different nutrient levels.
2. The consumer may have inadvertently used the wrong capsule for the test in question.

In most cases we offer to send the consumer additional reagent capsules for re-testing. If an error was made in the first testing process, it's generally corrected the second time through.

**HoldAll®**  
Decorative Plant Accessories

**40 TESTS**  
**DIRECTIONS INSIDE**

# SOIL TEST KIT

Tests Your Soil for a Healthy Garden

• pH • Nitrogen(N) • Phosphorus(P) • Potassium(K) •

## WHY TEST YOUR SOIL?

Plants need food (nutrients) for healthy growth. Nitrogen, Phosphorus and Potash (N, P and K for short), play a vital role in plant growth just as vitamins, minerals, carbohydrates and protein do in our health.

## HOW TO TEST YOUR SOIL

For the new and experienced soil testers alike, you will appreciate this easy, fast and fun way to achieve better growing results from your gardening efforts!

Everything is color-coded, including the tubes and capsules. All you do is take a sample of soil, mix with water, add powder from capsule, shake and watch the color develop. Then, note your test results. Fast, easy and it only takes a few minutes!

## WHEN TO TEST YOUR SOIL

Soil should be tested periodically throughout the growing season, but it is especially recommended to test before planting in Spring and when preparing beds in Fall. And, if you feel your plants are not growing well, a soil test may help.

## Included in the kit are:

40 test capsules, 10 each for pH, N, P and K, Four (4) Color-coded Test Tubes, Test Tube Storage Dock, complete instructions for adjusting soil pH, fertilization guidelines and pH preference list for over 450 plants for the home, yard and garden.

*Soil Test Kit Components*  
Complete Instruction  
booklet Inside.



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www.PanaceaProducts.com  
Assembled in USA from  
Foreign and Domestic parts



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## APPENDIX K

## CORRESPONDANCE & NOTIFICATIONS

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P.O. Box 62228 Midland • TX • 79711 • Tel: 432-563-2200 • Fax: 432-563-2213



**Erick Herrera**

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**From:** SLO Spills <spills@slo.state.nm.us>  
**Sent:** Tuesday, August 13, 2024 1:00 PM  
**To:** Erick Herrera  
**Cc:** Devon-Team; David, Deon W.; Griffin, Becky R.; Barnes, Will  
**Subject:** RE: Devon Site Sampling Variance Request - Black Mamba 15 State Com 8H (nJXK1534548184)



Erick,

The area does not lie within a sensitive receptor distance or is in a biologically sensitive area; therefore, ECO approves the variance of 400 sq feet for base samples. This has to be approved by NMOCD ultimately.

Thank you

**Tami Knight, CHMM**

*Environmental Specialist*  
 NMSLO SRD-ECO  
 505.670.1638  
 tknight@slo.state.nm.us  
[nmstatelands.org](http://nmstatelands.org)



**OUT OF OFFICE NOTICE: August 20-22 for NMSLO-SRD Annual Meeting**

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---

**From:** Erick Herrera <erick@etechenv.com>  
**Sent:** Tuesday, August 13, 2024 11:02 AM  
**To:** SLO Spills <spills@slo.state.nm.us>  
**Cc:** Devon-Team <Devon-Team@etechenv.com>  
**Subject:** [EXTERNAL] Devon Site Sampling Variance Request - Black Mamba 15 State Com 8H (nJXK1534548184)

Good afternoon,

Attached you will find the cover letter with the sampling variance request information for the Black Mamba 15 State Com 8H Incident Number (nJXK1534548184) for your review. Due to the large area of concern approximately (14,000 square feet), Devon Energy, requests a sampling variance for 5-point composite confirmation soil samples to represent a maximum of 400 square feet per soil sample collected from the area of concern. As such, 35 confirmation soil samples are anticipated to be collected, compared to the 70 soil samples utilizing a sampling frequency of 200 square feet. Lateral/edge confirmation soil samples will still be collected at a sampling frequency representing no more than 200

square feet per soil sample. Confirmation soil samples will be submitted to an accredited laboratory for analysis of BTEX (Method EPA 8260B), TPH (Method EPA 8015D) and chloride (Method EPA 300.0).

Please let me know if you have any questions or require any additional information.

Thanks,

**Erick Herrera**  
Project Geologist



Work: (432) 305-6416

Cell: (281) 777-4152



**Erick Herrera**

---

**From:** Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>  
**Sent:** Friday, August 9, 2024 10:36 AM  
**To:** Erick Herrera  
**Cc:** Devon-Team; Raley, Jim  
**Subject:** RE: [EXTERNAL] Devon Site Sampling Variance Request - Black Mamba 15 State Com 8H (nJXK1534548184)

You don't often get email from ashley.maxwell@emnrd.nm.gov. [Learn why this is important](#)

Thanks for the update. Your variance request to sample every 400 square feet is approved. Please include this correspondence in subsequent reporting.

**Ashley Maxwell** • Environmental Specialist  
Environmental Bureau Projects Group  
EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87110  
505.635.5000 | [Ashley.Maxwell@emnrd.nm.gov](mailto:Ashley.Maxwell@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

Please be advised that the new Digital C-141 is live as of December 1, 2023. Please review the new Digital C-141 submission Dec 1, 2023 Guidance document posted on the EMNRD Website prior to submitting any C-141s. The guidance documents can be found at <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/or> <https://www.emnrd.nm.gov/ocd/ocd-forms/>.

---

**From:** Erick Herrera <erick@etechenv.com>  
**Sent:** Friday, August 9, 2024 9:30 AM  
**To:** Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>  
**Cc:** Devon-Team <Devon-Team@etechenv.com>; Raley, Jim <Jim.Raley@dmn.com>  
**Subject:** RE: [EXTERNAL] Devon Site Sampling Variance Request - Black Mamba 15 State Com 8H (nJXK1534548184)

Hi Ashley,

Yes. We are currently only asking for a variance for Site 2 at the moment and it's situated in a different location from Sites 1 and 3. An initial Site Assessment was completed for Sites 1 and 3 and soil sampling had to be reevaluated as land access permitting needs to be granted before any soil disturbance can take place. They have the potential to impact both BLM and SLO surface owner boundaries and we are working on getting those permits together to ensure compliance with both surface owners.

Thanks,

**Erick Herrera**  
Project Geologist



Work: (432) 305-6416  
Cell: (281) 777-4152



---

**From:** Maxwell, Ashley, EMNRD <[Ashley.Maxwell@emnrd.nm.gov](mailto:Ashley.Maxwell@emnrd.nm.gov)>  
**Sent:** Friday, August 9, 2024 9:59 AM  
**To:** Erick Herrera <[erick@etechemv.com](mailto:erick@etechemv.com)>  
**Cc:** Devon-Team <[Devon-Team@etechemv.com](mailto:Devon-Team@etechemv.com)>; Raley, Jim <[Jim.Raley@dv.nm.gov](mailto:Jim.Raley@dv.nm.gov)>  
**Subject:** RE: [EXTERNAL] Devon Site Sampling Variance Request - Black Mamba 15 State Com 8H (NJXK1534548184)

You don't often get email from [ashley.maxwell@emnrd.nm.gov](mailto:ashley.maxwell@emnrd.nm.gov). [Learn why this is important](#)

Good Morning Erick,

In the approved work plan, there are three sites listed for remediation for this incident. Are you only requesting a variance in sampling for site 2? How are you planning to address sampling for sites 1 and 3?

**Ashley Maxwell** • Environmental Specialist  
Environmental Bureau Projects Group  
EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87110  
505.635.5000 | [Ashley.Maxwell@emnrd.nm.gov](mailto:Ashley.Maxwell@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

Please be advised that the new Digital C-141 is live as of December 1, 2023. Please review the new Digital C-141 submission Dec 1, 2023 Guidance document posted on the EMNRD Website prior to submitting any C-141s. The guidance documents can be found at <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/or> <https://www.emnrd.nm.gov/ocd/ocd-forms/>.

---

**From:** Erick Herrera <[erick@etechemv.com](mailto:erick@etechemv.com)>  
**Sent:** Thursday, August 8, 2024 12:58 PM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** Devon-Team <[Devon-Team@etechemv.com](mailto:Devon-Team@etechemv.com)>; Raley, Jim <[jim.raley@dv.nm.gov](mailto:jim.raley@dv.nm.gov)>  
**Subject:** [EXTERNAL] Devon Site Sampling Variance Request - Black Mamba 15 State Com 8H (NJXK1534548184)

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Good afternoon,

Attached you will find the cover letter with the sampling variance request information for the Black Mamba 15 State Com 8H Incident Number (NJXK1534548184) for your review. Due to the large area of concern approximately (14,000 square feet), Devon Energy, requests a sampling variance for 5-point composite confirmation soil samples to represent a maximum of 400 square feet per soil sample collected from the area of concern. As such, 35 confirmation soil samples are anticipated to be collected, compared to the 70 soil samples utilizing a sampling frequency of 200 square feet. Lateral/edge confirmation soil samples will still be collected at a sampling frequency representing no more than 200 square feet per soil sample. Confirmation soil samples will be submitted to an accredited laboratory for analysis of BTEX (Method EPA 8260B), TPH (Method EPA 8015D) and chloride (Method EPA 300.0).

Please let me now if you have any questions or require any additional information.

Thanks,

Erick Herrera

Project Geologist



Work: (432) 305-6416

Cell: (281) 777-4152

**Erick Herrera**

---

**From:** Knight, Tami C. <tknight@slo.state.nm.us>  
**Sent:** Tuesday, August 27, 2024 10:16 AM  
**To:** Erick Herrera  
**Cc:** Raley, Jim; Devon-Team  
**Subject:** ncident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981 REclamation plan approved

Erick

Thank you for the addendum. The reclamation plan for the subject release areas has been approved.



**Tami Knight, CHMM**  
*Environmental Specialist*  
 NMSLO SRD-ECO  
 505.670.1638



tknight@slo.state.nm.us  
[nmstatelands.org](http://nmstatelands.org)

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---

**From:** Erick Herrera <erick@etechnv.com>  
**Sent:** Wednesday, July 24, 2024 12:15 PM  
**To:** Knight, Tami C. <tknight@slo.state.nm.us>  
**Cc:** Raley, Jim <jim.raley@dv.com>; Devon-Team <Devon-Team@etechnv.com>  
**Subject:** [EXTERNAL] RE: Confirmation of RWP Submission Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H Incident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981

Hi Tami,

On behalf of Devon, please find the supplemental Reclamation Plan below and supporting documents attached for the Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H (Site) for Incident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981.

Upon receipt of laboratory analytical results, the areas that don't meet reclamation standards of 600 mg/kg chloride and 100 mg/kg TPH within the top 4 feet will be excavated following remediation pursuant to NMAC [19.15.17.13](#). Etech will conduct confirmation soil sampling to confirm that residual impacts have been removed. Soil samples will be sent to an accredited lab and analyzed for BTEX, TPH and chloride. The final soil cover will be re-contoured to match the Site's pre-

existing grade to prevent ponding of water and erosion. State Land Office (SLO) Sandy Loam Site Seed Mixture will be hand-broadcasted over the entire disturbed area in the next favorable growing season following the provided revegetation techniques. The selected seed blend will provide the maximum results of vegetation regrowth and ground surface coverage to match pre-existing conditions at the Site.

Following reclamation activities, the Site will be assessed quarterly for one year to ensure the Best Management Practices (BMPs) are working effectively and are subject to re-evaluation, if BMPs appear ineffective or damaged. The Site will be evaluated for vegetative re-growth approximately 1 year following the seeding application and every year thereafter, until established vegetative growth matches the surrounding native vegetation density.

As such, Devon respectfully requests SLO to consider approval of this Reclamation Plan in conjunction with the Remediation Work Plan report. Please let me know if you have any questions regarding this Reclamation Plan or require any additional information.

Thank you,

**Erick Herrera**  
Project Geologist



Work: (432) 305-6416  
Cell: (281) 777-4152

---

**From:** Knight, Tami C. <[tknight@slo.state.nm.us](mailto:tknight@slo.state.nm.us)>  
**Sent:** Wednesday, July 24, 2024 11:32 AM  
**To:** Erick Herrera <[erick@etechnv.com](mailto:erick@etechnv.com)>  
**Cc:** Raley, Jim <[jim.raley@dmn.com](mailto:jim.raley@dmn.com)>; Devon-Team <[Devon-Team@etechnv.com](mailto:Devon-Team@etechnv.com)>  
**Subject:** RE: Confirmation of RWP Submission Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H Incident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981

I apologize...I hit send too soon. The old remediation plan does not address reclamation of State Trust Land. Please provide an addendum, email response is fine, that documents how the remediation areas will be reclaimed.

Thank you

Tami

---

**From:** Knight, Tami C.  
**Sent:** Wednesday, July 24, 2024 10:31 AM  
**To:** Erick Herrera <[erick@etechnv.com](mailto:erick@etechnv.com)>  
**Cc:** Raley, Jim <[jim.raley@dmn.com](mailto:jim.raley@dmn.com)>; Devon-Team <[Devon-Team@etechnv.com](mailto:Devon-Team@etechnv.com)>  
**Subject:** RE: Confirmation of RWP Submission Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H Incident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981

Erick



Please ensure the remediation closure report documents applicability compliance with the Cultural Properties Protection Rule and working in biologically sensitive areas. Please be sure to send confirmation sampling notifications to ECO when you submit them to NMOCD.

**Tami Knight, CHMM**  
*Environmental Specialist*  
 NMSLO SRD-ECO  
 505.670.1638



[tknight@slo.state.nm.us](mailto:tknight@slo.state.nm.us)  
[nmstatelands.org](http://nmstatelands.org)

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---

**From:** Erick Herrera <[erick@etechnv.com](mailto:erick@etechnv.com)>  
**Sent:** Tuesday, July 2, 2024 11:54 AM  
**To:** Knight, Tami C. <[tknight@slo.state.nm.us](mailto:tknight@slo.state.nm.us)>  
**Cc:** Raley, Jim <[jim.rale@dv.com](mailto:jim.rale@dv.com)>; Devon-Team <[Devon-Team@etechnv.com](mailto:Devon-Team@etechnv.com)>  
**Subject:** [EXTERNAL] RE: Confirmation of RWP Submission Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H Incident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981

Yes, we are following the current reclamation standards. We reviewed all the existing data and removing anything in the top 4 feet over 100/600.

Thanks,

**Erick Herrera**  
 Project Geologist



Work: (432) 305-6416  
 Cell: (281) 777-4152

---

**From:** Knight, Tami C. <[tknight@slo.state.nm.us](mailto:tknight@slo.state.nm.us)>  
**Sent:** Tuesday, July 2, 2024 12:48 PM  
**To:** Erick Herrera <[erick@etechnv.com](mailto:erick@etechnv.com)>  
**Cc:** Raley, Jim <[jim.rale@dv.com](mailto:jim.rale@dv.com)>; Devon-Team <[Devon-Team@etechnv.com](mailto:Devon-Team@etechnv.com)>  
**Subject:** RE: Confirmation of RWP Submission Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H Incident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981



Thank you, so all work will be followed the NMOCD approved workplans...that approval is old, so just double checking.

Note, ECO will require all remediation and reclamation occurring off-pad and on/off ROWs to meet the most stringent standards of the current rules for remediation and reclamation. (<50 mg/kg BTEX, <100 mg/kg TPH, and <600 mg/kg chloride for upper 4 feet).

Tami

---

**From:** Erick Herrera <[erick@etechnv.com](mailto:erick@etechnv.com)>

**Sent:** Tuesday, July 2, 2024 11:44 AM

**To:** Knight, Tami C. <[tknight@slo.state.nm.us](mailto:tknight@slo.state.nm.us)>

**Cc:** Raley, Jim <[jim.raley@dmv.com](mailto:jim.raley@dmv.com)>; Devon-Team <[Devon-Team@etechnv.com](mailto:Devon-Team@etechnv.com)>

**Subject:** [EXTERNAL] RE: Confirmation of RWP Submission Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H Incident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981

Hi Tami,

Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H for Incident Numbers (nKJ1534531959 and nKJ1535733981) on the right of ways are pending an ROE, while Black Mamba 15 State Com #008 for Incident Number (nJXK1534548184) has been delineated recently, an ROE has been filed, and we are currently setting up excavation plans for it.

Thanks,

**Erick Herrera**

Project Geologist



Work: (432) 305-6416

Cell: (281) 777-4152

---

**From:** Knight, Tami C. <[tknight@slo.state.nm.us](mailto:tknight@slo.state.nm.us)>

**Sent:** Tuesday, July 2, 2024 11:48 AM

**To:** Erick Herrera <[erick@etechnv.com](mailto:erick@etechnv.com)>

**Cc:** Raley, Jim <[jim.raley@dmv.com](mailto:jim.raley@dmv.com)>; Devon-Team <[Devon-Team@etechnv.com](mailto:Devon-Team@etechnv.com)>

**Subject:** RE: Confirmation of RWP Submission Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H Incident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981

Thank you Erick. We have sampling notifications from Jan and Feb. What is the status of the remediation project?

**Tami Knight, CHMM**

Environmental Specialist

NMSLO SRD-ECO

505.670.1638





[tknight@slo.state.nm.us](mailto:tknight@slo.state.nm.us)  
[nmstatelands.org](http://nmstatelands.org)

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---

**From:** Erick Herrera <[erick@etechenv.com](mailto:erick@etechenv.com)>

**Sent:** Wednesday, June 26, 2024 2:36 PM

**To:** SLO Spills <[spills@slo.state.nm.us](mailto:spills@slo.state.nm.us)>

**Cc:** Knight, Tami C. <[tknight@slo.state.nm.us](mailto:tknight@slo.state.nm.us)>; Raley, Jim <[jim.raley@dvn.com](mailto:jim.raley@dvn.com)>; Devon-Team <[Devon-Team@etechenv.com](mailto:Devon-Team@etechenv.com)>

**Subject:** [EXTERNAL] Confirmation of RWP Submission Black Mamba 15 State Com #008H and Black Mamba 15 State Com #009H Incident Numbers nKJ1534531959, nJXK1534548184, and nKJ1535733981

Good afternoon,

Please find an NMOCD approved Remediation Workplan (RWP) for three separate historical produced water releases (Incident/Order Numbers **nKJ1534531959/1RP-4010**, **nJXK1534548184/1RP-4012**, and **nKJ1535733981/1RP-4059**) on State Land, which was approved by the NMOCD on **March 14, 2016**. The RWP was written, submitted, and approved under consideration of past guidance and standards that were in effect at the time of its approval. As part of ongoing compliance efforts and to ensure that all relevant documents are on record, on behalf of Devon Energy, Etech Environmental and Safety (Etech) wanted to confirm that this report has been submitted for NMSLO records and/or for NMSLO review.

If there are any specific procedures or requirements regarding the submission of reports approved under past guidance, please advise us accordingly to ensure compliance with the established protocols. Should you require any additional information or clarification, please do not hesitate to contact myself or anyone else on the Etech Devon-Team.

Thanks,

**Erick Herrera**  
Staff Geologist



Work: (432) 305-6416  
Cell: (281) 777-4152

**District I**

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

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

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

**District IV**

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

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

QUESTIONS

Action 308798

**QUESTIONS**

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 308798
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nJXK1534548184
Incident Name	NJXK1534548184 2015 MINOR A SWS @ 30-025-42630
Incident Type	Produced Water Release
Incident Status	Closure Not Approved
Incident Well	[30-025-42630] BLACK MAMBA 15 STATE COM #008H

**Location of Release Source**

Site Name	Unavailable.
Date Release Discovered	12/11/2015
Surface Owner	State

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

What is the sampling surface area in square feet	20,767
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	02/01/2024
Time sampling will commence	08:30 AM
Please provide any information necessary for observers to contact samplers	Please contact Gilbert Moreno at 432-305-6414
Please provide any information necessary for navigation to sampling site	From US Hwy 285 S, turn left onto NM-31, keep straight for 7.7 miles then turn right onto NM-128 E. Drive for 32 miles, then turn left onto Delaware Basin Rd, continue for 6.1 miles, turn left onto for 2.4miles, and turn right for 2 miles to reach the Black Mamba #008 sampling location

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
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1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
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Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 308798

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 308798
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

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

**District I**

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**District III**

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**District IV**

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

QUESTIONS

Action 381778

**QUESTIONS**

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 381778
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nJXK1534548184
Incident Name	NJXK1534548184 BLACK MAMBA 15 STATE COM #008H @ 30-025-42630
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved
Incident Well	[30-025-42630] BLACK MAMBA 15 STATE COM #008H

Location of Release Source	
Site Name	BLACK MAMBA 15 STATE COM #008H
Date Release Discovered	12/11/2015
Surface Owner	State

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	14,000
What is the estimated number of samples that will be gathered	43
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/11/2024
Time sampling will commence	08:30 AM
Please provide any information necessary for observers to contact samplers	Please contact Erick Herrera at 432-305-6416 with any questions
Please provide any information necessary for navigation to sampling site	From US Hwy 285 S, turn left onto NM-31, keep straight for 7.7 miles then turn right onto NM-128 E. Drive for 32 miles, then turn left onto Delaware Basin Rd, continue for 6.1 miles, turn left onto for 2.4miles, and turn right for 2 miles to reach the Black Mamba #008 sampling location

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
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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 381778

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 381778
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

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

**District I**

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

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

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

**District IV**

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

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

QUESTIONS

Action 400163

**QUESTIONS**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 400163
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nJXK1534548184
Incident Name	NJXK1534548184 BLACK MAMBA 15 STATE COM #008H @ 30-025-42630
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved
Incident Well	[30-025-42630] BLACK MAMBA 15 STATE COM #008H

Location of Release Source	
Site Name	BLACK MAMBA 15 STATE COM #008H
Date Release Discovered	12/11/2015
Surface Owner	State

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	800
What is the estimated number of samples that will be gathered	12
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/12/2024
Time sampling will commence	07:00 AM
Please provide any information necessary for observers to contact samplers	Please contact Erick Herrera at 432-305-6416 with any questions
Please provide any information necessary for navigation to sampling site	From US Hwy 285 S, turn left onto NM-31, keep straight for 7.7 miles then turn right onto NM-128 E. Drive for 32 miles, then turn left onto Delaware Basin Rd, continue for 6.1 miles, turn left onto for 2.4miles, and turn right for 2 miles to reach the Black Mamba #008 sampling location



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

CONDITIONS  
  
Action 400163

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 400163
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jraleay	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	11/6/2024

**District I**

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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 400170

**QUESTIONS**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 400170
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nJXK1534548184
Incident Name	NJXK1534548184 BLACK MAMBA 15 STATE COM #008H @ 30-025-42630
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved
Incident Well	[30-025-42630] BLACK MAMBA 15 STATE COM #008H

**Location of Release Source**

Site Name	BLACK MAMBA 15 STATE COM #008H
Date Release Discovered	12/11/2015
Surface Owner	State

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

What is the sampling surface area in square feet	800
What is the estimated number of samples that will be gathered	12
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/15/2024
Time sampling will commence	07:00 AM
Please provide any information necessary for observers to contact samplers	Please contact Erick Herrera at 432-305-6416 with any questions
Please provide any information necessary for navigation to sampling site	From US Hwy 285 S, turn left onto NM-31, keep straight for 7.7 miles then turn right onto NM-128 E. Drive for 32 miles, then turn left onto Delaware Basin Rd, continue for 6.1 miles, turn left onto for 2.4miles, and turn right for 2 miles to reach the Black Mamba #008 sampling location

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CONDITIONS

Action 400170

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 400170
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
jraleay	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	11/6/2024

---

## APPENDIX J

### ARCHIVED REPORTS

**APPROVED**

Condition:  
Provide photos that depict the  
depths of the excavations.

**Soil Remediation Work Plan**  
  
**Select Energy Services**  
**Lea County Saltwater Releases**  
**Lea County, New Mexico**  
  
**Cirrus Project No. 02-165169**

**PREPARED FOR:**

Mr. Carlos Lujan  
Select Energy Services, LLC

March 2, 2016



*Cirrus Associates, LLC™*

*Project No. 02-165169*

---

Dallas Office  
600 S. Sherman St.  
Suite 102  
Richardson, Texas 75081  
(972) 680-8555

---

Houston Office  
11757 Katy Freeway  
Suite 1300  
Houston, Texas 77079  
(281) 854-2383

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<b>2.0 SOIL SAMPLING &amp; ANALYTICAL RESULTS .....</b>	<b>1</b>
<b>3.0 REMEDIAL WORK PLAN .....</b>	<b>3</b>

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- 1 Site Location Map
- 2 Water Well Map
- 3 Site 1 – Sample Location Map
- 4 Site 2 – Sample Location Map
- 5 Site 3 – Sample Location Map

### **Tables**

- 1 Summary of Soil Analytical Results for Chlorides
- 2 Summary of Soil Analytical Results for BTEX, GRO, DRO and TPH

### **Appendices**

- A Photolog
- B Records of Communication
- C Laboratory Analytical Reports & Chain-of-Custody Records



## EXECUTIVE SUMMARY

Cirrus Associates, LLC (Cirrus) was retained by Select Energy Services, LLC (SES) to conduct an evaluation of three separate saltwater releases which occurred in Lea County, New Mexico (referred to as Site 1, Site 2 and Site 3). According to SES personnel, the releases consisted of treated produced water, which was free of hydrocarbons. The locations of the releases are marked on Figures 1 and 2.

## **1.0 INTRODUCTION/BACKGROUND**

Cirrus Associates, LLC (Cirrus) was retained by Select Energy Services, LLC (SES) to conduct an evaluation of three separate saltwater releases (identified by Cirrus as Sites 1 through 3) which occurred in Lea County, New Mexico. A Site Location Map is included as Figure 1. A Water Well Map, depicting the water wells in the surrounding area, well depths and depth to groundwater, is included as Figure 2. Sample locations from each site are presented on Figures 3 through 5.

## **2.0 SOIL SAMPLING & ANALYTICAL RESULTS**

The release sites were visually identified and evaluated by Mr. Kevin McNeely, Cirrus, on December 16, 2015. Cirrus returned to the sites on December 17, 2015 to collect shallow soil samples in the release area and adjacent to the release area in an attempt to delineate the impacted area. The soil samples were analyzed for chlorides via EPA method 300/300.1 and one sample from near the source of the release was analyzed for benzene, toluene, ethyl benzene and xylenes (BTEX) by EPA method 8021B and gasoline range organics (GRO), diesel range organics (DRO) and total petroleum hydrocarbons (TPH) via EPA method 8015B. Soil samples collected during the field activities were placed in laboratory supplied glassware and stored in coolers packed with ice. The soil samples along with the proper chain of custody documentation were delivered to Xenco Laboratories in Midland, Texas on December 17, 2015. The laboratory analytical reports and chain of custodies are included as Attachment C.

Based on correspondence with New Mexico Oil Conservation District (OCD), Hobbs Region, the soil cleanup level for sites with groundwater elevations greater than 100 feet below surface is 1,000 mg/Kg. According to available information obtained from the New Mexico Office of State Engineer and provided on Figure 2, the depth to groundwater in the site area is approximately 600 feet.

### **Site 1 –**

Site 1 is located along a lease road identified as Paduca Breaks Lane, approximately 12 miles southwest of Highway 176, in southwestern Lea County, New Mexico. The release of treated produced water occurred from a SES lay flat transfer line. The release occurred adjacent to the southeast side of the unpaved lease road and flowed down the sloped road towards the southwest approximately 565 feet. The majority of the release was contained within the roadway, which has berms on either side. A total of eight (8) samples were collected and identified as Site 1 – 001 through 008 and were analyzed for chlorides. A sample identified as WC-1 was collected near the source of the release, which occurred near Sample ID Site 1 – 001, and was analyzed for BTEX, GRO, DRO and TPH.

The analytical results from Site 1 show elevated concentrations of chlorides greater than 1,000 mg/Kg in four of the eight locations that range from 1,730 mg/Kg to 4,570 mg/Kg. Based on the locations of the samples collected, the impacted area has been delineated. No

detections of BTEX or TPH were identified in the sample collected near the source of the release. The analytical data is provided in Tables 1 and 2 and displayed on a site aerial in Figure 3.

#### Site 2 –

Site 2 is located along a lease road approximately 2 miles south-southwest of Site 3. The release of treated produced water occurred from a SES lay flat transfer line. The release covered a curved section of cleared access road, adjacent to an intersection of lease roads. The extent of the release covered approximately 325 feet in length and varied from 20 to 40 feet wide. The majority of the release was contained within a small berm to the north which serves as a marker for a buried pipeline. The southern extent of the release was mostly contained within berms adjacent to the cleared roadway, with a portion extending into a brushy area. A total of sixteen (16) samples were collected and identified as Site 2 – 001 through 016 and were analyzed for chlorides. A sample identified as WC-2 was collected near the source of the release, which occurred near Sample ID Site 2 – 006, and was analyzed for BTEX, GRO, DRO and TPH.

The analytical results from Site 2 show elevated concentrations of chlorides greater than 1,000 mg/Kg in four of the sixteen locations that range from 1,280 mg/Kg to 5,620 mg/Kg. No detections of BTEX, GRO, DRO and TPH were identified in WC-2. Based on the locations of the samples collected, the impacted area has been delineated. The analytical data is provided in Tables 1 and 2 and displayed on a site aerial in Figure 4.

#### Site 3 –

Site 3 is located along the same lease road as Site – 1, approximately 1.5 miles to the southwest. The release of treated produced water occurred from a SES lay flat transfer line. The release occurred adjacent to the southeast side of the lease road and ran towards the northeast approximately 1,500 feet. The release also extended to the southwest approximately 150 feet. A total of ten (10) samples were collected and identified as Site 3 – 001 through 010 and were analyzed for chlorides. A sample identified as WC-3 was collected near the source of the release, which occurred near Sample ID Site 3 – 001, and was analyzed for BTEX, GRO, DRO and TPH.

The analytical results from Site 3 show elevated concentrations of chlorides in four of the ten locations that range from 1,250 mg/Kg to 10,700 mg/Kg. No detections of BTEX, GRO, DRO and TPH were identified in WC-3. Based on the locations of the samples collected, the impacted area has been delineated. The analytical data is provided in Tables 1 and 2 and displayed on a site aerial in Figure 5.

### 3.0 REMEDIAL WORK PLAN

Based on the chloride results from the soil samples which have showed lateral delineation, Cirrus proposes to excavate soils in areas with concentrations of chlorides greater than 1,000 mg/Kg and dispose of at an approved landfill.

Soils will be excavated along the roadways to approximately 6 inches where the release showed minimal impact due to hard packed soil on the roadway and quick run-off along the steeper sections, which minimized vertical infiltration. In low lying areas where the release was allowed to pool, soils will be excavated to depths of 1 to 2 feet. Confirmatory soil samples for chlorides will be collected prior to backfilling the excavated areas.

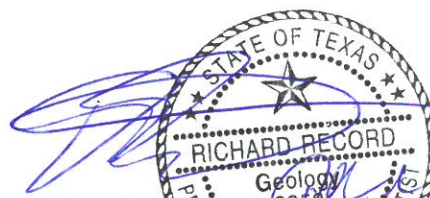
A final report will be provided to OCD documenting the excavation and disposal of chloride impacted soils which will include analytical reports, copies of waste manifests and photographic documentation.


We appreciate your assistance in this matter. Feel free to contact us with any questions or comments.

Respectfully,

Cirrus Associates

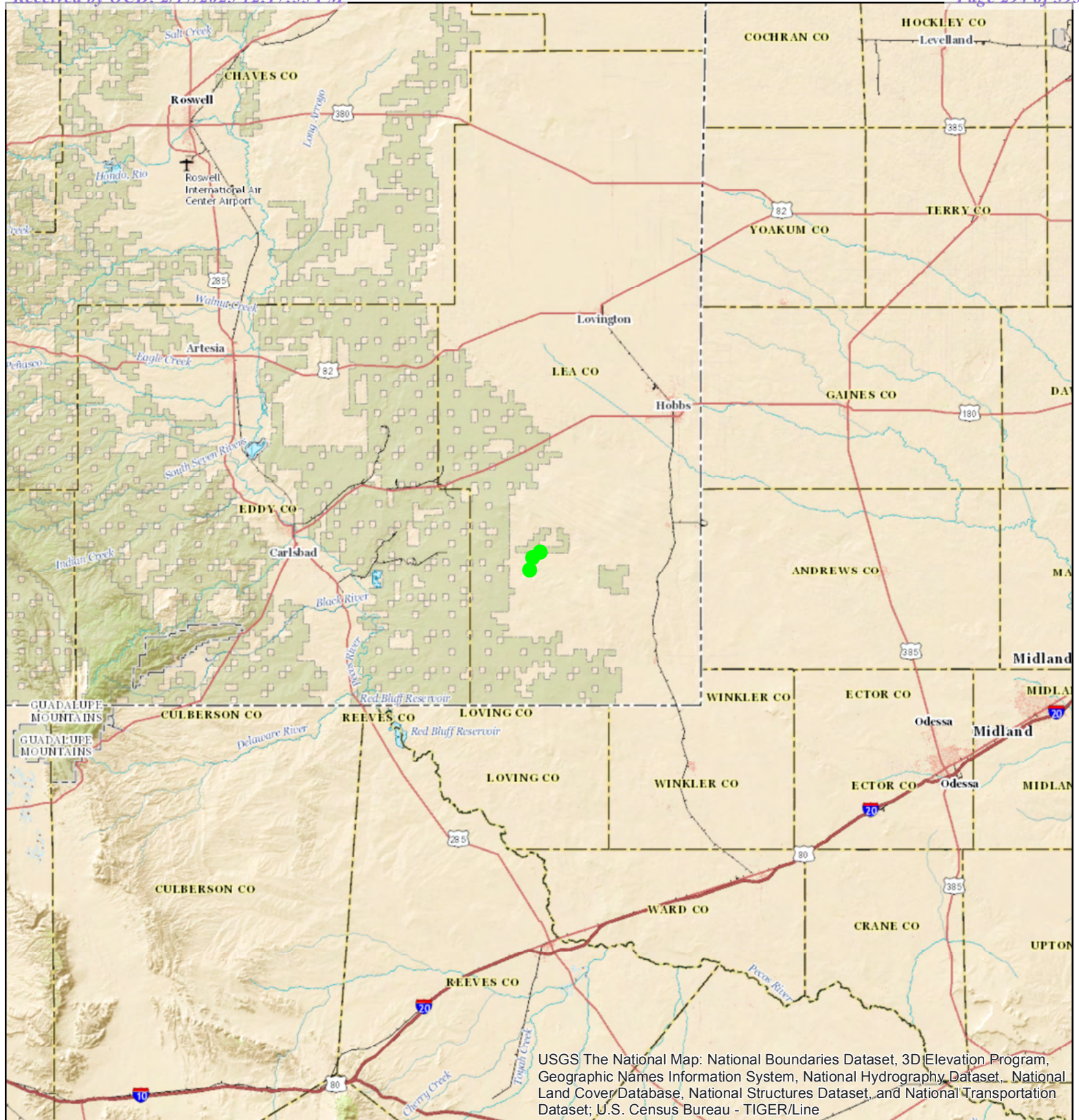
  
Kevin McNeely  
Field Operations Manager

  
Richard S. Record, P.E.  
President



## **FIGURES**





0 5 10 20  
Miles

Select Energy Services  
Lea County Sites  
Lea County, New Mexico

Project No. 02-165169

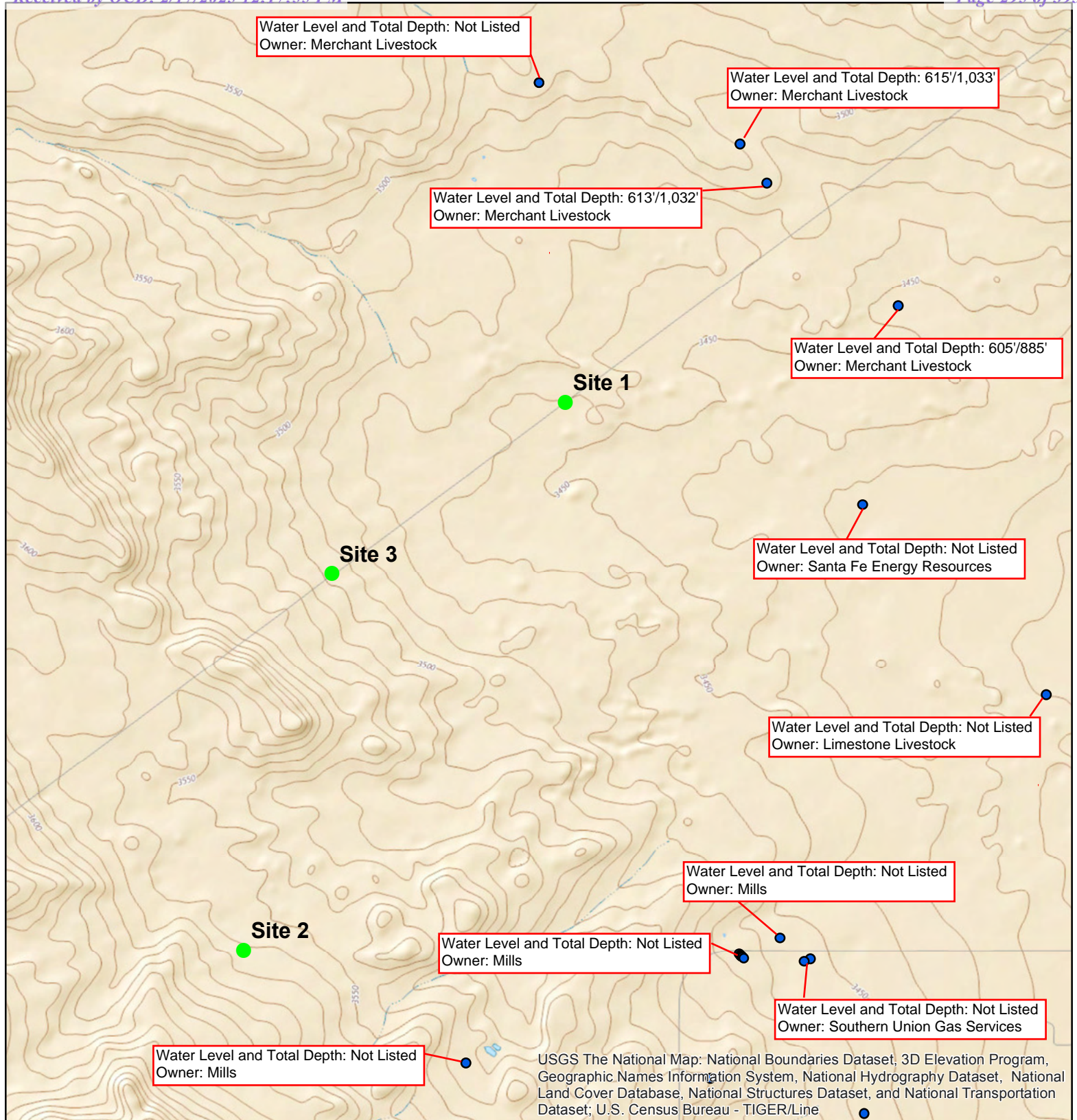
December 2015

### Figure 1 Site Location Map



Cirrus Associates, LLC  
600 S. Sherman Street, Suite 102  
Richardson, Texas 75081





0 0.25 0.5 1  
Miles

Select Energy Services  
Lea County Sites  
Lea County, New Mexico

Project No. 02-165169

December 2015

**Figure 2**  
**Water Well Map**




Cirrus Associates, LLC  
600 S. Sherman Street, Suite 102  
Richardson, Texas 75081



e

## Legend

 Sample Location

Site 1-002	12/17/2015
Chloride (mg/Kg)	16.7

Site 1-001	12/17/2015
Chloride (mg/Kg)	1,730

Site 1-003	12/17/2015
Chloride (mg/Kg)	2,440

Site 1-005	12/17/2015
Chloride (mg/Kg)	21

Site 1-006	12/17/2015
Chloride (mg/Kg)	4,570

Site 1-004	12/17/2015
Chloride (mg/Kg)	17.5

Site 1-008	12/17/2015
Chloride (mg/Kg)	13.9

Site 1-007	12/17/2015
Chloride (mg/Kg)	1,790

WC-1	12/17/2015
C6-C10	<14.9
C10-C28	<14.9
Total TPH	<14.9
Benzene	<0.00100
Toluene	<0.00200
Ethylbenzene	<0.00100
Total Xylenes	<0.00100
Total BTEX	<0.00100

New Mexico OCD Site Cleanup Level With Groundwater greater than 100 feet	
Chloride	1,000 mg/Kg
TPH	5,000 mg/Kg
Benzene	10 mg/Kg
BTEX	50 mg/Kg

## Notes:

**Bold indicates analyte detection**

### Select Energy Services Lea County Sites Lea County, New Mexico

Project No. 02-165169

December 2015

#### Figure 3 Site 1 - Chloride Analytical Soil Data



Cirrus Associates, LLC  
600 S. Sherman Street, Suite 102  
Richardson, Texas 75081



Google earth

Released to Imaging: 3/7/2025



# Site 2

## Legend

▣ Sample Location

<b>Site 2-001</b>	12/17/2015
Chloride (mg/Kg)	4.5

<b>Site 2-002</b>	12/17/2015
Chloride (mg/Kg)	<b>1,280</b>

<b>Site 2-003</b>	12/17/2015
Chloride (mg/Kg)	2.79

<b>Site 2-008</b>	12/17/2015
Chloride (mg/Kg)	31.1

<b>Site 2-010</b>	12/17/2015
Chloride (mg/Kg)	5.42

<b>Site 2-004</b>	12/17/2015
Chloride (mg/Kg)	<b>5,620</b>

<b>Site 2-011</b>	12/17/2015
Chloride (mg/Kg)	<b>4,040</b>

<b>WC-2</b>	12/17/2015
C6-C10	<15.0
C10-C28	<15.0
Total TPH	<15.0
Benzene	<0.000994
Toluene	<0.00199
Ethylbenzene	<0.000994
Total Xylenes	<0.000994
Total BTEX	<0.000994

<b>Site 2-005</b>	12/17/2015
Chloride (mg/Kg)	6.53

<b>Site 2-006</b>	12/17/2015
Chloride (mg/Kg)	225

<b>Site 2-009</b>	12/17/2015
Chloride (mg/Kg)	472

<b>Site 2-007</b>	12/17/2015
Chloride (mg/Kg)	5.76

<b>Site 2-012</b>	12/17/2015
Chloride (mg/Kg)	<2.00

<b>Site 2-013</b>	12/17/2015
Chloride (mg/Kg)	<b>1,500</b>

<b>Site 2-014</b>	12/17/2015
Chloride (mg/Kg)	10.6

<b>Site 2-015</b>	12/17/2015
Chloride (mg/Kg)	<2.00

<b>Site 2-016</b>	12/17/2015
Chloride (mg/Kg)	<2.00

<b>New Mexico OCD Site Cleanup Level With Groundwater greater than 100 feet</b>	
Chloride	1,000 mg/Kg
TPH	5,000 mg/Kg
Benzene	10 mg/Kg
BTEX	50 mg/Kg

Notes:  
**Bold** indicates analyte detection

## Select Energy Services Lea County Sites Lea County, New Mexico

Project No 02-165169 December 2015

**Figure 3**  
**Site 2 - Chloride Analytical Soil Data**



Cirrus Associates, LLC  
600 S. Sherman Street, Suite 102  
Richardson, Texas 75081

100 ft

Google earth



## Site 3

Site 3-008	12/17/2015
Chloride (mg/Kg)	<b>1,250</b>

## Legend

▣ Sample Location

Site 3-009	12/17/2015
Chloride (mg/Kg)	20.7

Site 3-007	12/17/2015
Chloride (mg/Kg)	318

Site 3-005	12/17/2015
Chloride (mg/Kg)	26.6

Site 3-004	12/17/2015
Chloride (mg/Kg)	12

Site 3-003	12/17/2015
Chloride (mg/Kg)	<b>10,700</b>

Site 3-002	12/17/2015
Chloride (mg/Kg)	<b>4,360</b>

Site 3-001	12/17/2015
Chloride (mg/Kg)	<b>5,820</b>

Site 3-006	12/17/2015
Chloride (mg/Kg)	11.2

WC-3	12/17/2015
C6-C10	<15.0
C10-C28	<15.0
Total TPH	<15.0
Benzene	<0.000994
Toluene	<0.00199
Ethylbenzene	<0.000994
Total Xylenes	<0.000994
Total BTEX	<0.000994

New Mexico OCD Site Cleanup Level With Groundwater greater than 100 feet	
Chloride	1,000 mg/Kg
TPH	5,000 mg/Kg
Benzene	10 mg/Kg
BTEX	50 mg/Kg

## Notes:

**Bold** indicates analyte detection

Select Energy Services  
Lea County Sites  
Lea County, New Mexico

Project No. 02-165169

December 2015

Figure 5  
Site 3 - Chloride Analytical Soil Data



Cirrus Associates, LLC  
600 S. Sherman Street, Suite 102  
Richardson, Texas 75081



600 ft



## **TABLES**

TABLE 1 Summary of Chloride Analytical Soil Data Select Energy Services Lea County Sites Cirrus Project No. 02-165169		
Sample ID	Sample Date	Chloride
		Units in miligram per kilogram (mg/Kg)
Site 1		
Site 1 - 001	12/17/2015	1,730
Site 1 - 002	12/17/2015	16.7
Site 1 - 003	12/17/2015	2,440
Site 1 - 004	12/17/2015	17.5
Site 1 - 005	12/17/2015	21
Site 1 - 006	12/17/2015	4,570
Site 1 - 007	12/17/2015	1,790
Site 1 - 008	12/17/2015	13.9
Site 2		
Site 2 - 001	12/17/2015	4.5
Site 2 - 002	12/17/2015	1,280
Site 2 - 003	12/17/2015	2.79
Site 2 - 004	12/17/2015	5,620
Site 2 - 005	12/17/2015	6.53
Site 2 - 006	12/17/2015	225
Site 2 - 007	12/17/2015	5.76
Site 2 - 008	12/17/2015	31.1
Site 2 - 009	12/17/2015	472
Site 2 - 010	12/17/2015	5.42
Site 2 - 011	12/17/2015	4,040
Site 2 - 012	12/17/2015	<2.00
Site 2 - 013	12/17/2015	1,500
Site 2 - 014	12/17/2015	10.6
Site 2 - 015	12/17/2015	<2.00
Site 2 - 016	12/17/2015	<2.00
Site 3		
Site 3 - 001	12/17/2015	5,820
Site 3 - 002	12/17/2015	4,360
Site 3 - 003	12/17/2015	10,700
Site 3 - 004	12/17/2015	12
Site 3 - 005	12/17/2015	26.6
Site 3 - 006	12/17/2015	11.2
Site 3 - 007	12/17/2015	318
Site 3 - 008	12/17/2015	1,250
Site 3 - 009	12/17/2015	20.7
Site 3 - 010	12/17/2015	3.26
New Mexico OCD Site Cleanup Level		1,000

Notes:

**Bold and highlighted indicates analyte detection above cleanup level**



**TABLE 2**  
**Summary of Hydrocarbon Analytical Soil Data**  
**Select Energy Services**  
**Lea County Sites**  
**Cirrus Project No. 02-165169**

Analyte	New Mexico OCD Site Cleanup Level	WC-1	WC-2	WC-3
Benzene	10	<0.001	<0.00094	<0.00094
Toluene	50*	<0.002	<0.00199	<0.00199
Ethyl benzene	50*	<0.001	<0.00094	<0.00094
Xylenes	50*	<0.001	<0.00094	<0.00094
GRO	NE	<14.9	<15.0	<15.0
DRO	NE	<14.9	<15.0	<15.0
TPH	5,000	<14.9	<15.0	<15.0

Notes:

50\* is the remediation cleanup level provided for total BTEX

Units in mg/Kg

## **APPENDIX A**



**PHOTO NO. 1**  
**DESCRIPTION:**

View of release area at Site 1 looking southeast.



**PHOTO NO. 2**  
**DESCRIPTION:**

View of end of release area at Site 1 looking northeast.





**PHOTO NO. 3**  
**DESCRIPTION:**

View across release area at Site 2 looking southwest.



**PHOTO NO. 4**  
**DESCRIPTION:**

View of end of release area at Site 2 looking north-northwest.





**PHOTO NO. 5**  
**DESCRIPTION:**

View of release location at Site 3 looking east.



**PHOTO NO. 6**  
**DESCRIPTION:**

View of end of release in low lying area adjacent to lease road at Site 3, looking southeast.

## **APPENDIX B**



## Kevin McNeely

---

**From:** Jones, Kellie, EMNRD <Kellie.Jones@state.nm.us>  
**Sent:** Thursday, January 07, 2016 1:42 PM  
**To:** Kevin McNeely  
**Subject:** RE: Chloride releases

With groundwater greater than 100 feet, remediation value is 1000 ppm for chlorides, 5000 for TPH, 10 Benzene, and 50 BTEX.

If you have any other questions, let me know.

Kellie

---

**From:** Kevin McNeely [<mailto:KMcNeely@cirrusassociates.com>]  
**Sent:** Thursday, January 07, 2016 12:41 PM  
**To:** Jones, Kellie, EMNRD  
**Subject:** RE: Chloride releases

Kellie,

Thank you for the response. Can you tell me more what the trend map numbers mean? How do I interpret those numbers to cleanup standards?

Thanks,

Kevin

Kevin McNeely  
Field Operations Manager  
Cirrus Associates, LLC  
600 S. Sherman Street, Suite 102  
Richardson, Texas 75081  
Office 972-680-8555  
Mobile 972-849-2618  
Fax 972-680-9455



---

**From:** Jones, Kellie, EMNRD [<mailto:Kellie.Jones@state.nm.us>]  
**Sent:** Thursday, January 07, 2016 8:05 AM  
**To:** Kevin McNeely  
**Subject:** RE: Chloride releases

Kevin,

Please note that these need to be verified. The trend map is from 93-94, so things might have changed. Check with the NM State Engineer's Office.

Sections 25 & 26 T22S, R33E - greater than 300 feet  
Section 2 T23S, R33E - greater than 350 feet

Hope that helps.

Kellie Jones  
Environmental Specialist, District 1  
Oil Conservation Division, EMNRD  
575-393-6161 ext. 111  
575-370-3180 (emergency-cell)  
E-Mail: [kellie.jones@state.nm.us](mailto:kellie.jones@state.nm.us)

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

---

**From:** Kevin McNeely [<mailto:KMcNeely@cirrusassociates.com>]  
**Sent:** Wednesday, January 06, 2016 3:55 PM  
**To:** Jones, Kellie, EMNRD  
**Subject:** Chloride releases

Kellie,

The site map is attached showing the 3 release sites.

Sections 25 & 26 T22S, R33E  
And Section 2 T23S, R33E

## **APPENDIX C**

# Analytical Report 521534

for  
**Cirrus Associates**

**Project Manager: Kevin McNeely**

**SELECT-LEA COUNTY**

**04-JAN-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135)  
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)

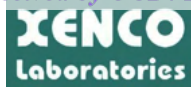
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



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Explanation of Qualifiers (Flags)	17
Chain of Custody	18
Sample Receipt Conformance Report	21



04-JAN-16

Project Manager: **Kevin McNeely**

**Cirrus Associates**

600 S Sherman St, Ste 102

Richardson, TX 75081

Reference: XENCO Report No(s): **521534**

**SELECT-LEA COUNTY**

Project Address: LEA COUNTY, NM

**Kevin McNeely:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 521534. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 521534 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Monica Tobar'.

**Monica Tobar**

Project Manager

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**Sample Cross Reference 521534****Cirrus Associates, Richardson, TX****SELECT-LEA COUNTY**

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SITE 1-001	S	12-17-15 11:20	- 0-1 ft	521534-001
SITE 1-002	S	12-17-15 11:25	- 0-1 ft	521534-002
SITE 1-003	S	12-17-15 11:30	- 0-1 ft	521534-003
SITE 1-004	S	12-17-15 11:35	- 0-1 ft	521534-004
SITE 1-005	S	12-17-15 11:40	- 0-1 ft	521534-005
SITE 1-006	S	12-17-15 11:45	- 0-1 ft	521534-006
SITE 1-007	S	12-17-15 11:50	- 0-1 ft	521534-007
SITE 1-008	S	12-17-15 11:55	- 0-1 ft	521534-008
WC-1	S	12-17-15 12:00	- 0-1 ft	521534-009



## CASE NARRATIVE

*Client Name: Cirrus Associates*

*Project Name: SELECT-LEA COUNTY*

Project ID:

Work Order Number(s): 521534

Report Date: 04-JAN-16

Date Received: 12/17/2015

---

**Sample receipt non conformances and comments:**

12/30 Btex/TPH added to sample WC-1.

---

**Sample receipt non conformances and comments per sample:**

None



## Certificate of Analytical Results 521534

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTY

Sample Id: **SITE 1-001** Matrix: Soil Date Received: 12.17.15 16.35  
Lab Sample Id: 521534-001 Date Collected: 12.17.15 11.20 Sample Depth: 0-1 ft  
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
Tech: MNR % Moisture:  
Analyst: MNR Date Prep: 12.21.15 12.00 Basis: Wet Weight  
Seq Number: 984010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1730	100	mg/kg	12.21.15 19.09		50



## Certificate of Analytical Results 521534



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 1-002**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521534-002

Date Collected: 12.17.15 11.25

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.21.15 12.00

Basis: Wet Weight

Seq Number: 984010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.7	2.00	mg/kg	12.21.15 19.27		1



## Certificate of Analytical Results 521534

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 1-003**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521534-003

Date Collected: 12.17.15 11.30

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.21.15 12.00

Basis: Wet Weight

Seq Number: 984010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2440	200	mg/kg	12.21.15 19.45		100



## Certificate of Analytical Results 521534



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 1-004**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521534-004

Date Collected: 12.17.15 11.35

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.21.15 12.00

Basis: Wet Weight

Seq Number: 984010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.5	2.00	mg/kg	12.21.15 20.03		1





## Certificate of Analytical Results 521534



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 1-005**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521534-005

Date Collected: 12.17.15 11.40

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.21.15 12.00

Basis: Wet Weight

Seq Number: 984010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.0	2.00	mg/kg	12.21.15 20.40		1



## Certificate of Analytical Results 521534

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 1-006**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521534-006

Date Collected: 12.17.15 11.45

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.21.15 12.00

Basis: Wet Weight

Seq Number: 984010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4570	200	mg/kg	12.21.15 20.58		100



## Certificate of Analytical Results 521534



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 1-007**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521534-007

Date Collected: 12.17.15 11.50

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.21.15 12.00

Basis: Wet Weight

Seq Number: 984010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1790	100	mg/kg	12.21.15 21.16		50



## Certificate of Analytical Results 521534



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 1-008**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521534-008

Date Collected: 12.17.15 11.55

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.21.15 12.00

Basis: Wet Weight

Seq Number: 984010

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.9	2.00	mg/kg	12.21.15 21.35		1



# Certificate of Analytical Results 521534

## Cirrus Associates, Richardson, TX SELECT-LEA COUNTY

Sample Id: **WC-1**  
Lab Sample Id: 521534-009

Matrix: Soil  
Date Collected: 12.17.15 12.00

Date Received: 12.17.15 16.35  
Sample Depth: 0-1 ft

Analytical Method: TPH By SW8015B Mod

Tech: PJB

Analyst: PJB

Seq Number: 984742

Date Prep: 12.30.15 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	<14.9	14.9	mg/kg	12.30.15 15.38	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<14.9	14.9	mg/kg	12.30.15 15.38	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.30.15 15.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	12.30.15 15.38	
o-Terphenyl	84-15-1	103	%	70-135	12.30.15 15.38	

Analytical Method: BTEX by EPA 8021B

Tech: SYG

Analyst: SYG

Seq Number: 984739

Date Prep: 12.30.15 07.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	12.30.15 14.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.30.15 14.13	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	12.30.15 14.13	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	12.30.15 14.13	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	12.30.15 14.13	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	12.30.15 14.13	U	1
Total BTEX		<0.00100	0.00100	mg/kg	12.30.15 14.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	80-120	12.30.15 14.13	
1,4-Difluorobenzene	540-36-3	115	%	80-120	12.30.15 14.13	


 Cirrus Associates  
 SELECT-LEA COUNTY
**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984010

Matrix: Solid

Prep Method: E300P

MB Sample Id: 702474-1-BLK

LCS Sample Id: 702474-1-BKS

Date Prep: 12.21.15

LCSD Sample Id: 702474-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	48.0	96	47.4	95	90-110	1	20	mg/kg	12.21.15 15:30	

**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984010

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 521534-004

MS Sample Id: 521534-004 S

Date Prep: 12.21.15

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	17.5	50.0	65.1	95	80-120	mg/kg	12.21.15 20:22	

**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984010

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 521698-001

MS Sample Id: 521698-001 S

Date Prep: 12.21.15

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	4150	10000	14300	102	80-120	mg/kg	12.21.15 16:25	

**Analytical Method: TPH By SW8015B Mod**

Seq Number: 984742

Matrix: Solid

Prep Method: TX1005P

MB Sample Id: 702914-1-BLK

LCS Sample Id: 702914-1-BKS

Date Prep: 12.30.15

LCSD Sample Id: 702914-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	709	71	744	74	70-135	5	35	mg/kg	12.30.15 09:57	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	850	85	845	85	70-135	1	35	mg/kg	12.30.15 09:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		112		128		70-135	%	12.30.15 09:57
o-Terphenyl	103		100		122		70-135	%	12.30.15 09:57





**Cirrus Associates**  
**SELECT-LEA COUNTY**

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 984739

MB Sample Id: 702912-1-BLK

Matrix: Solid

LCS Sample Id: 702912-1-BKS

Prep Method: SW5030B

Date Prep: 12.30.15

LCSD Sample Id: 702912-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0878	88	0.0918	92	70-130	4	35	mg/kg	12.30.15 08:10	
Toluene	<0.00200	0.100	0.0911	91	0.0944	94	70-130	4	35	mg/kg	12.30.15 08:10	
Ethylbenzene	<0.00100	0.100	0.0961	96	0.0986	99	71-129	3	35	mg/kg	12.30.15 08:10	
m_p-Xylenes	<0.00200	0.200	0.199	100	0.204	102	70-135	2	35	mg/kg	12.30.15 08:10	
o-Xylene	<0.00100	0.100	0.0941	94	0.0963	96	71-133	2	35	mg/kg	12.30.15 08:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		114		116		80-120	%	12.30.15 08:10
4-Bromofluorobenzene	104		107		105		80-120	%	12.30.15 08:10

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 984739

Parent Sample Id: 521534-009

Matrix: Soil

MS Sample Id: 521534-009 S

Prep Method: SW5030B

Date Prep: 12.30.15

MSD Sample Id: 521534-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0945	95	0.0952	96	70-130	1	35	mg/kg	12.30.15 16:24	
Toluene	<0.00200	0.0998	0.0947	95	0.0937	94	70-130	1	35	mg/kg	12.30.15 16:24	
Ethylbenzene	<0.000998	0.0998	0.0972	97	0.0945	95	71-129	3	35	mg/kg	12.30.15 16:24	
m_p-Xylenes	<0.00200	0.200	0.201	101	0.196	98	70-135	3	35	mg/kg	12.30.15 16:24	
o-Xylene	<0.000998	0.0998	0.0954	96	0.0932	94	71-133	2	35	mg/kg	12.30.15 16:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		107		80-120	%	12.30.15 16:24
4-Bromofluorobenzene	103		108		80-120	%	12.30.15 16:24



## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **SQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

+ NELAC certification not offered for this compound.

\* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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## CHAIN OF CUSTODY

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Tampa, Florida (813-820-2000)

Service Center - San Antonio, Texas (210-509-3334)

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Xenoco Quote #

Xenoco Job #

581534

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: <b>CIRBUS ASSOCIATES</b>				Project Name/Number: <b>SELECT - LEA COUNTY</b>											
Company Address: <b>606 S. SHERMAN, STE 102</b>				Project Location: <b>LEA COUNTY, NM</b>											
City/State/Zip: <b>RICHTHOLDEN, TX 75081</b>				Invoice To: <b>S RECORD @ cirbusassociates.com</b>											
Email: <b>kmcneely@cirbusassociates.com</b>				Phone No: <b>214-902-0300</b>											
Project Contact: <b>KEVIN MCNEELY</b>				PO Number: <b></b>											
Sampler's Name: <b>KEVIN MCNEELY</b>															
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	CHLORIDES	BTEX/TPH (HOLD)	Field Comments						
1	SITE 1 - 001	0-1'	12-17-15	1120	S	1	X								
2	SITE 1 - 002			1125											
3	SITE 1 - 003			1130											
4	SITE 1 - 004			1135											
5	SITE 1 - 005			1140											
6	SITE 1 - 006			1145											
7	SITE 1 - 007			1150											
8	SITE 1 - 008			1155											
9	WC-1			1200											
10															

Data Deliverable Information			
<input type="checkbox"/> Same Day TAT	<input checked="" type="checkbox"/> 5 Day TAT	<input type="checkbox"/> Level II Std QC	<input type="checkbox"/> Level IV (Full Data Pkg / new data)
<input type="checkbox"/> Next Day EMERGENCY	<input type="checkbox"/> 7 Day TAT	<input type="checkbox"/> Level III Std QC+ Forms	<input type="checkbox"/> TRRP Level IV
<input type="checkbox"/> 2 Day EMERGENCY	<input type="checkbox"/> Contact TAT	<input type="checkbox"/> Level 3 (CLP Forms)	<input type="checkbox"/> UST / RG -411
<input type="checkbox"/> 3 Day EMERGENCY		<input type="checkbox"/> TRRP Checklist	

TAT Starts Day received by Lab, If received by 3:00 pm			
Relinquished by Sampler:	Date Time: 12-17-15 11:35	Relinquished By:	1. <i>[Signature]</i>
Relinquished by:	Date Time:	Relinquished By:	2. <i>[Signature]</i>
Relinquished by:	Date Time:	Relinquished By:	3. <i>[Signature]</i>
Relinquished by:	Date Time:	Relinquished By:	4. <i>[Signature]</i>
Relinquished by:	Date Time:	Relinquished By:	5. <i>[Signature]</i>

FED-EX / UPS: Tracking #			
On Ice	Cooler Temp:	Thermos, Corr. Factor	0°C
<input checked="" type="checkbox"/>	33°C		

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.



monica tobar <monica.tobar@xenco.com>

---

## Report for WO 521538, project name: SELECT-LEA COUNTY

---

Kevin McNeely <KMcNeely@cirrusassociates.com>

Wed, Dec 30, 2015 at 11:24 AM

To: monica tobar <monica.tobar@xenco.com>

They will be on each order, 521534, 521537 & 521538.

Sample IDs are WC-1, WC-2 & WC-3

Thanks

Sent from my Verizon Wireless 4G LTE smartphone

—— Original message ——

From: monica tobar <monica.tobar@xenco.com>

Date: 12/30/2015 11:14 (GMT-06:00)

To: Kevin McNeely <KMcNeely@cirrusassociates.com>

[Quoted text hidden]



**REQUEST FOR ADDITIONS / CORRECTIONS FORM**

This form is a supplement to

11381 Meadowglen, Suite L, Houston, TX 77082 (281) 589-0692

9701 Harry Hines Blvd., Dallas, TX 75220 (214) 902-0300

5332 Blakerry Drive, San Antonio, TX 78238 (210) 509-3334

5757 N.W. 158th St., Miami Lakes, FL 33014 (305) 823-8555

3016 US Hwy 301 North, Suite 900, Tampa, FL 33619 (813) 620-

COC No: 521534

Page 1 of 1

This information should be taken from the original COC.

Contractor:	Cirrus Associates		Phone:		<input checked="" type="checkbox"/> Addition <input type="checkbox"/> Correction <input type="checkbox"/> Hold <input type="checkbox"/> Cancellation <input type="checkbox"/> No Addition
Address:	600 S. Sherman Ste102 Richardson, TX 75081				
Project Name:	Select LEA County	Project Manager:	Kevin McNeely		
Project Location:	LEA County, NM				
Project No.:		Project Director:			

Comments:

<p>Samples Received in Lab by:</p> <p>X:\Forms\Cirrus_521524</p> <p>Date/Time: 12/17/15 1635</p>		<p>Carley Owens</p>		<p><b>Matrix Legend</b></p> <p>S = Solid    P = Product</p> <p>L = Liquid    SI = Sludge</p> <p>A = Air    O =</p>		<p>Add Received By:</p> <p>Add Assigned By:</p> <p>Add Processed By:</p>	<p>MT</p> <p>MT</p> <p>MT</p>	<p>D/T:</p> <p>D/T:</p> <p>D/T:</p>	<p>12/30/2015 0:00</p> <p>12/30/2015 0:00</p> <p>12/30/2015 0:00</p>
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Client: Cirrus Associates

Date/ Time Received: 12/17/2015 04:35:00 PM

Work Order #: 521534

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

#1 *Temperature of cooler(s)?	3.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#22 >10 for all samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH?	N/A

\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#: OC679789

Checklist completed by:

  
Carley Owens

Date: 12/18/2015

Checklist reviewed by:

  
Monica Tobar

Date: 12/30/2015



# Analytical Report 521537

for  
**Cirrus Associates**

**Project Manager: Kevin McNeely**

**SELECT-LEA COUNTY**

-

**04-JAN-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135)  
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)

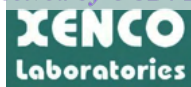
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



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04-JAN-16

Project Manager: **Kevin McNeely**

**Cirrus Associates**

600 S Sherman St, Ste 102

Richardson, TX 75081

Reference: XENCO Report No(s): **521537**

**SELECT-LEA COUNTY**

Project Address: LEA COUNTY, NM

**Kevin McNeely:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 521537. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 521537 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Monica Tobar'.

**Monica Tobar**

Project Manager

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 521537****Cirrus Associates, Richardson, TX****SELECT-LEA COUNTY**

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SITE 2-001	S	12-17-15 08:15	- 0-1 ft	521537-001
SITE 2-002	S	12-17-15 08:20	- 0-1 ft	521537-002
SITE 2-003	S	12-17-15 08:25	- 0-1 ft	521537-003
SITE 2-004	S	12-17-15 08:30	- 0-1 ft	521537-004
SITE 2-005	S	12-17-15 08:35	- 0-1 ft	521537-005
SITE 2-006	S	12-17-15 08:40	- 0-1 ft	521537-006
SITE 2-007	S	12-17-15 08:45	- 0-1 ft	521537-007
SITE 2-008	S	12-17-15 08:50	- 0-1 ft	521537-008
SITE 2-009	S	12-17-15 08:55	- 0-1 ft	521537-009
SITE 2-010	S	12-17-15 09:00	- 0-1 ft	521537-010
SITE 2-011	S	12-17-15 09:05	- 0-1 ft	521537-011
SITE 2-012	S	12-17-15 09:10	- 0-1 ft	521537-012
SITE 2-013	S	12-17-15 09:15	- 0-1 ft	521537-013
SITE 2-014	S	12-17-15 09:20	- 0-1 ft	521537-014
SITE 2-015	S	12-17-15 09:25	- 0-1 ft	521537-015
SITE 2-016	S	12-17-15 09:30	- 0-1 ft	521537-016
WC-2	S	12-17-15 09:45	- 0-1 ft	521537-017



## CASE NARRATIVE

*Client Name: Cirrus Associates*

*Project Name: SELECT-LEA COUNTY*

Project ID: -  
Work Order Number(s): 521537

Report Date: 04-JAN-16  
Date Received: 12/17/2015

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**Sample receipt non conformances and comments:**

12/30 Btex/TPH added to sample WC-2.

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**Sample receipt non conformances and comments per sample:**

None



## Certificate of Analytical Results 521537



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 2-001**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-001

Date Collected: 12.17.15 08.15

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.50	2.00	mg/kg	12.22.15 17.11		1





## Certificate of Analytical Results 521537

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 2-002**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-002

Date Collected: 12.17.15 08.20

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1280	100	mg/kg	12.22.15 17.47		50



## Certificate of Analytical Results 521537



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 2-003**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-003

Date Collected: 12.17.15 08.25

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2.79	2.00	mg/kg	12.22.15 18.24		1



## Certificate of Analytical Results 521537

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 2-004**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-004

Date Collected: 12.17.15 08.30

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5620	400	mg/kg	12.22.15 18.42		200



## Certificate of Analytical Results 521537

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 2-005**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-005

Date Collected: 12.17.15 08.35

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.53	2.00	mg/kg	12.22.15 19.00		1



## Certificate of Analytical Results 521537



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 2-006**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-006

Date Collected: 12.17.15 08.40

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	225	10.0	mg/kg	12.22.15 19.18		5



## Certificate of Analytical Results 521537



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 2-007**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-007

Date Collected: 12.17.15 08.45

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.76	2.00	mg/kg	12.22.15 20.13		1





## Certificate of Analytical Results 521537

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 2-008**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-008

Date Collected: 12.17.15 08.50

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	31.1	2.00	mg/kg	12.22.15 20.31		1



## Certificate of Analytical Results 521537

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 2-009**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-009

Date Collected: 12.17.15 08.55

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	472	20.0	mg/kg	12.22.15 20.49		10



## Certificate of Analytical Results 521537



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 2-010**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-010

Date Collected: 12.17.15 09.00

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.42	2.00	mg/kg	12.22.15 21.07		1



## Certificate of Analytical Results 521537



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 2-011**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-011

Date Collected: 12.17.15 09.05

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 10.00

Basis: Wet Weight

Seq Number: 984122

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4040	200	mg/kg	12.22.15 21.26		100



## Certificate of Analytical Results 521537



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 2-012**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-012

Date Collected: 12.17.15 09.10

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 12.00

Basis: Wet Weight

Seq Number: 984217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<2.00	2.00	mg/kg	12.24.15 18.10	U	1



## Certificate of Analytical Results 521537



## Cirrus Associates, Richardson, TX

## SELECT-LEA COUNTY

Sample Id: **SITE 2-013**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-013

Date Collected: 12.17.15 09.15

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 12.00

Basis: Wet Weight

Seq Number: 984217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1500	100	mg/kg	12.24.15 19.05		50





## Certificate of Analytical Results 521537

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 2-014**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-014

Date Collected: 12.17.15 09.20

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 12.00

Basis: Wet Weight

Seq Number: 984217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.6	10.0	mg/kg	12.24.15 19.23		5



## Certificate of Analytical Results 521537



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 2-015**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-015

Date Collected: 12.17.15 09.25

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 12.00

Basis: Wet Weight

Seq Number: 984217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<2.00	2.00	mg/kg	12.24.15 19.41	U	1



## Certificate of Analytical Results 521537

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 2-016**

Matrix: Soil

Date Received: 12.17.15 16.35

Lab Sample Id: 521537-016

Date Collected: 12.17.15 09.30

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.22.15 12.00

Basis: Wet Weight

Seq Number: 984217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<2.00	2.00	mg/kg	12.24.15 20.00	U	1



# Certificate of Analytical Results 521537



## Cirrus Associates, Richardson, TX

### SELECT-LEA COUNTY

Sample Id: **WC-2**  
Lab Sample Id: 521537-017

Matrix: Soil  
Date Collected: 12.17.15 09.45

Date Received: 12.17.15 16.35  
Sample Depth: 0-1 ft

Analytical Method: TPH By SW8015B Mod

Tech: PJB

Analyst: PJB

Seq Number: 984742

Date Prep: 12.30.15 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	<15.0	15.0	mg/kg	12.30.15 17.11	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	12.30.15 17.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.30.15 17.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	12.30.15 17.11	
o-Terphenyl	84-15-1	103	%	70-135	12.30.15 17.11	

Analytical Method: BTEX by EPA 8021B

Tech: SYG

Analyst: SYG

Seq Number: 984739

Date Prep: 12.30.15 07.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	12.30.15 14.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.30.15 14.46	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	12.30.15 14.46	U	1
m_p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	12.30.15 14.46	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	12.30.15 14.46	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	12.30.15 14.46	U	1
Total BTEX		<0.000994	0.000994	mg/kg	12.30.15 14.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	80-120	12.30.15 14.46	
1,4-Difluorobenzene	540-36-3	119	%	80-120	12.30.15 14.46	


 Cirrus Associates  
 SELECT-LEA COUNTY
**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984122

Matrix: Solid

Prep Method: E300P

MB Sample Id: 702537-1-BLK

LCS Sample Id: 702537-1-BKS

Date Prep: 12.22.15

LCSD Sample Id: 702537-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	48.6	97	48.7	97	90-110	0	20	mg/kg	12.22.15 12:12	

**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984217

Matrix: Solid

Prep Method: E300P

MB Sample Id: 702585-1-BLK

LCS Sample Id: 702585-1-BKS

Date Prep: 12.22.15

LCSD Sample Id: 702585-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	52.4	105	52.2	104	90-110	0	20	mg/kg	12.24.15 15:03	

**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984122

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 521537-002

MS Sample Id: 521537-002 S

Date Prep: 12.22.15

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	1280	2500	3830	102	80-120	mg/kg	12.22.15 18:06	

**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984217

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 521751-001

MS Sample Id: 521751-001 S

Date Prep: 12.22.15

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	5220	10000	14600	94	80-120	mg/kg	12.22.15 13:58	

**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984217

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 521751-002

MS Sample Id: 521751-002 S

Date Prep: 12.22.15

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	4650	5000	10200	111	80-120	mg/kg	12.24.15 15:57	



**Cirrus Associates**  
**SELECT-LEA COUNTY**

**Analytical Method:** TPH By SW8015B Mod

Seq Number: 984742

MB Sample Id: 702914-1-BLK

Matrix: Solid

LCS Sample Id: 702914-1-BKS

Prep Method: TX1005P

Date Prep: 12.30.15

LCSD Sample Id: 702914-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	709	71	744	74	70-135	5	35	mg/kg	12.30.15 09:57	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	850	85	845	85	70-135	1	35	mg/kg	12.30.15 09:57	
<b>Surrogate</b>	<b>MB %Rec</b>	<b>MB Flag</b>	<b>LCS %Rec</b>	<b>LCS Flag</b>	<b>LCSD %Rec</b>	<b>LCSD Flag</b>	<b>Limits</b>	<b>Units</b>	<b>Analysis Date</b>			
1-Chlorooctane	117		112		128		70-135	%	12.30.15 09:57			
o-Terphenyl	103		100		122		70-135	%	12.30.15 09:57			

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 984739

MB Sample Id: 702912-1-BLK

Matrix: Solid

LCS Sample Id: 702912-1-BKS

Prep Method: SW5030B

Date Prep: 12.30.15

LCSD Sample Id: 702912-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0878	88	0.0918	92	70-130	4	35	mg/kg	12.30.15 08:10	
Toluene	<0.00200	0.100	0.0911	91	0.0944	94	70-130	4	35	mg/kg	12.30.15 08:10	
Ethylbenzene	<0.00100	0.100	0.0961	96	0.0986	99	71-129	3	35	mg/kg	12.30.15 08:10	
m_p-Xylenes	<0.00200	0.200	0.199	100	0.204	102	70-135	2	35	mg/kg	12.30.15 08:10	
o-Xylene	<0.00100	0.100	0.0941	94	0.0963	96	71-133	2	35	mg/kg	12.30.15 08:10	
<b>Surrogate</b>	<b>MB %Rec</b>	<b>MB Flag</b>	<b>LCS %Rec</b>	<b>LCS Flag</b>	<b>LCSD %Rec</b>	<b>LCSD Flag</b>	<b>Limits</b>	<b>Units</b>	<b>Analysis Date</b>			
1,4-Difluorobenzene	116		114		116		80-120	%	12.30.15 08:10			
4-Bromofluorobenzene	104		107		105		80-120	%	12.30.15 08:10			

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 984739

Parent Sample Id: 521534-009

Matrix: Soil

MS Sample Id: 521534-009 S

Prep Method: SW5030B

Date Prep: 12.30.15

MSD Sample Id: 521534-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0945	95	0.0952	96	70-130	1	35	mg/kg	12.30.15 16:24	
Toluene	<0.00200	0.0998	0.0947	95	0.0937	94	70-130	1	35	mg/kg	12.30.15 16:24	
Ethylbenzene	<0.000998	0.0998	0.0972	97	0.0945	95	71-129	3	35	mg/kg	12.30.15 16:24	
m_p-Xylenes	<0.00200	0.200	0.201	101	0.196	98	70-135	3	35	mg/kg	12.30.15 16:24	
o-Xylene	<0.000998	0.0998	0.0954	96	0.0932	94	71-133	2	35	mg/kg	12.30.15 16:24	
<b>Surrogate</b>			<b>MS %Rec</b>	<b>MS Flag</b>	<b>MSD %Rec</b>	<b>MSD Flag</b>	<b>Limits</b>	<b>Units</b>	<b>Analysis Date</b>			
1,4-Difluorobenzene			120		107		80-120	%	12.30.15 16:24			
4-Bromofluorobenzene			103		108		80-120	%	12.30.15 16:24			





## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **SQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

+ NELAC certification not offered for this compound.

\* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 5332 Blackberry Drive, San Antonio TX 78238  
 1211 W Florida Ave, Midland, TX 79701  
 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

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Page 2 of 2

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**Kenco Job #**

5021537

On Ice	Cooler Temp.	Thermo. Corr. Factor
100	32	1.00
100	34	1.00
100	36	1.00
100	38	1.00
100	40	1.00
100	42	1.00
100	44	1.00
100	46	1.00
100	48	1.00
100	50	1.00
100	52	1.00
100	54	1.00
100	56	1.00
100	58	1.00
100	60	1.00
100	62	1.00
100	64	1.00
100	66	1.00
100	68	1.00
100	70	1.00
100	72	1.00
100	74	1.00
100	76	1.00
100	78	1.00
100	80	1.00
100	82	1.00
100	84	1.00
100	86	1.00
100	88	1.00
100	90	1.00
100	92	1.00
100	94	1.00
100	96	1.00
100	98	1.00
100	100	1.00





monica tobar <monica.tobar@xenco.com>

---

## Report for WO 521538, project name: SELECT-LEA COUNTY

---

Kevin McNeely <KMcNeely@cirrusassociates.com>

Wed, Dec 30, 2015 at 11:24 AM

To: monica tobar <monica.tobar@xenco.com>

They will be on each order, 521534, 521537 & 521538.

Sample IDs are WC-1, WC-2 & WC-3

Thanks

Sent from my Verizon Wireless 4G LTE smartphone

----- Original message -----

From: monica tobar <monica.tobar@xenco.com>

Date: 12/30/2015 11:14 (GMT-06:00)

To: Kevin McNeely <KMcNeely@cirrusassociates.com>

[Quoted text hidden]

**REQUEST FOR ADDITIONS / CORRECTIONS FORM**

No: \_\_\_\_\_

**This form is a supplement to**

COC No: 521537

Page 1 of 1

11381 Meadowglen, Suite L, Houston, TX 77082 (281) 589-0692  
9701 Harry Hines Blvd., Dallas, TX 75220 (214) 902-0300  
5332 Bla ckberry Drive, San Antonio, TX 78238 (210) 509-3334  
5757 N.W. 158th St., Miami Lakes, FL 33014 (305) 823-8555  
3016 US Hwy 301 North, Suite 900, Tampa, FL 33619 (813) 620-2

This information should be taken from the original COC.

Contractor:	<i>Cirrus Associates</i>	Phone:	<input checked="checked" type="checkbox"/> Addition
Address:	<i>600 S. Sherman Ste102 Richardson, TX 75081</i>		
Project Name:	<i>Select LEA County</i>	Project Manager:	<input type="checkbox"/> Correction
Project Location:	<i>LEA County, NM</i>		
Project No.:	Project Director:		<input type="checkbox"/> Hold
			<input type="checkbox"/> Cancellation
			<input type="checkbox"/> No Addition

[illegible]

**Comments:**

Samples Received in Lab by:

X:\Forms\Cirrus\_521537

Date/Time: 12/17/15 1640

Carley Owens

**Matrix Legend**

S = Solid	P = Product
L = Liquid	SI = Sludge
A = Air	O =

Add Received By:

Add Assigned By:

Add Processed By:

MT

D/T:

D/L:

D/T:

12/30/2015 0:00

12/30/2015 0:00  
12/30/2015 0:00

12/30/2015 0:00  
12/30/2015 0:00



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: Cirrus Associates

Date/ Time Received: 12/17/2015 04:35:00 PM

Work Order #: 521537

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

**Sample Receipt Checklist****Comments**

#1 *Temperature of cooler(s)?	3.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#22 >10 for all samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH?	N/A

**\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#: OC679789

Checklist completed by:

  
 Carley Owens

Date: 12/18/2015

Checklist reviewed by:

  
 Monica Tobar

Date: 12/30/2015



# Analytical Report 521538

for  
**Cirrus Associates**

**Project Manager: Kevin McNeely**

**SELECT-LEA COUNTY**

**04-JAN-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135)  
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)

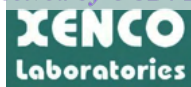
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



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04-JAN-16

Project Manager: **Kevin McNeely**

**Cirrus Associates**

600 S Sherman St, Ste 102

Richardson, TX 75081

Reference: XENCO Report No(s): **521538**

**SELECT-LEA COUNTY**

Project Address: LEA COUNTY, NM

**Kevin McNeely:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 521538. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 521538 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Monica Tobar'.

**Monica Tobar**

Project Manager

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**Sample Cross Reference 521538****Cirrus Associates, Richardson, TX****SELECT-LEA COUNTY**

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SITE 3-001	S	12-17-15 10:05	- 0-1 ft	521538-001
SITE 3-002	S	12-17-15 10:10	- 0-1 ft	521538-002
SITE 3-003	S	12-17-15 10:15	- 0-1 ft	521538-003
SITE 3-004	S	12-17-15 10:20	- 0-1 ft	521538-004
SITE 3-005	S	12-17-15 10:25	- 0-1 ft	521538-005
SITE 3-006	S	12-17-15 10:30	- 0-1 ft	521538-006
SITE 3-007	S	12-17-15 10:35	- 0-1 ft	521538-007
SITE 3-008	S	12-17-15 10:40	- 0-1 ft	521538-008
SITE 3-009	S	12-17-15 10:50	- 0-1 ft	521538-009
SITE 3-010	S	12-17-15 10:55	- 0-1 ft	521538-010
WC-3	S	12-17-15 12:00	- 0-1 ft	521538-011



## CASE NARRATIVE

*Client Name: Cirrus Associates*

*Project Name: SELECT-LEA COUNTY*

Project ID:

Work Order Number(s): 521538

Report Date: 04-JAN-16

Date Received: 12/17/2015

---

**Sample receipt non conformances and comments:**

12/30 Btex & TPH added to sample WC-3.

---

**Sample receipt non conformances and comments per sample:**

None

**Certificate of Analytical Results 521538****Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTY**

Sample Id: **SITE 3-001** Matrix: Soil Date Received: 12.17.15 16.40  
Lab Sample Id: 521538-001 Date Collected: 12.17.15 10.05 Sample Depth: 0-1 ft  
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
Tech: MNR % Moisture:  
Analyst: MNR Date Prep: 12.23.15 08.00 Basis: Wet Weight  
Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5820	400	mg/kg	12.23.15 11.04		200





## Certificate of Analytical Results 521538



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 3-002**

Matrix: Soil

Date Received: 12.17.15 16.40

Lab Sample Id: 521538-002

Date Collected: 12.17.15 10.10

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.23.15 08.00

Basis: Wet Weight

Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4360	200	mg/kg	12.23.15 11.40		100



## Certificate of Analytical Results 521538

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 3-003**

Matrix: Soil

Date Received: 12.17.15 16.40

Lab Sample Id: 521538-003

Date Collected: 12.17.15 10.15

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.23.15 08.00

Basis: Wet Weight

Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10700	400	mg/kg	12.23.15 11.58		200



## Certificate of Analytical Results 521538

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTY

Sample Id: **SITE 3-004** Matrix: Soil Date Received: 12.17.15 16.40  
Lab Sample Id: 521538-004 Date Collected: 12.17.15 10.20 Sample Depth: 0-1 ft  
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
Tech: MNR % Moisture:  
Analyst: MNR Date Prep: 12.23.15 08.00 Basis: Wet Weight  
Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.0	2.00	mg/kg	12.23.15 12.16		1



## Certificate of Analytical Results 521538



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 3-005**

Matrix: Soil

Date Received: 12.17.15 16.40

Lab Sample Id: 521538-005

Date Collected: 12.17.15 10.25

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.23.15 08.00

Basis: Wet Weight

Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.6	2.00	mg/kg	12.23.15 12.35		1



## Certificate of Analytical Results 521538

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTY

Sample Id: **SITE 3-006** Matrix: Soil Date Received: 12.17.15 16.40  
Lab Sample Id: 521538-006 Date Collected: 12.17.15 10.30 Sample Depth: 0-1 ft  
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
Tech: MNR % Moisture:  
Analyst: MNR Date Prep: 12.23.15 08.00 Basis: Wet Weight  
Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.2	2.00	mg/kg	12.23.15 12.53		1



## Certificate of Analytical Results 521538

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTYSample Id: **SITE 3-007**

Matrix: Soil

Date Received: 12.17.15 16.40

Lab Sample Id: 521538-007

Date Collected: 12.17.15 10.35

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.23.15 08.00

Basis: Wet Weight

Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	318	10.0	mg/kg	12.23.15 13.47		5





## Certificate of Analytical Results 521538



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 3-008**

Matrix: Soil

Date Received: 12.17.15 16.40

Lab Sample Id: 521538-008

Date Collected: 12.17.15 10.40

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.23.15 08.00

Basis: Wet Weight

Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1250	40.0	mg/kg	12.23.15 14.05		20



## Certificate of Analytical Results 521538



Cirrus Associates, Richardson, TX

SELECT-LEA COUNTY

Sample Id: **SITE 3-009**

Matrix: Soil

Date Received: 12.17.15 16.40

Lab Sample Id: 521538-009

Date Collected: 12.17.15 10.50

Sample Depth: 0-1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MNR

% Moisture:

Analyst: MNR

Date Prep: 12.23.15 08.00

Basis: Wet Weight

Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.7	2.00	mg/kg	12.23.15 14.24		1



## Certificate of Analytical Results 521538

Cirrus Associates, Richardson, TX  
SELECT-LEA COUNTY

Sample Id: **SITE 3-010** Matrix: Soil Date Received: 12.17.15 16.40  
Lab Sample Id: 521538-010 Date Collected: 12.17.15 10.55 Sample Depth: 0-1 ft  
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
Tech: MNR % Moisture:  
Analyst: MNR Date Prep: 12.23.15 08.00 Basis: Wet Weight  
Seq Number: 984228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3.26	2.00	mg/kg	12.23.15 14.42		1



# Certificate of Analytical Results 521538

## Cirrus Associates, Richardson, TX SELECT-LEA COUNTY

Sample Id: **WC-3**  
Lab Sample Id: 521538-011

Matrix: Soil  
Date Collected: 12.17.15 12.00

Date Received: 12.17.15 16.40  
Sample Depth: 0-1 ft

Analytical Method: TPH By SW8015B Mod

Tech: PJB

Analyst: PJB

Seq Number: 984742

Date Prep: 12.30.15 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	<15.0	15.0	mg/kg	12.30.15 16.02	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	12.30.15 16.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.30.15 16.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	12.30.15 16.02	
o-Terphenyl	84-15-1	98	%	70-135	12.30.15 16.02	

Analytical Method: BTEX by EPA 8021B

Tech: SYG

Analyst: SYG

Seq Number: 984739

Date Prep: 12.30.15 07.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	12.30.15 14.30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.30.15 14.30	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	12.30.15 14.30	U	1
m_p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	12.30.15 14.30	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	12.30.15 14.30	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	12.30.15 14.30	U	1
Total BTEX		<0.000994	0.000994	mg/kg	12.30.15 14.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	119	%	80-120	12.30.15 14.30	
4-Bromofluorobenzene	460-00-4	113	%	80-120	12.30.15 14.30	


 Cirrus Associates  
 SELECT-LEA COUNTY
**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984228

Matrix: Solid

Prep Method: E300P

MB Sample Id: 702593-1-BLK

LCS Sample Id: 702593-1-BKS

Date Prep: 12.23.15

LCSD Sample Id: 702593-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	48.8	98	48.9	98	90-110	0	20	mg/kg	12.23.15 10:27	

**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 984228

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 521538-001

MS Sample Id: 521538-001 S

Date Prep: 12.23.15

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	5820	10000	15200	94	80-120	mg/kg	12.23.15 11:22	

**Analytical Method: TPH By SW8015B Mod**

Seq Number: 984742

Matrix: Solid

Prep Method: TX1005P

MB Sample Id: 702914-1-BLK

LCS Sample Id: 702914-1-BKS

Date Prep: 12.30.15

LCSD Sample Id: 702914-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	709	71	744	74	70-135	5	35	mg/kg	12.30.15 09:57	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	850	85	845	85	70-135	1	35	mg/kg	12.30.15 09:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		112		128		70-135	%	12.30.15 09:57
o-Terphenyl	103		100		122		70-135	%	12.30.15 09:57

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 984739

Matrix: Solid

Prep Method: SW5030B

MB Sample Id: 702912-1-BLK

LCS Sample Id: 702912-1-BKS

Date Prep: 12.30.15

LCSD Sample Id: 702912-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0878	88	0.0918	92	70-130	4	35	mg/kg	12.30.15 08:10	
Toluene	<0.00200	0.100	0.0911	91	0.0944	94	70-130	4	35	mg/kg	12.30.15 08:10	
Ethylbenzene	<0.00100	0.100	0.0961	96	0.0986	99	71-129	3	35	mg/kg	12.30.15 08:10	
m_p-Xylenes	<0.00200	0.200	0.199	100	0.204	102	70-135	2	35	mg/kg	12.30.15 08:10	
o-Xylene	<0.00100	0.100	0.0941	94	0.0963	96	71-133	2	35	mg/kg	12.30.15 08:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		114		116		80-120	%	12.30.15 08:10
4-Bromofluorobenzene	104		107		105		80-120	%	12.30.15 08:10



**Cirrus Associates**  
**SELECT-LEA COUNTY**

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 984739

Parent Sample Id: 521534-009

Matrix: Soil

MS Sample Id: 521534-009 S

Prep Method: SW5030B

Date Prep: 12.30.15

MSD Sample Id: 521534-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0945	95	0.0952	96	70-130	1	35	mg/kg	12.30.15 16:24	
Toluene	<0.00200	0.0998	0.0947	95	0.0937	94	70-130	1	35	mg/kg	12.30.15 16:24	
Ethylbenzene	<0.000998	0.0998	0.0972	97	0.0945	95	71-129	3	35	mg/kg	12.30.15 16:24	
m_p-Xylenes	<0.00200	0.200	0.201	101	0.196	98	70-135	3	35	mg/kg	12.30.15 16:24	
o-Xylene	<0.000998	0.0998	0.0954	96	0.0932	94	71-133	2	35	mg/kg	12.30.15 16:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		107		80-120	%	12.30.15 16:24
4-Bromofluorobenzene	103		108		80-120	%	12.30.15 16:24





## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **SQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

+ NELAC certification not offered for this compound.

\* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 1211 W Florida Ave, Midland, TX 79701  
 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
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## CHAIN OF CUSTODY

Page 1 of 2



Setting the Standard since 1990

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Odessa, Texas (432-563-1800)

Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8528)

Tampa, Florida (813-620-2000)

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: <b>CYRUS ASSOCIATES</b>				Project Name/Number: <b>SELECT - LEA COUNTY</b>											
Company Address: <b>600 S. SHERMAN, STE. 102</b>				Project Location: <b>LEA COUNTY, NM</b>											
Richardson, TX 75081				Invoice To: <b>SECRET@CYNUSASSOCIATES.COM</b>											
Email: <b>KMCNEELY@CYNUSASSOCIATES.COM</b>				Phone No: <b>512-449-8800</b>											
Project Contact: <b>KEVIN MCNEELY</b>				PO Number: <b>SECRET</b>											
Samplers Name: <b>KEVIN MCNEELY</b>															
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	Acetone	Acetone	Acetone	Acetone	Acetone	Acetone	Acetone	Acetone	Field Comments
1	SITE 3 - 001	0-1'	12-17-15	1005	S	1									
2	SITE 3 - 002			1010											
3	SITE 3 - 003			1015											
4	SITE 3 - 004			1020											
5	SITE 3 - 005			1025											
6	SITE 3 - 006			1030											
7	SITE 3 - 007			1035											
8	SITE 3 - 008			1040											
9	SITE 3 - 009			1050											
10	SITE 3 - 010			1055											

Data Deliverable Information			
<input type="checkbox"/> Same Day TAT	<input checked="" type="checkbox"/> 5 Day TAT	<input type="checkbox"/> Level II Std QC	<input type="checkbox"/> Level IV (Full Data Pkg / raw data)
<input type="checkbox"/> Next Day EMERGENCY	<input type="checkbox"/> 7 Day TAT	<input type="checkbox"/> Level III Std QC+ Forms	<input type="checkbox"/> TRRP Level IV
<input type="checkbox"/> 2 Day EMERGENCY	<input type="checkbox"/> Contract TAT	<input type="checkbox"/> Level 3 (CLP Forms)	<input type="checkbox"/> UST / RG -411
<input type="checkbox"/> 3 Day EMERGENCY		<input type="checkbox"/> TRRP Checklist	

TAT Starts Day received by Lab, if received by 3:00 pm			
Relinquished by Sample:	Date Time: 12-17-15	Relinquished By:	Date Time: 12-17-15
Relinquished by:	Date Time: 12-17-15	Relinquished By:	Date Time: 12-17-15
Relinquished by:	Date Time: 12-17-15	Relinquished By:	Date Time: 12-17-15

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY			
Received By:	Date Time: 12-17-15	Received By:	Date Time: 12-17-15
Received By:	Date Time: 12-17-15	Received By:	Date Time: 12-17-15
Received By:	Date Time: 12-17-15	Received By:	Date Time: 12-17-15

FED-EX / UPS: Tracking #			
On Ice	Cooler Temp.	Thermo. Corr. Factor	
<input checked="" type="checkbox"/>	3.3°C	0°C	







monica tobar <monica.tobar@xenco.com>

---

## Report for WO 521538, project name: SELECT-LEA COUNTY

---

Kevin McNeely <KMcNeely@cirrusassociates.com>

Wed, Dec 30, 2015 at 11:24 AM

To: monica tobar <monica.tobar@xenco.com>

They will be on each order, 521534, 521537 & 521538.

Sample IDs are WC-1, WC-2 & WC-3

Thanks

Sent from my Verizon Wireless 4G LTE smartphone

----- Original message -----

From: monica tobar <monica.tobar@xenco.com>

Date: 12/30/2015 11:14 (GMT-06:00)

To: Kevin McNeely <KMcNeely@cirrusassociates.com>

[Quoted text hidden]

**REQUEST FOR ADDITIONS / CORRECTIONS FORM**

Page 1 of 1

11381 Meadowglen, Suite L, Houston, TX 77082 (281) 589-0692

---

9701 Harry Hines Blvd., Dallas, TX 75220 (214) 902-0300

---

5332 Bla ckberry Drive, San Antonio, TX 78238 (210) 509-3334

---

5757 N.W. 158th St., Miami Lakes, FL 33014 (305) 823-8555

---

3016 US Hwy 301 North, Suite 900, Tampa, FL 33619 (813) 620-

This information should be taken from the original COC.

Contractor:	Phone:	<input checked="" type="checkbox"/> Addition <input type="checkbox"/> Correction <input type="checkbox"/> Hold <input type="checkbox"/> Cancellation <input type="checkbox"/> No Addition	
Address: <b>Cirrus Associates</b> <b>600 S. Sherman Ste102</b> <b>Richardson, TX 75081</b>		Project Manager: <b>Kevin McNeely</b>	
Project Name: <b>Select LEA County</b>		Project Location:	
Project No.:		Project Director:	

Lab ID	Field ID	Date/Time	Depth	Matrix	Sample Description						H <sub>2</sub> O	H <sub>2</sub> O	H <sub>2</sub> O	H <sub>2</sub> O	H <sub>2</sub> O	H <sub>2</sub> O	Remarks
011	WC-3	12-17-15 1200	0-1'	S							X						

Comments:

Samples Received in Lab by:	Carley Owens			
X:\Forms\Cirrus_521538				
Date/Time:	12/17/15 1640			
		Matrix Legend		
		S = Solid	P = Product	
		L = Liquid	SI = Sludge	
		A = Air	O =	
		Add Received By:	MT	D/T: 12/30/2015 0:00
		Add Assigned By:	MT	D/T: 12/30/2015 0:00
		Add Processed By:	MT	D/T: 12/30/2015 0:00



Client: Cirrus Associates

Date/ Time Received: 12/17/2015 04:40:00 PM

Work Order #: 521538

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#22 >10 for all samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH?	N/A

\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#: OC679789

Checklist completed by:

  
Carley Owens

Date: 12/18/2015

Checklist reviewed by:

  
Monica Tobar

Date: 12/30/2015



Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
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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 432548

**QUESTIONS**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 432548
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nJXK1534548184
Incident Name	NJXK1534548184 BLACK MAMBA 15 STATE COM #008H @ 30-025-42630
Incident Type	Produced Water Release
Incident Status	Reclamation Report Received
Incident Well	[30-025-42630] BLACK MAMBA 15 STATE COM #008H

**Location of Release Source**

Please answer all the questions in this group.

Site Name	BLACK MAMBA 15 STATE COM #008H
Date Release Discovered	12/11/2015
Surface Owner	State

**Incident Details**

Please answer all the questions in this group.

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

**Nature and Volume of Release**

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Pump   Produced Water   Released: 10 BBL   Recovered: 2 BBL   Lost: 8 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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

QUESTIONS, Page 2

Action 432548

**QUESTIONS (continued)**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 432548
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	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: James Raley Title: EHS Professional Email: jim.raley@dvni.com Date: 02/17/2025
--	---

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Phone: (505) 476-3441

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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
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**Santa Fe, NM 87505**

QUESTIONS, Page 3

Action 432548

**QUESTIONS (continued)**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 432548
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

<b>Site Characterization</b>	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<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 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

<b>Remediation Plan</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	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
<b>Soil Contamination Sampling:</b> (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	5620
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	9610
GRO+DRO (EPA SW-846 Method 8015M)	6120
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<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>	
On what estimated date will the remediation commence	11/12/2024
On what date will (or did) the final sampling or liner inspection occur	01/15/2025
On what date will (or was) the remediation complete(d)	11/15/2024
What is the estimated surface area (in square feet) that will be reclaimed	800
What is the estimated volume (in cubic yards) that will be reclaimed	80
What is the estimated surface area (in square feet) that will be remediated	800
What is the estimated volume (in cubic yards) that will be remediated	80
<i>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.</i>	
<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 4

Action 432548

**QUESTIONS (continued)**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 432548
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Yes
In which state is the disposal taking place	Texas
What is the name of the out-of-state facility	R360
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<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: James Raley Title: EHS Professional Email: jim.raley@dmv.com Date: 02/17/2025
<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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Action 432548

QUESTIONS (continued)

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  432548
	Action Type:  [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 432548

**QUESTIONS (continued)**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 432548
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	418685
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	01/15/2025
What was the (estimated) number of samples that were to be gathered	4
What was the sampling surface area in square feet	800

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	800
What was the total volume (cubic yards) remediated	80
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	800
What was the total volume (in cubic yards) reclaimed	80
Summarize any additional remediation activities not included by answers (above)	The Site was remediated in accordance with an approved Remediation Work Plan, ultimately removing 80 CY of residual impacted soil and has been backfilled with clean, locally sourced material, and recontoured to match the original conditions as close as possible. Backfill soil samples were collected and submitted for lab analysis for constituents of concern identified by Table I.
<i>The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.</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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 02/17/2025



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Action 432548

**QUESTIONS (continued)**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 432548
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

<b>Reclamation Report</b>	
<i>Only answer the questions in this group if all reclamation steps have been completed.</i>	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	800
What was the total volume of replacement material (in cubic yards) for this site	80
<i>Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.</i>	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseedling commence(d)	05/29/2025
Summarize any additional reclamation activities not included by answers (above)	Remediation area has been restored with clean backfill material and will be re-seeded with NMSLO Sandy Loam Site Seed Mixture following the appropriate NMSLO re-seeding guidelines for seed to sqft area ratio.
<i>The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseedling plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 NMAC.</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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dmv.com Date: 02/17/2025

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QUESTIONS, Page 8  
  
Action 432548

QUESTIONS (continued)

Operator:  DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID:  6137
	Action Number:  432548
	Action Type:  [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

<b>Revegetation Report</b>	
<i>Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.</i>	
Requesting a restoration complete approval with this submission	No
<i>Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.</i>	

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CONDITIONS

Action 432548

**CONDITIONS**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 432548
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**CONDITIONS**

Created By	Condition	Condition Date
amaxwell	The reclamation report has been approved pursuant to 19.15.29.13 E. NMAC. The acceptance of this 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; or if the location fails to revegetate properly. In addition, the OCD approval does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.	3/7/2025
amaxwell	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	3/7/2025
amaxwell	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	3/7/2025