



February 28, 2024

**New Mexico Oil Conservation Division**

New Mexico Energy, Minerals, and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Remediation Work Plan  
Twin Lakes SA Unit #046  
Incident Number nAPP2405244889  
Chaves County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Oxy USA Inc. (Oxy), has prepared the following *Remediation Work Plan (Work Plan)* to document site assessment and delineation activities completed to date and propose remedial actions to address historical impacted soil identified at the Twin Lakes SA Unit #046 well pad (Site). The following *Work Plan* proposes excavation of impacted soil within the historical release area and submittal of a subsequent *Closure Request*, documenting the excavation activities and confirmation soil sample analytical results.

**SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit O, Section 36, Township 8 South, Range 28 East, in Chaves County, New Mexico (33.569662, -104.040772) and is associated with oil and gas exploration and production operations on state land managed by the New Mexico State Land Office (NMSLO).

During 2021, the NMSLO completed an aerial imagery review of plugged and abandoned wells located on state land in Chaves County. Visible indications of a potential historical release were identified at the Site, and as the lease holder, Oxy was notified by the NMSLO of the need to investigate potential impacts to soil. Oxy contracted BBC International, Inc. (BBC) and Ensolum to conduct assessment and delineation activities within the historical release area. Based on the delineation soil sample analytical results, a Notification of Release was submitted to the New Mexico Oil Conservation Division (NMOCD) on February 21, 2024. The release was assigned Incident Number nAPP2405244889.

Oxy is not the Operator of the Twin Lakes SA Unit #046 well, and has no independent knowledge of the facts or circumstances surrounding the nature, content or volume of any release(s), contemporaneous to any such release(s). All information submitted by Oxy herein is based on Oxy's present day observations of the site. Oxy submits this *Work Plan* pursuant to an agreement with the NMSLO, as lessee of record.

Since the release occurred on a previously disturbed well pad, compliance with the Cultural Properties Protection Rule (CPP) is not required. The oil and gas well has been plugged and abandoned. Upon completion of remediation activities and closure approval of Incident Number nAPP2405244889, a

Oxy USA Inc.  
Remediation Work Plan  
Twin Lakes SA Unit #046

Reclamation Plan will be submitted to the NMSLO proposing final reclamation activities for the well pad and access road.

## **SITE CHARACTERIZATION AND CLOSURE CRITERIA**

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization are summarized below and detailed in the NMOCD permitting portal Form C-141 Site Characterization section. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geologic Survey (USGS) well 333423104032401, located approximately 0.98 miles northwest of the Site. The well has a recorded depth to groundwater of 35.77 feet bgs and a total depth of 157 feet. The referenced well records are included in Appendix A. All wells used for depth to groundwater determination are depicted on Figure 1.

The closest continuously flowing or significant watercourse is greater than 300 feet from the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology. Site receptors are identified on Figure 1.

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

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

## **SITE ASSESSMENT AND DELINEATION ACTIVITIES**

During November 2021 and January 2024, BBC and Ensolum personnel were at the Site to evaluate the historical release extent based on information provided by the NMSLO and visual observations. Four surface soil samples (North, East, West, and South) were collected around the historical release extent to confirm the lateral extent of the surface release. Potholes were advanced at seven sample points (SP1 through SP7) within the historical release area to delineate the vertical extent of impacted soil. The potholes were advanced to depths ranging from 2 feet to 4 feet bgs. Discrete delineation soil samples were collected from sample points SP1 through SP7 at depths ranging from the ground surface to 4 feet bgs. Soil from the potholes was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations for the January 2024 potholes were logged on lithologic soil sampling logs, which are included in Appendix B.

The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-

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Remediation Work Plan  
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diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visits and a photographic log is included in Appendix C.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for surface soil samples North, East, West, and South indicated all COC concentrations were compliant with the Site Closure Criteria and confirmed the lateral extent of the surface release. Laboratory analytical results for the delineation soil samples collected from sample points SP3, SP5, and SP6, collected at depths ranging from the ground surface to 2 feet bgs, indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for the delineation soil samples collected from sample points SP1, SP2, SP4, and SP7 indicated that TPH and/or chloride concentrations exceeded the Site Closure Criteria at depths ranging from the ground surface to 2 feet bgs. Laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix D.

Based on the soil sample analytical results, additional remediation activities are warranted and are proposed below.

## PROPOSED REMEDIATION WORKPLAN

The delineation soil sample results indicated soil containing TPH and/or chloride concentrations exceeding the Site Closure Criteria is present across an approximate 4,500 square foot area around sample points SP1, SP2, SP4, and SP7 and extends to a depth of 1-foot to 2 feet bgs around sample points SP1, SP2, SP4 and to a depth greater than 2 feet bgs around sample point SP7. Based on the delineation soil sample analytical results, Oxy proposes to complete the following remediation activities:

- The impacted soil identified within the release area will be excavated. Excavation will proceed laterally and vertically until excavation sidewall and floor samples confirm all COC concentrations are compliant with the Site Closure Criteria.
  - 5-point composite soil samples will be collected from the sidewalls and floor of the final excavation extent. The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.
  - The excavation sidewall and floor samples will be collected at a frequency of every 200 square feet.
  - The excavation confirmation soil samples will be handled as described above and analyzed for BTEX, TPH, and chloride.
- The excavated soil will be transported to an approved landfill facility for disposal.
- Upon completion of excavation activities, the excavation will be backfilled with locally procured backfill and topsoil and recontoured to match pre-existing conditions. Since the well has been plugged and abandoned, a Reclamation Plan for the entire well pad and access road will be submitted to the NMSLO upon closure approval of Incident Number nAPP2405244889.

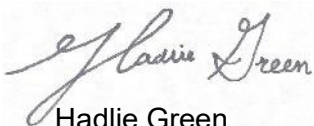
Oxy will complete the excavation activities within 90 days of the date of approval of this *Work Plan* by the NMOCD. A *Closure Request* detailing the excavation activities will be submitted to the NMOCD and NMSLO upon completion of excavation activities and receipt of final laboratory analytical results.

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Remediation Work Plan  
Twin Lakes SA Unit #046

Oxy believes the scope of work described above meets the requirements set forth in 19.15.29 NMAC and is protective of human health, the environment, and groundwater and respectfully requests approval of this *Work Plan* for Incident Number nAPP2405244889.

If you have any questions or comments, please contact Ms. Aimee Cole at (720) 384-7365 or [acole@ensolum.com](mailto:acole@ensolum.com).

Sincerely,  
**Ensolum, LLC**



Hadlie Green  
Project Geologist



Aimee Cole  
Senior Managing Scientist

cc: Kalei Jennings, Oxy USA Inc.  
New Mexico State Land Office





Appendices:

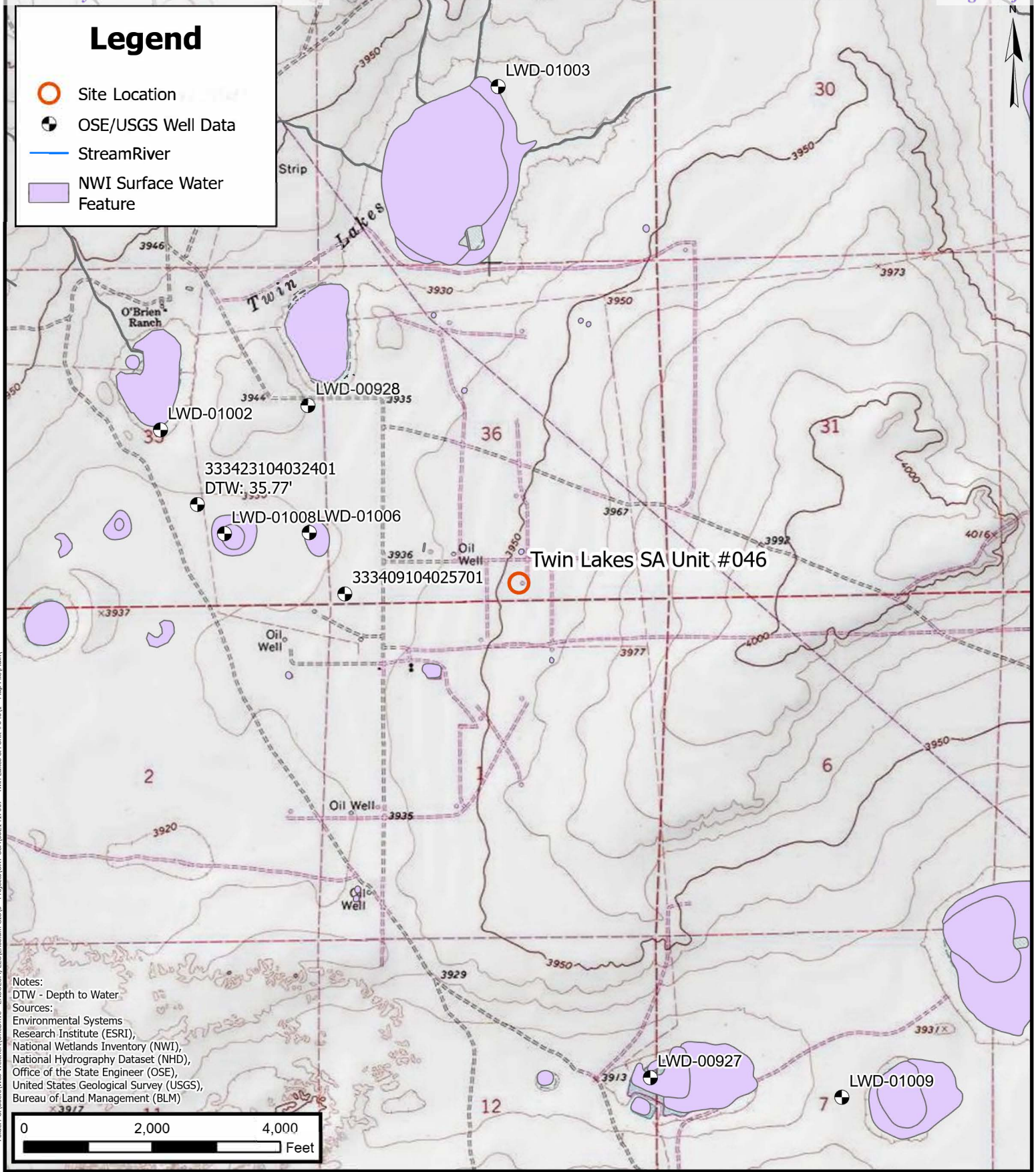
- Figure 1 Site Receptor Map
- Figure 2 Delineation Soil Sample Locations
- Figure 3 Proposed Excavation Extent
- Table 1 Soil Sample Analytical Results
- Appendix A Referenced Well Records
- Appendix B Lithologic Soil Sampling Logs
- Appendix C Photographic Log
- Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation



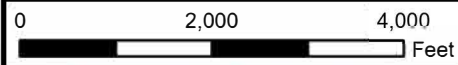
FIGURES

# Legend

-  Site Location
-  OSE/USGS Well Data
-  Stream/River
-  NWI Surface Water Feature



Notes:  
 DTW - Depth to Water  
 Sources:  
 Environmental Systems  
 Research Institute (ESRI),  
 National Wetlands Inventory (NWI),  
 National Hydrography Dataset (NHD),  
 Office of the State Engineer (OSE),  
 United States Geological Survey (USGS),  
 Bureau of Land Management (BLM)



## Site Receptor Map

Oxy USA Inc.  
 Twin Lakes SA Unit #046  
 Incident Number: nAPP2405244889  
 Unit O, Sec 36, T08S, R28E  
 Chaves County, New Mexico

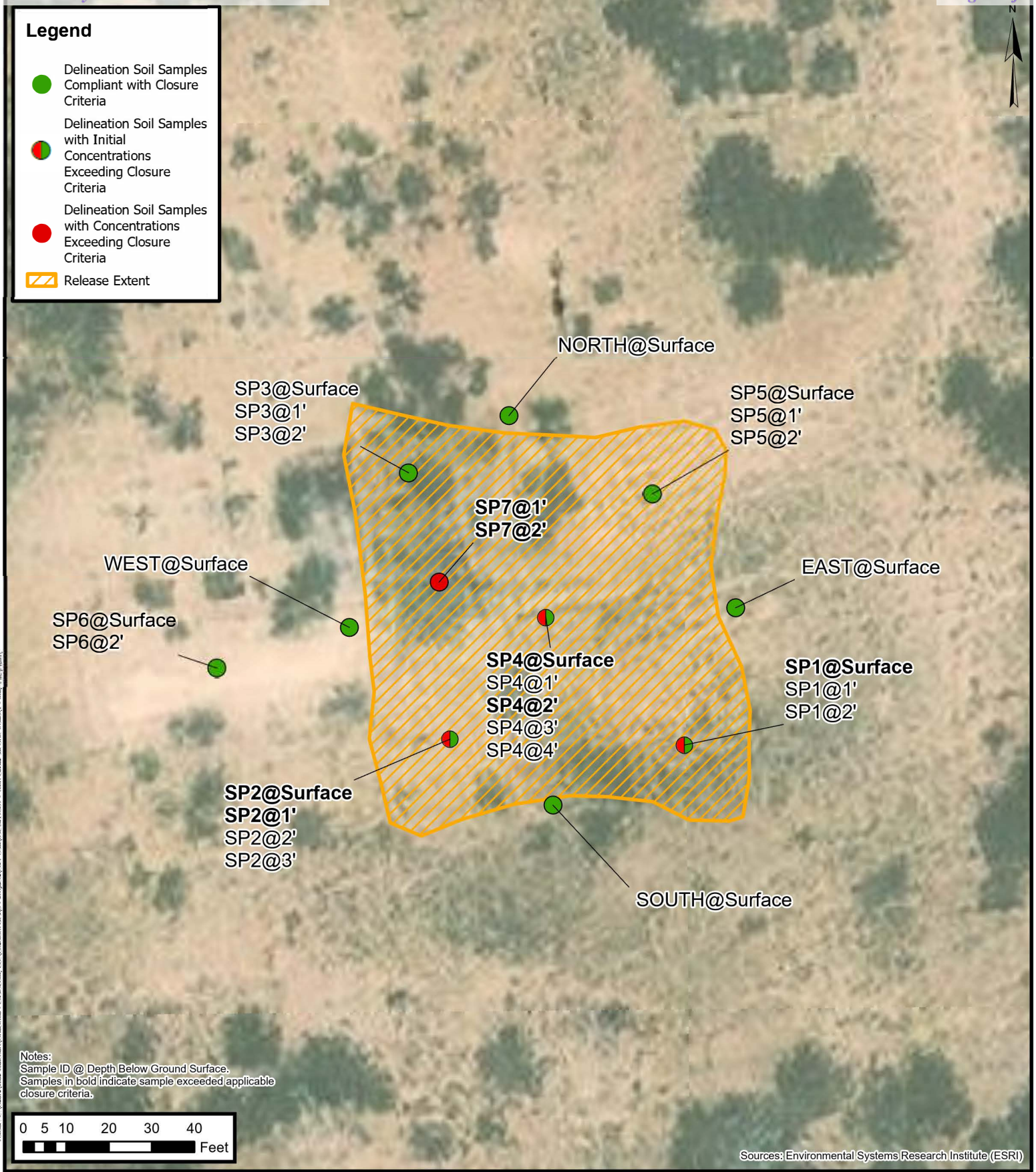
## FIGURE

1

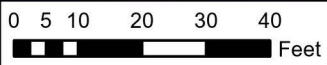


### Legend

- Delineation Soil Samples Compliant with Closure Criteria
- Delineation Soil Samples with Initial Concentrations Exceeding Closure Criteria
- Delineation Soil Samples with Concentrations Exceeding Closure Criteria
- Release Extent



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



Sources: Environmental Systems Research Institute (ESRI)



## Delineation Soil Sample Locations

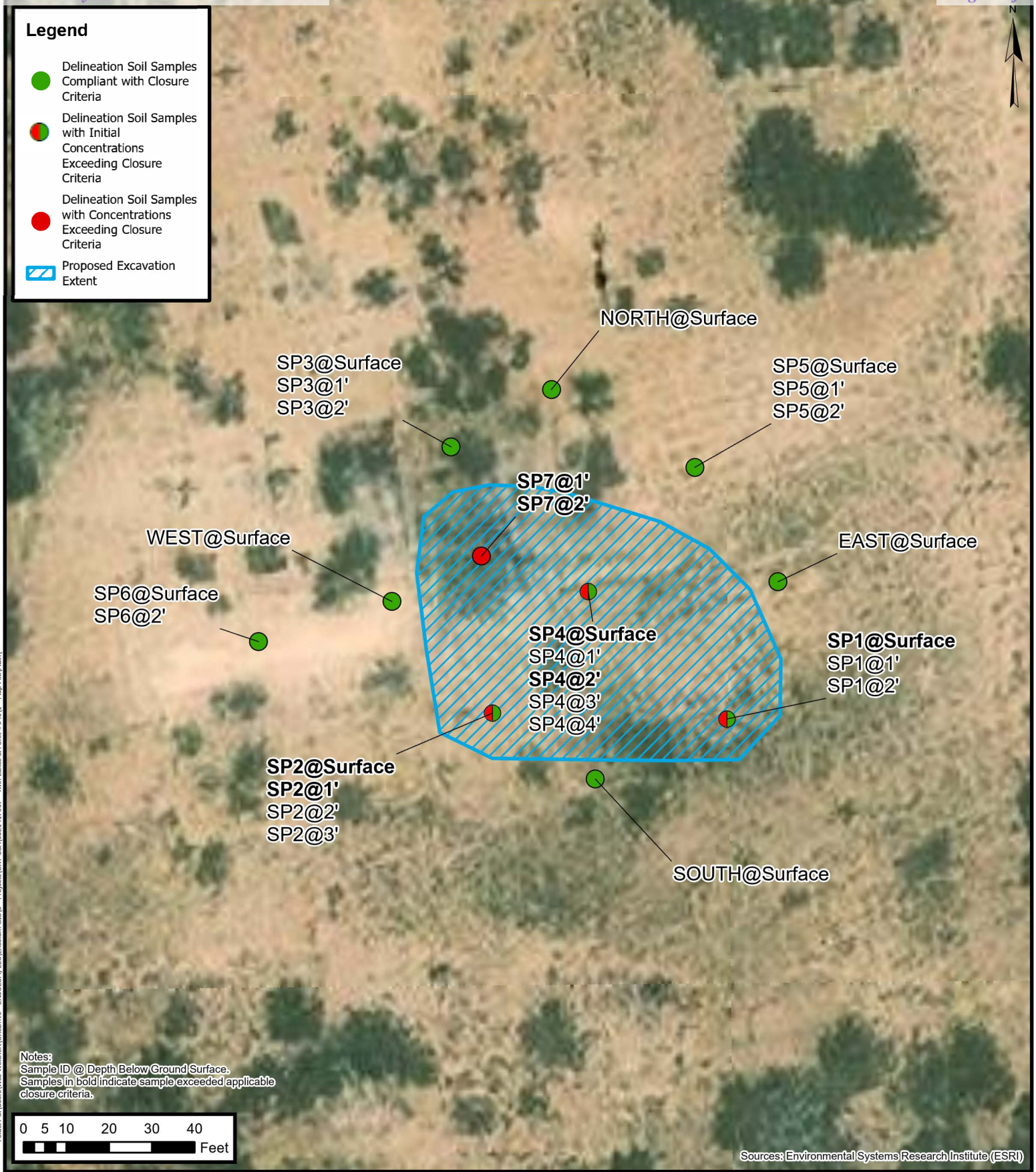
Oxy USA Inc.  
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 Incident Number: nAPP2405244889  
 Unit O, Sec 36, T08S, R28E  
 Chaves County, New Mexico

### FIGURE

# 2

### Legend

- Delineation Soil Samples Compliant with Closure Criteria
- Delineation Soil Samples with Initial Concentrations Exceeding Closure Criteria
- Delineation Soil Samples with Concentrations Exceeding Closure Criteria
- Proposed Excavation Extent



## Proposed Excavation Extent

Oxy USA Inc.  
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 Incident Number: nAPP2405244889  
 Unit O, Sec 36, T08S, R28E  
 Chaves County, New Mexico

### FIGURE

# 3







TABLES

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Twin Lakes SA Unit #046  
 Oxy USA Inc.  
 Chaves County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
<b>Delineation Soil Samples</b>										
North	11/03/2021	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
East	11/03/2021	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
West	11/03/2021	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
South	11/03/2021	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SP1	11/03/2021	Surface	<0.050	<0.300	<10.0	127	<10.0	127	<b>127</b>	<b>30,400</b>
SP1	11/03/2021	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SP1	11/03/2021	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SP2	11/03/2021	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>944</b>
SP2	11/03/2021	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>800</b>
SP2	11/03/2021	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SP2	11/03/2021	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SP3	11/03/2021	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SP3	11/03/2021	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SP3	11/03/2021	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SP4	11/03/2021	Surface	<0.050	<0.300	<50.0	1,940	1,100	1,940	<b>3,040</b>	<b>2,880</b>
SP4	11/03/2021	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
SP4	11/03/2021	2	<0.050	<0.300	<10.0	20.8	<10.0	20.8	20.8	<b>880</b>
SP4	11/03/2021	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
SP4	11/03/2021	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SP5	11/03/2021	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SP5	11/03/2021	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SP5	11/03/2021	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Twin Lakes SA Unit #046  
 Oxy USA Inc.  
 Chaves County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
SP6	01/30/2024	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SP6	01/30/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496
SP7	01/30/2024	1	<0.050	<0.300	<10.0	557	783	557	<b>1,340</b>	464
SP7	01/30/2024	2	<0.050	<0.300	<10.0	561	714	561	<b>1,275</b>	288

**Notes:**

*bgs: below ground surface*

*mg/kg: milligrams per kilogram*

*NMOCD: New Mexico Oil Conservation Division*

*NMAC: New Mexico Administrative Code*

*BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes*

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

*GRO: Gasoline Range Organics*

*DRO: Diesel Range Organics*

*ORO: Oil Range Organics*

*TPH: Total Petroleum Hydrocarbon*



## APPENDIX A

### Referenced Well Records

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USGS Home  
Contact USGS  
Search USGS

## National Water Information System: Web Interface

USGS Water Resources

Data Category:  Geographic Area:

Click to hide News Bulletins

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

Groundwater levels for New Mexico

Click to hide state-specific text

Important: [Next Generation Monitoring Location Page](#)

### Search Results -- 1 sites found

**Agency code** = usgs

**site\_no list** =  
• 333423104032401

**Minimum number of levels** = 1

[Save file of selected sites](#) to local disk for future upload

### USGS 333423104032401 08S.28E.35.41334

Chaves County, New Mexico

Latitude 33°34'23", Longitude 104°03'24" NAD27

Land-surface elevation 3,931 feet above NAVD88

The depth of the well is 157 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

#### Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water- level approval status
1978-10-18			D	62610	3895.00	NGVD29	1		Z		A
1978-10-18			D	62611	3896.86	NAVD88	1		Z		A
1978-10-18			D	72019	34.14		1		Z		A
1984-02-16			D	62610	3893.37	NGVD29	1		Z		A
1984-02-16			D	62611	3895.23	NAVD88	1		Z		A
1984-02-16			D	72019	35.77		1		Z		A

## Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

[Questions or Comments](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: Groundwater for New Mexico: Water Levels**

**URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>**

Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2024-02-07 16:44:11 EST

0.36 0.31 nadww02





# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)
		(quarters are smallest to largest)				
<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X Y</b>
	RA 09732		1 22	08S	28E	585283 3719179*

<b>Driller License:</b> 1082	<b>Driller Company:</b> SPEARS, JACK DRILLING CO.	
<b>Driller Name:</b> SPEARS, JACK		
<b>Drill Start Date:</b> 05/14/1999	<b>Drill Finish Date:</b> 06/17/1999	<b>Plug Date:</b>
<b>Log File Date:</b> 06/22/1999	<b>PCW Rcv Date:</b>	<b>Source:</b> Shallow
<b>Pump Type:</b>	<b>Pipe Discharge Size:</b>	<b>Estimated Yield:</b> 10 GPM
<b>Casing Size:</b> 5.00	<b>Depth Well:</b> 922 feet	<b>Depth Water:</b> 600 feet

<b>Water Bearing Stratifications:</b>	<b>Top</b>	<b>Bottom</b>	<b>Description</b>
	862	920	Shallow Alluvium/Basin Fill

<b>Casing Perforations:</b>	<b>Top</b>	<b>Bottom</b>
	832	922

\*UTM location was derived from PLSS - see Help

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

2/7/24 2:46 PM

POINT OF DIVERSION SUMMARY







## APPENDIX B

### Lithologic Soil Sampling Logs

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					Sample Name: SP6		Date: Jan 30, 2024	
					Site Name: Twin Lakes SA Unit #046			
					Incident Number: nAPP2405244889			
					Job Number: 03E1417007			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>					Logged By: K Shimada		Method: Backhoe	
Coordinates: 33.5696558, -104.0408874					Hole Diameter: N/A		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included. D-Dry; ND-Non Detect; N-No								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	ND	0.0	N	SP6	Surface	Surface	SW	SAND, brown, well graded, fine grain, rounded, dry, no stain, no odor.
D	464.8	0.0	N			1	SW	SAND, darker brown, well graded, fine grain, rounded, dry, no stain, no odor.
D	319.2	0.0	N	SP6	2	2	SW	SAND, darker brown, well graded, fine grain, rounded, dry, no stain, no odor.
Total Depth @ 2 feet bgs								

					Sample Name: SP7		Date: Jan 30, 2024	
					Site Name: Twin Lakes SA Unit #046			
					Incident Number: nAPP2405244889			
					Job Number: 03E1417007			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>					Logged By: K Shimada		Method: Backhoe	
Coordinates: 33.5697098, -104.0407155					Hole Diameter: N/A		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included. D-Dry; ND-Non Detect; N-No								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	ND	0.0	N			Surface	SW	SAND, brown, well graded, fine grain, rounded, dry, no stain, no odor.
D	240.8	0.0	N	SP7	1	1	SW	SAND, darker brown, well graded, fine grain, rounded, dry, no stain, no odor.
D	240.8	0.0	N	SP7	2	2	SW	SAND, darker brown, well graded, fine grain, rounded, dry, no stain, no odor.
Total Depth @ 2 feet bgs								



## APPENDIX C

### Photographic Log

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**Photographic Log**  
Oxy USA Inc.  
Twin Lakes SA Unit #046  
Incident Number nAPP2405244889



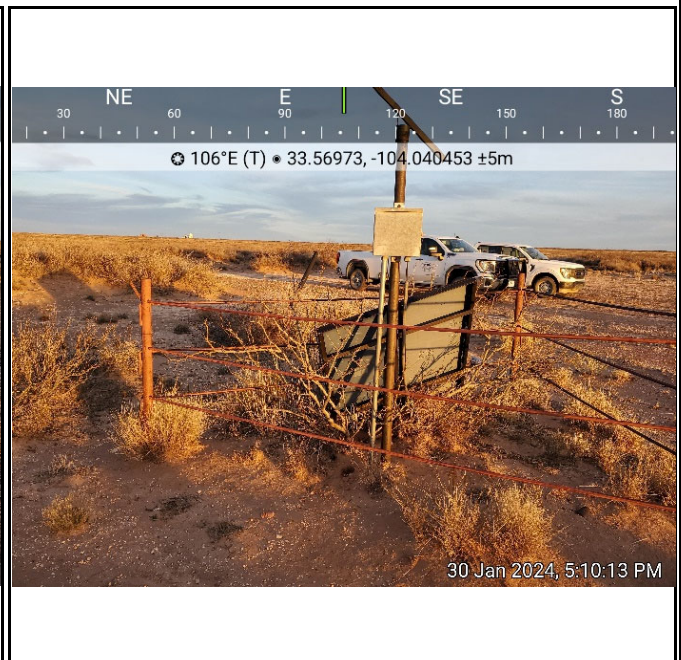
Photograph 1 Date: 01/30/2024  
Description: Delineation activities  
View: Northeast



Photograph 2 Date: 01/30/2024  
Description: View of well pad  
View: Northeast



Photograph 3 Date: 01/30/2024  
Description: View of well pad  
View: Southeast



Photograph 4 Date: 01/30/2024  
Description: View of well pad  
View: East



## APPENDIX D

### Laboratory Analytical Reports & Chain of Custody Documentation

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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November 11, 2021

Cliff Brunson  
BBC International, Inc.  
P.O. Box 805  
Hobbs, NM 88241

RE: TWIN LAKES SAN ANDRES UNIT #46

Enclosed are the results of analyses for samples received by the laboratory on 11/09/21 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP NORTH (H213169-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	0.389	
Toluene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	2.96	
Ethylbenzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	3.46	
Total Xylenes*	<0.150	0.150	11/09/2021	ND	6.37	106	6.00	2.50	
Total BTEX	<0.300	0.300	11/09/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/10/2021	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	226	113	200	15.2	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	211	106	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 110 % 44.3-133

Surrogate: 1-Chlorooctadecane 111 % 38.9-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP EAST (H213169-02)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	0.389	
Toluene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	2.96	
Ethylbenzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	3.46	
Total Xylenes*	<0.150	0.150	11/09/2021	ND	6.37	106	6.00	2.50	
Total BTEX	<0.300	0.300	11/09/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/10/2021	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	226	113	200	15.2	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	211	106	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 110 % 44.3-133

Surrogate: 1-Chlorooctadecane 110 % 38.9-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP WEST (H213169-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	0.389	
Toluene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	2.96	
Ethylbenzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	3.46	
Total Xylenes*	<0.150	0.150	11/09/2021	ND	6.37	106	6.00	2.50	
Total BTEX	<0.300	0.300	11/09/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/10/2021	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	226	113	200	15.2	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	211	106	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-133

Surrogate: 1-Chlorooctadecane 104 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP SOUTH (H213169-04)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	0.389	
Toluene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	2.96	
Ethylbenzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	3.46	
Total Xylenes*	<0.150	0.150	11/09/2021	ND	6.37	106	6.00	2.50	
Total BTEX	<0.300	0.300	11/09/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	226	113	200	15.2	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	211	106	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 108 % 44.3-133

Surrogate: 1-Chlorooctadecane 111 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 1 @ SURFACE (H213169-05)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	0.389	
Toluene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	2.96	
Ethylbenzene*	<0.050	0.050	11/09/2021	ND	2.10	105	2.00	3.46	
Total Xylenes*	<0.150	0.150	11/09/2021	ND	6.37	106	6.00	2.50	
Total BTEX	<0.300	0.300	11/09/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>30400</b>	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	226	113	200	15.2	
<b>DRO &gt;C10-C28*</b>	<b>127</b>	10.0	11/10/2021	ND	211	106	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 115 % 44.3-133

Surrogate: 1-Chlorooctadecane 132 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 1 @ 1' (H213169-06)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	226	113	200	15.2	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	211	106	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 112 % 44.3-133

Surrogate: 1-Chlorooctadecane 113 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 1 @ 2' (H213169-07)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	226	113	200	15.2	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	211	106	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 108 % 44.3-133

Surrogate: 1-Chlorooctadecane 108 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 2 @ SURFACE (H213169-08)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	226	113	200	15.2	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	211	106	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-133

Surrogate: 1-Chlorooctadecane 106 % 38.9-142

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 2 @ 1' (H213169-09)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 98.2 % 44.3-133

Surrogate: 1-Chlorooctadecane 97.6 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 2 @ 2' (H213169-10)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 109 % 44.3-133

Surrogate: 1-Chlorooctadecane 109 % 38.9-142

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 2 @ 3' (H213169-11)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-133

Surrogate: 1-Chlorooctadecane 105 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 3 @ SURFACE (H213169-12)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 97.8 % 44.3-133

Surrogate: 1-Chlorooctadecane 98.3 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 3 @ 1' (H213169-13)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 108 % 44.3-133

Surrogate: 1-Chlorooctadecane 110 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 3 @ 2' (H213169-14)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.5 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 106 % 44.3-133

Surrogate: 1-Chlorooctadecane 107 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 4 @ SURFACE (H213169-15)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2880</b>	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	11/10/2021	ND	189	94.3	200	5.48		
<b>DRO &gt;C10-C28*</b>	<b>1940</b>	50.0	11/10/2021	ND	200	99.8	200	2.50		
<b>EXT DRO &gt;C28-C36</b>	<b>1100</b>	50.0	11/10/2021	ND						

Surrogate: 1-Chlorooctane 123 % 44.3-133

Surrogate: 1-Chlorooctadecane 185 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 4 @ 1' (H213169-16)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 107 % 44.3-133

Surrogate: 1-Chlorooctadecane 107 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 4 @ 2' (H213169-17)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>880</b>	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
<b>DRO &gt;C10-C28*</b>	<b>20.8</b>	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-133

Surrogate: 1-Chlorooctadecane 105 % 38.9-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 4 @ 3' (H213169-18)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.3 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>176</b>	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 99.5 % 44.3-133

Surrogate: 1-Chlorooctadecane 101 % 38.9-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 4 @ 4' (H213169-19)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 105 % 44.3-133

Surrogate: 1-Chlorooctadecane 106 % 38.9-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 5 @ SURFACE (H213169-20)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 101 % 44.3-133

Surrogate: 1-Chlorooctadecane 101 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 5 @ 1' (H213169-21)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 106 % 44.3-133

Surrogate: 1-Chlorooctadecane 107 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	11/09/2021	Sampling Date:	11/03/2021
Reported:	11/11/2021	Sampling Type:	Soil
Project Name:	TWIN LAKES SAN ANDRES UNIT #46	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY - NEW MEXICO		

**Sample ID: SP 5 @ 2' (H213169-22)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/10/2021	ND	2.13	106	2.00	3.08	
Toluene*	<0.050	0.050	11/10/2021	ND	2.04	102	2.00	3.27	
Ethylbenzene*	<0.050	0.050	11/10/2021	ND	2.02	101	2.00	3.71	
Total Xylenes*	<0.150	0.150	11/10/2021	ND	6.16	103	6.00	3.61	
Total BTEX	<0.300	0.300	11/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	11/10/2021	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/10/2021	ND	189	94.3	200	5.48	
DRO >C10-C28*	<10.0	10.0	11/10/2021	ND	200	99.8	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	11/10/2021	ND					

Surrogate: 1-Chlorooctane 112 % 44.3-133

Surrogate: 1-Chlorooctadecane 111 % 38.9-142

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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- QR-04 The RPD for the BS/BSD was outside of historical limits.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



**ARDINAL LABORATORIES**  
101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

<b>Company Name:</b> BBC International, Inc.		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>											
<b>Project Manager:</b> Cliff Brunson		<b>P.O. #:</b>													
<b>Address:</b> P.O. Box 805		<b>Company:</b> Oxy													
<b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88241		<b>Attn:</b>													
<b>Phone #:</b> 575-397-6388 <b>Fax #:</b> 575-397-0397		<b>Address:</b>													
<b>Project #:</b> <b>Project Owner:</b> Oxy		<b>City:</b>													
<b>Project Name:</b> TWIN LAKES SAN ANDRES UNIT #46		<b>State:</b> <b>Zip:</b>													
<b>Project Location:</b> NEW MEXICO		<b>Phone #:</b>													
<b>Sampler Name:</b> SIMON		<b>Fax #:</b>													

FOR LAB USE ONLY		MATRIX	PRESERV.	SAMPLING		CL	BTEX	TPH EXT												
Lab I.D.	Sample I.D.			DATE	TIME															
H213169	SP NORTH	↓	↓	11/3/21	9:40AM	✓	✓	✓												
1	SP EAST			11/3/21	9:57AM	✓	✓	✓												
2	SP WEST			11/3/21	10:10AM	✓	✓	✓												
3	SP SOUTH			11/3/21	10:23AM	✓	✓	✓												
4	SP 1 @ SURFACE			11/3/21	10:40AM	✓	✓	✓												
5	SP 1 @ 1'			11/3/21	10:53AM	✓	✓	✓												
6	SP 1 @ 2'			11/3/21	11:07AM	✓	✓	✓												
7	SP 2 @ SURFACE			11/3/21	11:18AM	✓	✓	✓												
8	SP 2 @ 1'			11/3/21	11:27AM	✓	✓	✓												
9	SP 2 @ 2'			11/3/21	11:40AM	✓	✓	✓												

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<b>Relinquished By:</b> 	<b>Date:</b> 11-9-21 <b>Time:</b> 10:30	<b>Received By:</b> 	<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Add'l Phone #:</b>
<b>Relinquished By:</b>	<b>Date:</b>	<b>Received By:</b>	<b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Add'l Fax #:</b>
<b>Delivered By: (Circle One)</b> -9.60 C-0.50			<b>REMARKS:</b>	
<b>Sampler - UPS - Bus - Other:</b> -10.10 #113			<b>CHECKED BY:</b> (Initials) T.O.	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



# CARDINAL LABORATORIES

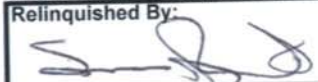
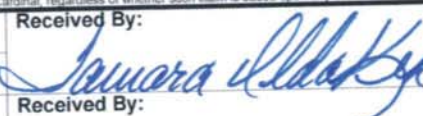
101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.		BILL TO			ANALYSIS REQUEST																							
Project Manager: Cliff Brunson		P.O. #:																										
Address: P.O. Box 805		Company: <u>Oxy</u>																										
City: Hobbs State: NM Zip: 88241		Attn:																										
Phone #: 575-397-6388 Fax #: 575-397-0397		Address:																										
Project #: Project Owner: <u>Oxy</u>		City:																										
Project Name: TWIN LAKES SAN ANDRES UNIT #46		State: Zip:																										
Project Location: NEW MEXICO		Phone #:																										
Sampler Name: SIMON		Fax #:																										

FOR LAB USE ONLY		(G)RAB OR (C)OMP. # CONTAINERS	MATRIX					PRESERV.		SAMPLING																			
Lab I.D.	Sample I.D.		GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME																
<u>H213169</u>																													
<u>11</u>	SP 2 @ 3'										11/3/21	11:53AM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>12</u>	SP 3 @ SURFACE										11/3/21	12:47PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>13</u>	SP 3 @ 1'										11/3/21	1:03PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>14</u>	SP 3 @ 2'										11/3/21	1:14PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>15</u>	SP 4 @ SURFACE										11/3/21	1:22PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>16</u>	SP 4 @ 1'										11/3/21	1:34PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>17</u>	SP 4 @ 2'										11/3/21	1:42PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>18</u>	SP 4 @ 3'										11/3/21	1:51PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>19</u>	SP 4 @ 4'										11/3/21	2:02PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>20</u>	SP 5 @ SURFACE										11/3/21	2:10PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: 	Date: <u>11-9-21</u>	Received By: 	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Time: <u>1030</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) <u>-9.6c</u> <u>-10.1c #13</u>	Time:	Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	REMARKS:	
Sampler - UPS - Bus - Other:		Checked by: <u>J.O.</u>		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476





**CARDINAL LABORATORIES**  
101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>									
Project Manager: Cliff Brunson		P.O. #:											
Address: P.O. Box 805		Company: <i>Oxy</i>											
City: Hobbs State: NM Zip: 88241		Attn:											
Phone #: 575-397-6388 Fax #: 575-397-0397		Address:											
Project #: Project Owner: <i>Oxy</i>		City:											
Project Name: TWIN LAKES SAN ANDRES UNIT #46		State: Zip:											
Project Location: NEW MEXICO		Phone #:											
Sampler Name: SIMON		Fax #:											

FOR LAB USE ONLY		(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.		SAMPLING		CL	BTEX	TPH EXT
Lab I.D.	Sample I.D.			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:			
<i>H213169</i>															
<i>21</i>	SP 5 @ 1'	✓	✓	✓							11/3/21	2:19PM	✓	✓	✓
<i>22</i>	SP 5 @ 2'	✓	✓	✓							11/3/21	2:31PM	✓	✓	✓

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Relinquished By: <i>[Signature]</i>	Date: <i>11-9-21</i>	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <i>1030</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:			
Delivered By: (Circle One) <i>-9.68/C-0.5c</i>	Sample Condition	CHECKED BY: (Initials) <i>Y.O.</i>		
Sampler - UPS - Bus - Other: <i>-10.ic #113</i>	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

February 04, 2024

AIMEE COLE  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: TWIN LAKES SA UNIT #046

Enclosed are the results of analyses for samples received by the laboratory on 02/01/24 10:27.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 AIMEE COLE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/04/2024	Sampling Type:	Soil
Project Name:	TWIN LAKES SA UNIT #046	Sampling Condition:	Cool & Intact
Project Number:	03E1417007	Sample Received By:	Shalyn Rodriguez
Project Location:	OXY- CHAVES COUNTY, NM		

**Sample ID: SP 6 SURFACE (H240475-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	2.20	110	2.00	9.52	
Toluene*	<0.050	0.050	02/01/2024	ND	2.28	114	2.00	10.4	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.41	120	2.00	9.83	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	7.22	120	6.00	10.1	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	02/02/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	197	98.3	200	1.42	
DRO >C10-C28*	<10.0	10.0	02/01/2024	ND	213	106	200	5.11	
EXT DRO >C28-C36	<10.0	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 AIMEE COLE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 02/01/2024  
 Reported: 02/04/2024  
 Project Name: TWIN LAKES SA UNIT #046  
 Project Number: 03E1417007  
 Project Location: OXY- CHAVES COUNTY, NM

Sampling Date: 01/30/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SP 6 2' (H240475-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	2.13	107	2.00	1.71		
Toluene*	<0.050	0.050	02/01/2024	ND	2.14	107	2.00	1.60		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.12	106	2.00	1.58		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.39	107	6.00	1.50		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	02/02/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	197	98.3	200	1.42		
DRO >C10-C28*	<10.0	10.0	02/01/2024	ND	213	106	200	5.11		
EXT DRO >C28-C36	<10.0	10.0	02/01/2024	ND						

Surrogate: 1-Chlorooctane 82.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.2 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 AIMEE COLE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/04/2024	Sampling Type:	Soil
Project Name:	TWIN LAKES SA UNIT #046	Sampling Condition:	Cool & Intact
Project Number:	03E1417007	Sample Received By:	Shalyn Rodriguez
Project Location:	OXY- CHAVES COUNTY, NM		

**Sample ID: SP 7 1' (H240475-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	2.13	107	2.00	1.71		
Toluene*	<0.050	0.050	02/01/2024	ND	2.14	107	2.00	1.60		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.12	106	2.00	1.58		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.39	107	6.00	1.50		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>464</b>	16.0	02/02/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	197	98.3	200	1.42		
<b>DRO &gt;C10-C28*</b>	<b>557</b>	10.0	02/02/2024	ND	213	106	200	5.11		
<b>EXT DRO &gt;C28-C36</b>	<b>783</b>	10.0	02/02/2024	ND						

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

ENSOLUM, LLC  
 AIMEE COLE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	02/01/2024	Sampling Date:	01/30/2024
Reported:	02/04/2024	Sampling Type:	Soil
Project Name:	TWIN LAKES SA UNIT #046	Sampling Condition:	Cool & Intact
Project Number:	03E1417007	Sample Received By:	Shalyn Rodriguez
Project Location:	OXY- CHAVES COUNTY, NM		

**Sample ID: SP 7 2' (H240475-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	2.13	107	2.00	1.71		
Toluene*	<0.050	0.050	02/01/2024	ND	2.14	107	2.00	1.60		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.12	106	2.00	1.58		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.39	107	6.00	1.50		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>288</b>	16.0	02/02/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	197	98.3	200	1.42		
<b>DRO &gt;C10-C28*</b>	<b>561</b>	10.0	02/02/2024	ND	213	106	200	5.11		
<b>EXT DRO &gt;C28-C36</b>	<b>714</b>	10.0	02/02/2024	ND						

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

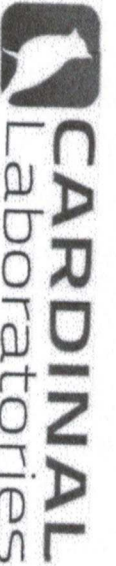
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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: Ensolum, LLC

Project Manager: Aimee Cole

Address: 601 N. Marientfield St. STE 400

City: Midland

Phone #: 720-384-7365

Fax #:

State: TX Zip: 79701

Project #: 63E1417007 Project Owner:

Project Name: Twin Lakes SA Unit # 046

Project Location: Chavez County

Sampler Name: SK

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: Oxy USA, Inc.

Attn: Wade Ditrich

Address:

City:

State:

Phone #: 575-390-2828

Fax #:

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
1344	SP6	2	C	1						1/30/24	1326	BTEX	
	SP6	2	C	1						1/30/24	1332	TPH	
	SP7	2	C	1						1/30/24	1414	Chloride	
	SP7	2	C	1						1/30/24	1416		
	SP6	2	C	1						1/30/24	1642		
	SP7	2	C	1						1/30/24	1646		
	SP7	2	C	1						1/30/24	1633		
	SP7	2	C	1						1/30/24	1625		

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Relinquished By: *Woodruff*

Date: 2-12-24

Time: 10:27

Received By: *Woodruff*

Date: *2-12-24*

Time: *10:27*

Relinquished By: *Woodruff*

Date:

Time:

Received By: *Woodruff*

Date:

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C: 4.4

Corrected Temp. °C:

Sample Condition Cool Intact

Checked BY: *SK*

Turnaround Time: *48 hrs*

Standard Rush

Bacteria (only) Sample Condition Cool Intact

Corrected Temp. °C:

Verbal Result:  Yes  No Add'l Phone #:

All Results are emailed. Please provide Email address: *Acole@ensolum.com*

REMARKS:

*48 hrs*

Thermometer ID: #113

Correction Factor: -0.5°C



**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 318589

**QUESTIONS**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318589
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2405244889
Incident Name	NAPP2405244889 TWIN LAKES SA UNIT #046 @ 30-005-60291
Incident Type	Oil Release
Incident Status	Remediation Plan Received
Incident Well	[30-005-60291] TWIN LAKES SAN ANDRES UNIT #046

**Location of Release Source**

Please answer all the questions in this group.

Site Name	Twin Lakes SA Unit #046
Date Release Discovered	11/01/2021
Surface Owner	State

**Incident Details**

Please answer all the questions in this group.

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

**Nature and Volume of Release**

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

Crude Oil Released (bbls) Details	Cause: Other   Unknown   Crude Oil   Released: 0 BBL (Unknown Released Amount)   Recovered: 0 BBL   Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Other   Unknown   Produced Water   Released: 0 BBL (Unknown Released Amount)   Recovered: 0 BBL   Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Historical release, volume is unknown. Oxy is not the Operator of the Incident Well and has no independent knowledge of the facts or circumstances surrounding the nature, content or volume of any release(s), contemporaneous to any such release(s). All information submitted by Oxy herein is based on Oxy's present day observations of the site, and educated guesses based on those observations. Oxy submits this Notification of Release pursuant to an agreement with the New Mexico State Land Office, as lessee of record.

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-9720  
**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  
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**Oil Conservation Division**  
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**Santa Fe, NM 87505**

QUESTIONS, Page 2

Action 318589

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318589
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	<b>No, according to supplied volumes this does not appear to be a "gas only" report.</b>
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	<b>Yes</b>
Reasons why this would be considered a submission for a notification of a major release	<b>From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.</b>
<i>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.</i>	

**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	False
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	Historical Release

*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: Wade Dittrich Title: Environmental Coordinator Email: wade_dittrich@oxy.com Date: 02/28/2024
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QUESTIONS, Page 3

Action 318589

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318589
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
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 ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 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	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

**Remediation Plan**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

**Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	30400
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3040
GRO+DRO (EPA SW-846 Method 8015M)	1940
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	06/01/2024
On what date will (or did) the final sampling or liner inspection occur	08/30/2024
On what date will (or was) the remediation complete(d)	08/30/2024
What is the estimated surface area (in square feet) that will be reclaimed	4500
What is the estimated volume (in cubic yards) that will be reclaimed	340
What is the estimated surface area (in square feet) that will be remediated	4500
What is the estimated volume (in cubic yards) that will be remediated	340

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 318589

**QUESTIONS (continued)**

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	Action Number: 318589
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

**Remediation Plan (continued)**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

**This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:**

(Select all answers below that apply.)

(Ex Situ) Excavation and <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	R360 Artesia LLC LANDFARM [FEEM0112340644]
<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	Not answered.
<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.

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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

I hereby agree and sign off to the above statement	Name: Wade Dittrich Title: Environmental Coordinator Email: wade_dittrich@oxy.com Date: 02/28/2024
--	---

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 318589

**QUESTIONS (continued)**

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	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

**Deferral Requests Only**

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

Requesting a deferral of the remediation closure due date with the approval of this submission	No
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QUESTIONS, Page 6

Action 318589

**QUESTIONS (continued)**

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	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

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

Remediation Closure Request	
<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	No

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CONDITIONS

Action 318589

**CONDITIONS**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318589
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**CONDITIONS**

Created By	Condition	Condition Date
rhamlet	The Remediation Plan is Conditionally Approved. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Floor confirmation samples should be delineated/excavated to meet closure criteria standards from Table 1 of the OCD Spill Rule for site assessment/characterization/proven depth to water determination. Sidewall/Edge samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. Please collect confirmation samples, representing no more than 200 ft. All sidewall samples should be taken from the sidewall of the excavation. Please make sure that the edge of the release extent is accurately defined. All off-pad areas must meet reclamation standards set forth in the OCD Spill Rule. The work will need to occur in 90 days after the report has been reviewed.	3/12/2024