



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

Incident # **nAPP2406454812**

**The Pump Canyon SWD #001 API# 30-045-26970 is in Unit J, Section 07, Township 30 North, Range 08 West, San Juan County, New Mexico.**

**RE: The cause of the release was determined that the motor was cracked from the SWD and resulted in the release on pad. The estimated release volume was 240 BBLS and 220 BBLS were recovered via water truck. Volume lost was calculated using telemetry.**

Dear Mr. Velez,

On March 4, 2024, LOGOS Pump Canyon SWD #001 SWD Motor experienced a failure resulting in 240 barrels of produced water released on location, no fluids left the vicinity and water trucks were at the disposal at the time of the release and was able to recover 220 barrels of free liquid.

The release size was 98'X 95'X 0.3'. Equaling 9,497 sq ft in area. The release area was contained on pad. Due to the release area fluid removed quickly LOGOS was able to skim the release area with a backhoe and remove 3 cyds of impacted soil and transport to Envirotech Landfarm. LOGOS complied with 19.15.29 when remediation occurs.

The Pump Canyon SWD #001 is located in the San Juan Basin. The San Jose Formation of Eocene age occurs in New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin. It overlies the Nacimiento Formation in the area generally south of the Colorado-New Mexico State line and overlies the Animas Formation in the area generally north of the State line.

The San Jose Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and variegated shale. Thickness of the San Jose Formation generally increases from west to east (200 feet in the west and south to almost 2,700 feet in the center of the structural basin).

Ground water is associated with alluvial and fluvial sandstone aquifers. Thus, the occurrence of ground water is mainly controlled by the distribution of sandstone in the formation. The distribution of such sandstone is the result of original depositional extent plus any post-depositional modifications, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone et al, 1983, table 5). The reported or measured discharge from 46 water wells completed in San Jose Formation ranges from 0.15 to 61 gallons per minute and the median is 5 gallons per minute. Most of the wells provide water for livestock and domestic use.

The San Jose Formation is a very suitable unit for recharge from precipitation because soils that form on the unit are sandy and highly permeable and therefore readily adsorb precipitation. However, low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the San Jose Formation by the San Juan River and its tributaries all tend to reduce the effective.

The attached sitting criteria demonstrates that the area is not within a floodplain or wetlands nor over a karst and the depth to ground water is greater than 100' below grade surface.

After remediation was completed and the location was ready for final confirmation sampling, LOGOS conducted final confirmation sampling on June 4, 2024, as approved by the NMOCD and BLM. A NMOCD representative was not on-site for the final confirmation sampling however, Adeloze, Abiodun (Emmanuel) was onsite for the final confirmation duration. However, Nelson Velez gave written approval for 500 sq ft sampling of (5) point composite samples.

LOGOS measured the quadrant areas approved by Emmanuel onsite for sampling and 17 (5)- point confirmation samples were collected from the release area. The sampling area was 9,497 sq feet. No odor or staining was observed during the sampling event. The sample results were below regulatory standards in all constituents. Please refer to Table 1 for analytical results. LOGOS respectfully request closure of the remediation.





### Sample Area

Each quardarnt represents 500 sqft where 1 (5) point composite sample was collected whitnessed by the BLM

PUMP CANYON SWD #1





Table I Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≤ 50 feet	Chloride***	EPA 300.0 or SM4500 C1 B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
51 feet-100 feet	Chloride***	EPA 300.0 or SM4500 C1 B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
>100 feet	Chloride***	EPA 300.0 or SM4500 C1 B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

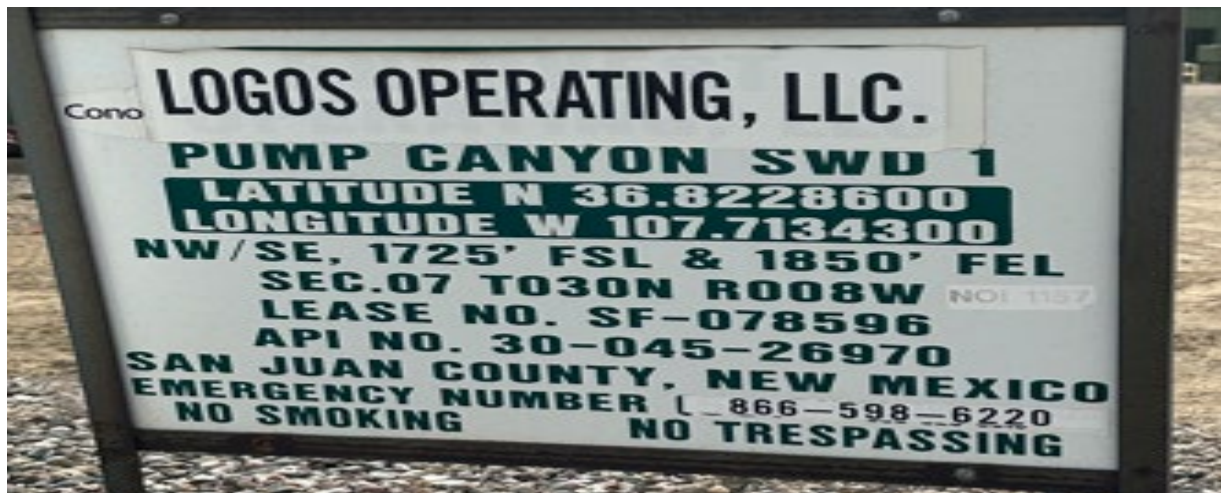
## Sample Area

Table 1

12/08/2023 Analytical Results SEE ATTACHED TABLE								
Sample Description	Date 6/4/2024	Sample Depth See below	EPA Method 8015		EPA Method 8021		EPA Method 300.0	
			GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)
19.15.29.13 (D) NMAC			1000 mg/kg			10 mg/kg	50 mg/kg	600 mg/kg
19.15.29.12 NMAC			1000 mg/kg					20,000 mg/kg
			2500 mg/kg					

● = Sample points to 0.3' bgs

The samples that were collected were placed into individual laboratory 4-ounce jars, capped head space free and transported on ice to Envirotech. The samples were analyzed for TPH (GRO/DRO/ORO) using EPA Method 8015D; benzene, Toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B and chlorides using EPA Method 300.0.



Site Overview





SB 1



SB 2





SB 3



SB 4





**SB 5**



**SB 6**





**SB7**



**SB8**





SB 9



SB10





**SB11**



**SB12**





**SB13**



**SB14**





SB 15



SB16





SB17



Thank you,

*Vanessa Fields*

Vanessa Fields

Regulatory Manager

Email: [vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)

Office: 505-787-2218

Cell: 505-320-1243





30-045-26970

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO  
(Submit 3 copies to OCD Aztec Office)

Operator MERIDIAN OIL INC. Location: Unit J Sec. 7 Twp 30 Rng 8Name of Well/Wells or Pipeline Serviced PUMP CANYON SWD #1  
cps 2094wElevation 5972' Completion Date 2/15/89 Total Depth 460' Land Type\* N/ACasing, Sizes, Types & Depths 40'If Casing is cemented, show amounts & types used N/AIf Cement or Bentonite Plugs have been placed, show depths & amounts used  
N/ADepths & thickness of water zones with description of water when possible:  
Fresh, Clear, Salty, Sulphur, Etc. 130' NO SAMPLEDepths gas encountered: N/AType & amount of coke breeze used: N/ADepths anodes placed: 415', 405', 395', 385', 375', 345', 335', 325', 275', 265'Depths vent pipes placed: 465'Vent pipe perforations: 360'Remarks: gb #1

RECEIVED

MAY 31 1991

OIL CON. DIV

DIST. 3

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

\*Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.  
If Federal or Indian, add Lease Number.



# National Flood Hazard Layer FIRMette



107°43'11"W 36°49'37"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

107°42'33"W 36°49'8"N

Released to Imaging: 11/4/2024 11:45:06 AM

Basemap Imagery Source: USGS National Map 2023

## Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



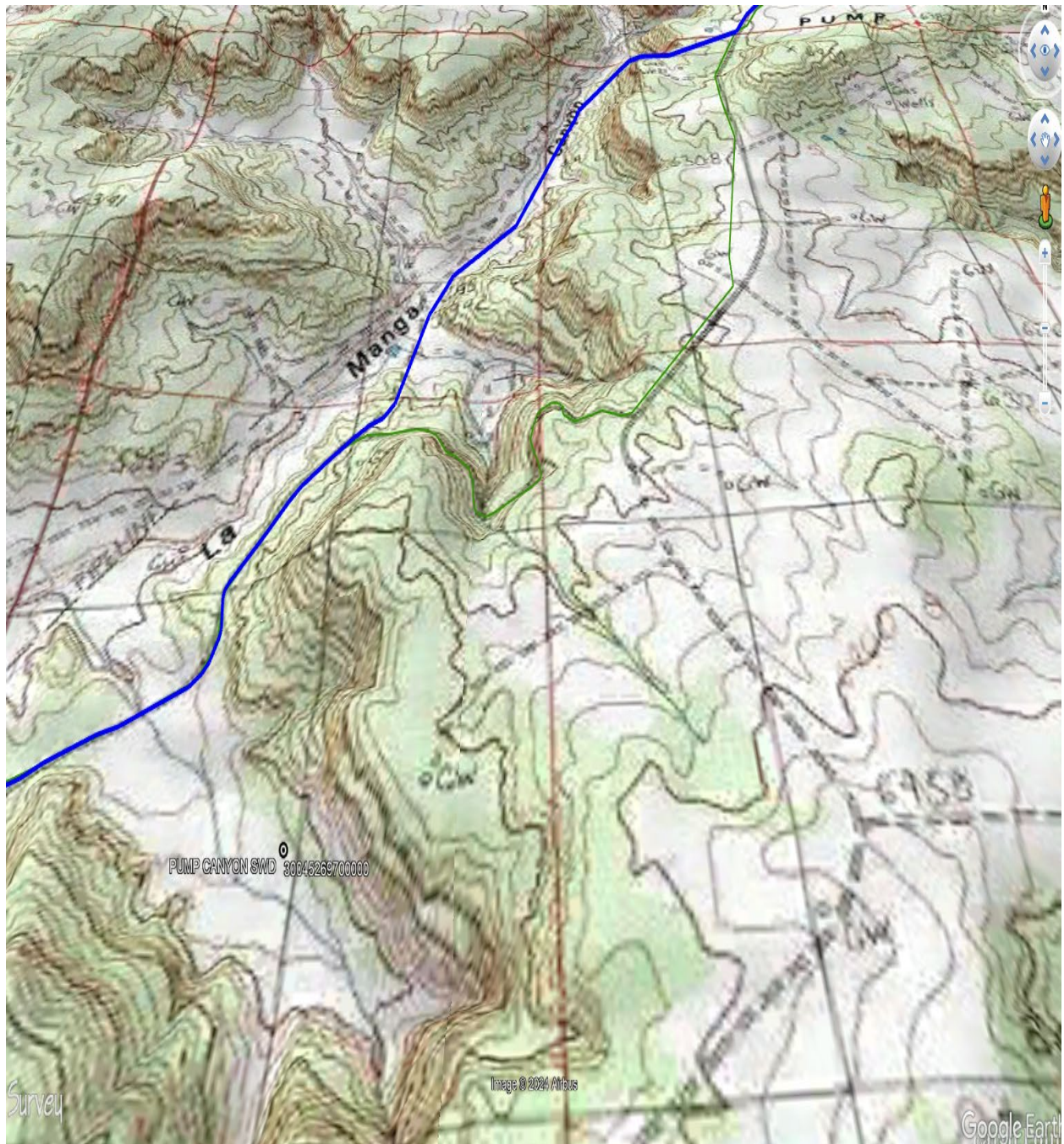
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/30/2024 at 5:42 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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







<b>SB1</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	113	322	886	451
<b>SB2</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	138	377	515	332
<b>SB3</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	172	425	597	1610
<b>SB4</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	72.5	186	258.5	1010
<b>SB5</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	68.7	152	220.7	466
<b>SB6</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	88	195	283	403
<b>SB7</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	275	608	883	1350
<b>SB8</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	168	411	579	1770
<b>SB9</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	585	1390	1975	1860
<b>SB10</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	270	682	952	1480
<b>SB11</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	196	489	685	1410
<b>SB12</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	193	494	687	1590
<b>SB13</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	95.9	265	360.9	1200
<b>SB14</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	71.7	199	270.7	944
<b>SB15</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	39.2	129	168.2	574
<b>SB16</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	277	585	862	685
<b>SB17</b>	<i>Benzene</i>	<i>Gasoline Range Organics</i>	<i>Diesel Range Organics</i>	<i>Oil Range Organics</i>	<b>Total</b>	<i>Chloride</i>
	ND	ND	297	812	1109	436



Report to:  
Vanessa Fields



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

### Logos Resources

Project Name: Pump Canyon SWD #1

Work Order: E406017

Job Number: 12035-0114

Received: 6/4/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
6/12/24

5796 U.S. Hwy 64  
Farmington, NM 87401

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



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
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Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 6/12/24

Vanessa Fields  
2010 Afton Place  
Farmington, NM 87401



Project Name: Pump Canyon SWD #1  
Workorder: E406017  
Date Received: 6/4/2024 11:56:00AM

Vanessa Fields,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/4/2024 11:56:00AM, under the Project Name: Pump Canyon SWD #1.

The analytical test results summarized in this report with the Project Name: Pump Canyon SWD #1 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

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



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## Sample Summary

Logos Resources	Project Name:	Pump Canyon SWD #1	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	06/12/24 12:23

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SB#1	E406017-01A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#2	E406017-02A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#3	E406017-03A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#4	E406017-04A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#5	E406017-05A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#6	E406017-06A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#7	E406017-07A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#8	E406017-08A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#9	E406017-09A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#10	E406017-10A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#11	E406017-11A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#12	E406017-12A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#13	E406017-13A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#14	E406017-14A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#15	E406017-15A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#16	E406017-16A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.
SB#17	E406017-17A	Soil	06/04/24	06/04/24	Glass Jar, 2 oz.





Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#1  
E406017-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2423062	
Benzene	ND	0.0250	1	06/05/24	06/05/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/05/24	
Toluene	ND	0.0250	1	06/05/24	06/05/24	
o-Xylene	ND	0.0250	1	06/05/24	06/05/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/05/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/05/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/05/24	
Surrogate: 1,2-Dichloroethane-d4		93.9 %	70-130	06/05/24	06/05/24	
Surrogate: Toluene-d8		105 %	70-130	06/05/24	06/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2423062	
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/05/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/05/24	
Surrogate: 1,2-Dichloroethane-d4		93.9 %	70-130	06/05/24	06/05/24	
Surrogate: Toluene-d8		105 %	70-130	06/05/24	06/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2423095	
Diesel Range Organics (C10-C28)	113	25.0	1	06/06/24	06/08/24	
Oil Range Organics (C28-C36)	322	50.0	1	06/06/24	06/08/24	
Surrogate: n-Nonane		118 %	50-200	06/06/24	06/08/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2423100	
Chloride	451	40.0	2	06/06/24	06/06/24	





Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#2

E406017-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/05/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/05/24	
Toluene	ND	0.0250	1	06/05/24	06/05/24	
o-Xylene	ND	0.0250	1	06/05/24	06/05/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/05/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/05/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/05/24	
Surrogate: 1,2-Dichloroethane-d4		90.6 %	70-130	06/05/24	06/05/24	
Surrogate: Toluene-d8		107 %	70-130	06/05/24	06/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/05/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/05/24	
Surrogate: 1,2-Dichloroethane-d4		90.6 %	70-130	06/05/24	06/05/24	
Surrogate: Toluene-d8		107 %	70-130	06/05/24	06/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	138	25.0	1	06/06/24	06/08/24	
Oil Range Organics (C28-C36)	377	50.0	1	06/06/24	06/08/24	
Surrogate: n-Nonane		116 %	50-200	06/06/24	06/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	332	200	10	06/06/24	06/06/24	



Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#3

E406017-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/05/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/05/24	
Toluene	ND	0.0250	1	06/05/24	06/05/24	
o-Xylene	ND	0.0250	1	06/05/24	06/05/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/05/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/05/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/05/24	
Surrogate: 1,2-Dichloroethane-d4		89.2 %	70-130	06/05/24	06/05/24	
Surrogate: Toluene-d8		105 %	70-130	06/05/24	06/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/05/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/05/24	
Surrogate: 1,2-Dichloroethane-d4		89.2 %	70-130	06/05/24	06/05/24	
Surrogate: Toluene-d8		105 %	70-130	06/05/24	06/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	172	25.0	1	06/06/24	06/08/24	
Oil Range Organics (C28-C36)	425	50.0	1	06/06/24	06/08/24	
Surrogate: n-Nonane		116 %	50-200	06/06/24	06/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	1670	200	10	06/06/24	06/06/24	





Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#4

E406017-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		88.7 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		88.7 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	72.5	25.0	1	06/06/24	06/08/24	
Oil Range Organics (C28-C36)	186	50.0	1	06/06/24	06/08/24	
Surrogate: n-Nonane		121 %	50-200	06/06/24	06/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	1010	200	10	06/06/24	06/06/24	



Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#5

E406017-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		90.4 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		108 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		90.4 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		108 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	68.7	25.0	1	06/06/24	06/08/24	
Oil Range Organics (C28-C36)	152	50.0	1	06/06/24	06/08/24	
Surrogate: n-Nonane		116 %	50-200	06/06/24	06/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	466	100	5	06/06/24	06/06/24	





## Sample Data

Logos Resources  
2010 Afton Place  
Farmington NM, 87401

Project Name: Pump Canyon SWD #1  
Project Number: 12035-0114  
Project Manager: Vanessa Fields

**Reported:**  
6/12/2024 12:23:25PM

## SB#6

## E406017-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		108 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.9 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		107 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		108 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.9 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		107 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	88.0	25.0	1	06/06/24	06/08/24	
Oil Range Organics (C28-C36)	195	50.0	1	06/06/24	06/08/24	
Surrogate: n-Nonane		117 %	50-200	06/06/24	06/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	403	200	10	06/06/24	06/06/24	



Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#7

E406017-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.1 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		108 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.1 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		108 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	275	25.0	1	06/06/24	06/08/24	
Oil Range Organics (C28-C36)	608	50.0	1	06/06/24	06/08/24	
Surrogate: n-Nonane		115 %	50-200	06/06/24	06/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	1350	200	10	06/06/24	06/06/24	





Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#8

E406017-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		88.8 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		88.8 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	168	25.0	1	06/06/24	06/11/24	
Oil Range Organics (C28-C36)	411	50.0	1	06/06/24	06/11/24	
Surrogate: n-Nonane		119 %	50-200	06/06/24	06/11/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	1770	200	10	06/06/24	06/06/24	



Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#9

E406017-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		88.6 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		88.6 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	585	125	5	06/06/24	06/11/24	
Oil Range Organics (C28-C36)	1390	250	5	06/06/24	06/11/24	
Surrogate: n-Nonane		115 %	50-200	06/06/24	06/11/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	1860	200	10	06/06/24	06/06/24	





Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#10

E406017-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		88.2 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		108 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		88.2 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		108 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	270	50.0	2	06/06/24	06/11/24	
Oil Range Organics (C28-C36)	682	100	2	06/06/24	06/11/24	
Surrogate: n-Nonane		119 %	50-200	06/06/24	06/11/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	1480	200	10	06/06/24	06/06/24	



Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#11

E406017-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.6 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		105 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.6 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		105 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	196	25.0	1	06/06/24	06/11/24	
Oil Range Organics (C28-C36)	489	50.0	1	06/06/24	06/11/24	
Surrogate: n-Nonane		122 %	50-200	06/06/24	06/11/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	1410	200	10	06/06/24	06/06/24	





Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#12

E406017-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		90.9 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		107 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		90.9 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		107 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	193	25.0	1	06/06/24	06/11/24	
Oil Range Organics (C28-C36)	494	50.0	1	06/06/24	06/11/24	
Surrogate: n-Nonane		124 %	50-200	06/06/24	06/11/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	1590	200	10	06/06/24	06/06/24	



## Sample Data

Logos Resources  
2010 Afton Place  
Farmington NM, 87401

Project Name: Pump Canyon SWD #1  
Project Number: 12035-0114  
Project Manager: Vanessa Fields

**Reported:**  
6/12/2024 12:23:25PM

## SB#13

## E406017-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene	109 %	70-130		06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4	93.4 %	70-130		06/05/24	06/06/24	
Surrogate: Toluene-d8	108 %	70-130		06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene	109 %	70-130		06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4	93.4 %	70-130		06/05/24	06/06/24	
Surrogate: Toluene-d8	108 %	70-130		06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	95.9	25.0	1	06/06/24	06/11/24	
Oil Range Organics (C28-C36)	265	50.0	1	06/06/24	06/11/24	
Surrogate: n-Nonane	124 %	50-200		06/06/24	06/11/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	1200	200	10	06/06/24	06/06/24	



Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#14

E406017-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		90.2 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		110 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		90.2 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	71.7	25.0	1	06/06/24	06/11/24	
Oil Range Organics (C28-C36)	199	50.0	1	06/06/24	06/11/24	
Surrogate: n-Nonane		128 %	50-200	06/06/24	06/11/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	944	200	10	06/06/24	06/06/24	





Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#15

E406017-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.7 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.7 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	39.2	25.0	1	06/06/24	06/11/24	
Oil Range Organics (C28-C36)	129	50.0	1	06/06/24	06/11/24	
Surrogate: n-Nonane		122 %	50-200	06/06/24	06/11/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	574	40.0	2	06/06/24	06/06/24	



Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#16

E406017-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		91.2 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		104 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		111 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		91.2 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		104 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	277	25.0	1	06/06/24	06/08/24	
Oil Range Organics (C28-C36)	585	50.0	1	06/06/24	06/08/24	
Surrogate: n-Nonane		119 %	50-200	06/06/24	06/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	685	40.0	2	06/06/24	06/06/24	



Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Pump Canyon SWD #1 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 6/12/2024 12:23:25PM
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SB#17

E406017-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Benzene	ND	0.0250	1	06/05/24	06/06/24	
Ethylbenzene	ND	0.0250	1	06/05/24	06/06/24	
Toluene	ND	0.0250	1	06/05/24	06/06/24	
o-Xylene	ND	0.0250	1	06/05/24	06/06/24	
p,m-Xylene	ND	0.0500	1	06/05/24	06/06/24	
Total Xylenes	ND	0.0250	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		113 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.3 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2423062
Gasoline Range Organics (C6-C10)	ND	20.0	1	06/05/24	06/06/24	
Surrogate: Bromofluorobenzene		113 %	70-130	06/05/24	06/06/24	
Surrogate: 1,2-Dichloroethane-d4		89.3 %	70-130	06/05/24	06/06/24	
Surrogate: Toluene-d8		106 %	70-130	06/05/24	06/06/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2423095
Diesel Range Organics (C10-C28)	297	25.0	1	06/06/24	06/08/24	
Oil Range Organics (C28-C36)	812	50.0	1	06/06/24	06/08/24	
Surrogate: n-Nonane		119 %	50-200	06/06/24	06/08/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2423100
Chloride	436	40.0	2	06/06/24	06/06/24	





QC Summary Data

Logos Resources	Project Name:	Pump Canyon SWD #1	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	6/12/2024 12:23:25PM

Volatile Organic Compounds by EPA 8260B

Analyst: IY

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

Blank (2423062-BLK1) Prepared: 06/05/24 Analyzed: 06/05/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.545		0.500		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.457		0.500		91.3	70-130			
Surrogate: Toluene-d8	0.527		0.500		105	70-130			

LCS (2423062-BS1) Prepared: 06/05/24 Analyzed: 06/05/24

Benzene	2.16	0.0250	2.50		86.2	70-130			
Ethylbenzene	2.33	0.0250	2.50		93.1	70-130			
Toluene	2.35	0.0250	2.50		94.1	70-130			
o-Xylene	2.41	0.0250	2.50		96.2	70-130			
p,m-Xylene	4.83	0.0500	5.00		96.5	70-130			
Total Xylenes	7.23	0.0250	7.50		96.4	70-130			
Surrogate: Bromofluorobenzene	0.557		0.500		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.477		0.500		95.4	70-130			
Surrogate: Toluene-d8	0.533		0.500		107	70-130			

LCS Dup (2423062-BSD1) Prepared: 06/05/24 Analyzed: 06/05/24

Benzene	2.25	0.0250	2.50		90.0	70-130	4.22	23	
Ethylbenzene	2.45	0.0250	2.50		97.8	70-130	4.99	27	
Toluene	2.45	0.0250	2.50		98.0	70-130	4.00	24	
o-Xylene	2.61	0.0250	2.50		104	70-130	8.08	27	
p,m-Xylene	5.22	0.0500	5.00		104	70-130	7.88	27	
Total Xylenes	7.83	0.0250	7.50		104	70-130	7.95	27	
Surrogate: Bromofluorobenzene	0.573		0.500		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.471		0.500		94.1	70-130			
Surrogate: Toluene-d8	0.533		0.500		107	70-130			



QC Summary Data

Logos Resources	Project Name:	Pump Canyon SWD #1	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	6/12/2024 12:23:25PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

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

Blank (2423062-BLK1) Prepared: 06/05/24 Analyzed: 06/05/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.545		0.500		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.457		0.500		91.3	70-130			
Surrogate: Toluene-d8	0.527		0.500		105	70-130			

LCS (2423062-BS2) Prepared: 06/05/24 Analyzed: 06/05/24

Gasoline Range Organics (C6-C10)	57.6	20.0	50.0		115	70-130			
Surrogate: Bromofluorobenzene	0.561		0.500		112	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.460		0.500		91.9	70-130			
Surrogate: Toluene-d8	0.535		0.500		107	70-130			

LCS Dup (2423062-BSD2) Prepared: 06/05/24 Analyzed: 06/05/24

Gasoline Range Organics (C6-C10)	58.6	20.0	50.0		117	70-130	1.65	20	
Surrogate: Bromofluorobenzene	0.570		0.500		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.450		0.500		90.0	70-130			
Surrogate: Toluene-d8	0.534		0.500		107	70-130			



QC Summary Data

Logos Resources	Project Name:	Pump Canyon SWD #1	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	6/12/2024 12:23:25PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2423095-BLK1)					Prepared: 06/06/24 Analyzed: 06/08/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	60.5		50.0		121	50-200			

LCS (2423095-BS1)					Prepared: 06/06/24 Analyzed: 06/08/24				
Diesel Range Organics (C10-C28)	327	25.0	250		131	38-132			
Surrogate: n-Nonane	58.2		50.0		116	50-200			

Matrix Spike (2423095-MS1)					Source: E406017-08		Prepared: 06/06/24 Analyzed: 06/08/24		
Diesel Range Organics (C10-C28)	476	25.0	250	168	123	38-132			
Surrogate: n-Nonane	60.0		50.0		120	50-200			

Matrix Spike Dup (2423095-MSD1)					Source: E406017-08		Prepared: 06/06/24 Analyzed: 06/08/24		
Diesel Range Organics (C10-C28)	454	25.0	250	168	114	38-132	4.83	20	
Surrogate: n-Nonane	59.1		50.0		118	50-200			





QC Summary Data

Logos Resources	Project Name:	Pump Canyon SWD #1	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	6/12/2024 12:23:25PM

Anions by EPA 300.0/9056A

Analyst: DT

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

Blank (2423100-BLK1)					Prepared: 06/06/24 Analyzed: 06/06/24				
Chloride	ND	20.0							
LCS (2423100-BS1)					Prepared: 06/06/24 Analyzed: 06/06/24				
Chloride	254	20.0	250		101	90-110			
Matrix Spike (2423100-MS1)					Source: E406017-03		Prepared: 06/06/24 Analyzed: 06/06/24		
Chloride	1910	200	250	1670	94.7	80-120			
Matrix Spike Dup (2423100-MSD1)					Source: E406017-03		Prepared: 06/06/24 Analyzed: 06/06/24		
Chloride	1900	200	250	1670	94.3	80-120	0.0551	20	

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

Definitions and Notes

Logos Resources	Project Name:	Pump Canyon SWD #1	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Vanessa Fields	06/12/24 12:23

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Released to: On 11/17/2023 11:45:06 AM

Received by: OCD: 8/30/2024 3:52:38 PM

Client: <u>Logos Resources</u>		Bill To		Lab Use Only		TAT		EPA Program	
Project: <u>Pump Canyon JWD #1</u>		Attention: <u>Vanessa Fields</u>		Lab WO# <u>E 406017</u>		Job Number <u>12035-0114</u>		CWA	
Project Manager: <u>Vanessa Fields</u>		Address: <u>2010 Affin Pl.</u>						SDWA	
Address: <u>2010 Affin Pl.</u>		City, State, Zip <u>Farmington nm 87402</u>		Analysis and Method		1D		RCRA	
City, State, Zip <u>Farmington nm 87402</u>		Phone: <u>505 320 1243</u>				2D			
Phone: <u>505 320 1243</u>		Email: <u>Vfields@logosresourcesllc.com</u>				3D			
Email: <u>Vfields@logosresourcesllc.com</u>		Email: <u>lganillo@logosresourcesllc.com</u>				Standard			
Report due by:									

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO	GRO/DRO	BTEX by	VOC by	Metals	Chloride	BGDOC	TCEQ 100						Remarks
11:45 AM 6/4/24	6/4/24	S	1	SB #1	1	X	X	X			X								
9:39	"	S	1	SB #2	2	X	X	X			X								
9:43	"	S	1	SB #3	3	X	X	X			X								
9:47	"	S	1	SB #4	4	X	X	X			X								
9:50	"	S	1	SB #5	5	X	X	X			X								
9:57	"	S	1	SB #6	6	X	X	X			X								
10:03	"	S	1	SB #7	7	X	X	X			X								
10:06	"	S	1	SB #8	8	X	X	X			X								
10:07	"	S	1	SB #9	9	X	X	X			X								
10:11	"	S	1	SB #10	10	X	X	X			X								

Additional Instructions:

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

Relinquished by: (Signature) [Signature] Date 6/4/24 Time 11:53

Received by: (Signature) [Signature] Date 6/4/24 Time 11:56

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

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

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

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



Released to: [illegible] 11:45:06 AM 07/10/24

Received by: [illegible] 8/30/2024 3:52:38 PM

Client: <u>Logos Resources</u>		Bill To		Lab Use Only		TAT		EPA Program	
Project: <u>Pump Canyon SWD#1</u>		Attention: <u>Vanessa Fields</u>		Lab WO# <u>E 400017</u>		Job Number <u>12035-0114</u>		CWA	
Project Manager: <u>Vanessa Fields</u>		Address: <u>2010 Affin Pl.</u>		City, State, Zip <u>Farmington nm 87402</u>		1D 2D 3D Standard		SDWA	
Address: <u>2010 Affin Pl.</u>		Phone: <u>505 320 1243</u>		Email: <u>VFields@logosresourcesllc.com</u>		Analysis and Method		RCRA	
City, State, Zip <u>Farmington nm 87402</u>		Email: <u>VFields@logosresourcesllc.com</u>		Email: <u>lgani@logosresourcesllc.com</u>		DRO/ORO by 8015		State	
Phone: <u>505 320 1243</u>		Email: <u>VFields@logosresourcesllc.com</u>		Email: <u>lgani@logosresourcesllc.com</u>		GRO/DRO by 8015		NM CO UT AZ TX	
Email: <u>VFields@logosresourcesllc.com</u>		Email: <u>lgani@logosresourcesllc.com</u>		Email: <u>lgani@logosresourcesllc.com</u>		BTEX by 8021			
Report due by:						VOC by 8260			
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	Metals 6010	Chloride 300.0	BDOC - NM	TCEQ 1005-TX
6:16	6/4/24	S	1	SB11	11	X	X	X	
8:19	"	S	1	SB12	12				
10:23	"	S	1	SB13	13				
10:26	"	S	1	SB14	14				
10:30	"	S	1	SB15	15				
10:33	"	S	1	SB16	16				
10:39	"	S	1	SB17	17				

Additional Instructions:

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

Sampled by: [Signature]

Relinquished by: (Signature) [Signature] Date 6/4/24 Time 11:53

Received by: (Signature) [Signature] Date 06/04/24 Time 11:56

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

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

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

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

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

Received on ice: (Y) N

T1 \_\_\_\_\_ T2 \_\_\_\_\_ T3 \_\_\_\_\_

AVG Temp °C 4

## Envirotech Analytical Laboratory

Printed: 6/4/2024 1:37:31PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

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

Client:	Logos Resources	Date Received:	06/04/24 11:56	Work Order ID:	E406017
Phone:	(505) 787-9100	Date Logged In:	06/04/24 12:27	Logged In By:	Angelina Pineda
Email:	vfields@logosresourcesllc.com	Due Date:	06/11/24 17:00 (5 day TAT)		

Chain of Custody (COC)

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

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

Carrier: Lacey GranilloComments/ResolutionSample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

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

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client Instruction

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

Date



envirotech Inc.



Client: <u>Logos Resources</u>		Bill To		Lab Use Only		TAT		EPA Program					
Project: <u>Pump &amp; Treat WPD #1</u>		Attention: <u>Vanessa Fields</u>		Lab WO# <u>E 406017</u>		Job Number <u>1203-0114</u>		1D	2D	3D	Standard	CWA	SDWA
Project Manager: <u>Vanessa Fields</u>		Address: <u>2010 Afton Pl.</u>		City, State, Zip <u>Farmington nm 87402</u>		Analysis and Method							
Address: <u>2010 Afton Pl.</u>		Phone: <u>505 320 1243</u>		Email: <u>Vfields@logosresourcesllc.com</u>									
City, State, Zip <u>Farmington nm 87402</u>		Email: <u>lgranillo@logosresourcesllc.com</u>											
Phone: <u>505 320 1243</u>													
Email: <u>Vfields@logosresourcesllc.com</u>													
Report due by:													

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BDOC - NM	TCEQ 1005-TX	1D	2D	3D	Standard	State	Remarks
9:36	6/4/24	S	1	SB #1	1	X	X	X			X								
9:39	"	S	1	SB #2	2	X	X	X			X								
9:43	"	S	1	SB #3	3	X	X	X			X								
9:47	"	S	1	SB #4	4	X	X	X			X								
9:50	"	S	1	SB #5	5	X	X	X			X								
9:57	"	S	1	SB #6	6	X	X	X			X								
10:03	"	S	1	SB #7	7	X	X	X			X								
10:06	"	S	1	SB #8	8	X	X	X			X								
10:09	"	S	1	SB #9	9	X	X	X			X								
10:11	"	S	1	SB #10	10	X	X	X			X								

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date, or time of collection is considered fraud and may be grounds for legal action.						Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days					
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Lab Use Only			
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N			
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	T1 _____ T2 _____ T3 _____			
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	AVG Temp °C <u>4</u>			

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA \_\_\_\_\_

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



Released to: Imaging 1/14/2024 11:45:06 AM

Received by: OCD: 8/30/2024 3:52:38 PM

Client: <u>Logos Resources</u>		Bill To		Lab Use Only		TAT		EPA Program	
Project: <u>Pump (on SWD #1)</u>		Attention: <u>Vanessa Fields</u>		Lab WO# <u>E 400017</u>		Job Number <u>12035-0114</u>		CWA SDWA	
Project Manager: <u>Vanessa Fields</u>		Address: <u>2010 Afton Pl.</u>		City, State, Zip <u>Farmington nm 87402</u>		1D 2D 3D Standard		RCRA	
Address: <u>2010 Afton Pl.</u>		Phone: <u>505 320 1243</u>		Email: <u>Vfields@logosresourcesllc.com</u>		Analysis and Method		State	
City, State, Zip <u>Farmington nm 87402</u>		Email: <u>lgrani@logosresourcesllc.com</u>		DRQ/DRO by 8015		GRO/DRO by 8015		BTEX by 8021	
Phone: <u>505 320 1243</u>		Email: <u>Vfields@logosresourcesllc.com</u>		VOC by 8260		Metals 6010		Chloride 300.0	
Email: <u>Vfields@logosresourcesllc.com</u>		Email: <u>lgrani@logosresourcesllc.com</u>		BGDOC - NM		TCEQ 1005 TX		NM CO UT AZ TX	
Report due by:									

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRQ/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC - NM	TCEQ 1005 TX	Remarks
10:16	6/4/24	S	1	SB11	11	X	X	X			X			
10:19	"	S	1	SB12	12									
10:23	"	S	1	SB13	13									
10:26	"	S	1	SB14	14									
10:30	"	S	1	SB15	15									
10:33	"	S	1	SB16	16									
10:38	"	S	1	SB17	17									Analysis added per client request per email

Additional Instructions:

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

Relinquished by: (Signature) [Signature] Date 6/4/24 Time 11:55

Received by: (Signature) [Signature] Date 6/4/24 Time 11:56

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

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

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

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



Page 51 of 67



Cc: Robert Bixler <[rbixler@logosresourcesllc.com](mailto:rbixler@logosresourcesllc.com)>; Bryan Lovato <[blovato@logosresourcesllc.com](mailto:blovato@logosresourcesllc.com)>; Etta Trujillo <[etrujillo@logosresourcesllc.com](mailto:etrujillo@logosresourcesllc.com)>; Lacey Granillo <[lgranillo@logosresourcesllc.com](mailto:lgranillo@logosresourcesllc.com)>  
Subject: [EXTERNAL] LOGOS Major Release 220BBLs produced water Pump Canyon SWD #001

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good afternoon Emmanuel,

Per our conversation. LOGOS had a 220 BBL produced water release at the Pump Canyon SWD #001 today (March 4, 2024) at 9:00 am. The release was due to a pump failure.

All liquids remained on location and all free liquids have been disposed of.

LOGOS will submit an Initial MUEV by 9:00am on March 5, 2024

Please let me know if you have any questions.

## 30-045-26970 PUMP CANYON SWD #001

General Well Information

Operator: [289408](#) LOGOS OPERATING, LLC

Status: Active

Well Type: Salt Water Disposal

Work Type: New

Direction: Vertical

Multi-Lateral: No

Mineral Owner: Federal

Surface Owner: Federal

Surface Location: J-07-30N-08W 1725 FSL 1850 FEL

Lat/Long: 36.8228951,-107.7140961 NAD83

GL Elevation: 5972

Vanessa Fields

Regulatory Manager

Email: [vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)

Office: 505-787-2218

Cell: 505-320-1243



**From:** Vanessa Fields  
**Sent:** Saturday, June 1, 2024 9:48 AM  
**To:** Adeloze, Abiodun A <aadeloze@blm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>  
**Cc:** Robert Bixler <rbixler@logosresourcesllc.com>; Bryan Lovato <blovato@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Lacey Granillo <LGranillo@logosresourcesllc.com>; Krista McWilliams <kmcwilliams@logosresourcesllc.com>  
**Subject:** RE: [EXTERNAL] LOGOS Major Release 240 BBLs produced water Pump Canyon SWD #001 Sampling Notice incident ID (n#) nAPP2406454812

Good morning,

Final confirmation sampling has been scheduled for Tuesday June 4, 2024, at 9:30 am.

Please let me know if you have any questions.

Thank you,

Vanessa Fields  
Regulatory Manager  
Email: [vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)  
Office: 505-787-2218  
Cell: 505-320-1243



**From:** Vanessa Fields  
**Sent:** Monday, March 4, 2024 6:06 PM  
**To:** Adeloze, Abiodun A <aadeloze@blm.gov>  
**Cc:** Robert Bixler <rbixler@logosresourcesllc.com>; Bryan Lovato <blovato@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Lacey Granillo <LGranillo@logosresourcesllc.com>  
**Subject:** RE: [EXTERNAL] LOGOS Major Release 240 BBLs produced water Pump Canyon SWD #001

Good evening Emmanuel,

Please find attached the MUE for the Pump Canyon SWD #001.

A sundry will be submitted as well.

Thank you,

Vanessa Fields  
Regulatory Manager  
Email: [vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)  
Office: 505-787-2218  
Cell: 505-320-1243



**From:** Adeloze, Abiodun A <aadeloze@blm.gov>  
**Sent:** Monday, March 4, 2024 4:00 PM  
**To:** Vanessa Fields <vfields@logosresourcesllc.com>  
**Cc:** Robert Bixler <rbixler@logosresourcesllc.com>; Bryan Lovato <blovato@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Lacey Granillo <lgranillo@logosresourcesllc.com>  
**Subject:** RE: [EXTERNAL] LOGOS Major Release 220BBLs produced water Pump Canyon SWD #001

Thanks, Vanessa for the notification. I will visit the location tomorrow morning. Please fill out the MUE Form and provide as much details as possible and include any photos if available and send it to me and submit a Sundry Notice as well.  
Thank you.

Abiodun Adeloze (Emmanuel)  
Natural Resources Specialist (NRS)  
6251 College Blvd., Suite A  
Farmington, NM 87402  
Office: 505-564-7665  
Mobile: 505-635-0984

**From:** Vanessa Fields <vfields@logosresourcesllc.com>  
**Sent:** Monday, March 4, 2024 3:05 PM  
**To:** Adeloze, Abiodun A <aadeloze@blm.gov>



## Vanessa Fields

---

**From:** Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>  
**Sent:** Tuesday, June 4, 2024 3:28 PM  
**To:** Vanessa Fields  
**Cc:** Adeloye, Abiodun A; Robert Bixler; Bryan Lovato; Etta Trujillo; Lacey Granillo; Krista McWilliams  
**Subject:** Re: [EXTERNAL] LOGOS Major Release 240 BBLS produced water Pump Canyon SWD # 001 Sampling Notice incident ID (n#) nAPP2406454812 Variance for Sampling

Good afternoon Vanessa,

Per our conversation this morning, your request to increase the sampling frequency from 200 to 500 square feet is approved.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards,

**Nelson Velez** • Environmental Specialist - Adv  
Environmental Bureau | EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87410  
(505) 469-6146 | [nelson.velez@emnrd.nm.gov](mailto:nelson.velez@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>





Outlook

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Re: [EXTERNAL] LOGOS Major Release 240 BBLS produced water Pump Canyon SWD #001 Sampling Notice incident ID (n#) nAPP2406454812  
Variance for Sampling Notification

---

From Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>

Date Mon 6/3/2024 2:44 PM

To Vanessa Fields <vfields@logosresourcesllc.com>; Adeloze, Abiodun A <aadeloze@blm.gov>

Cc Robert Bixler <rbixler@logosresourcesllc.com>; Bryan Lovato <blovato@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Lacey Granillo <lgranillo@logosresourcesllc.com>; Krista McWilliams <kmcwilliams@logosresourcesllc.com>

Good afternoon Vanessa,

Thank you for the notice. Your variance request specifically addressing 19.15.29.12D (1a) NMAC is approved.

If an OCD representative is not on-site on the date &/or time given, please sample per 19.15.29 NMAC or from an OCD pre-approved sampling plan. For whatever reason, if the sampling timeframe is altered, please notify the OCD as soon as possible so we may adjust our schedule(s). Failure to notify the OCD of this change may result in the closure sample(s) not being accepted.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards,

**Nelson Velez** • Environmental Specialist - Adv  
Environmental Bureau | EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87410  
(505) 469-6146 | [nelson.velez@emnrd.nm.gov](mailto:nelson.velez@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>



LOGOS is requesting a variance to 19.15.29.13D.1C to allow LOGOS to collect 500 square feet composite samples instead of the standard 200 square feet. This request is based on the immediate remedial efforts undertaken during the release of produced water, and the fact that the depth to groundwater is greater than 100 feet, according to the cathodic report from Pump Canyon SWD #001.

Thank you for your time and consideration in this matter.

Thank you,  
Vanessa Fields  
Regulatory Manager  
Email: [vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)  
Office: 505-787-2218  
Cell: 505-320-1243



**From:** Vanessa Fields  
**Sent:** Monday, June 3, 2024 2:44 PM  
**To:** Adeloyle, Abiodun A <aadeloyle@blm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>  
**Cc:** Robert Bixler <rbixler@logosresourcesllc.com>; Bryan Lovato <blovato@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Lacey Granillo <LGranillo@logosresourcesllc.com>; Krista McWilliams <kmcwilliams@logosresourcesllc.com>  
**Subject:** RE: [EXTERNAL] LOGOS Major Release 240 BBLS produced water Pump Canyon SWD #001 Sampling Notice incident ID (n#) nAPP2406454812 Variance for Sampling Notification

Hi Nelson,

LOGOS is seeking a variance for the two-business day notification per 19.15.29 12D1A. The notification has been submitted already through E-Permitting.

Thank you very much for your consideration.

Thank you,

Vanessa Fields  
Regulatory Manager  
Email: [vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)  
Office: 505-787-2218  
Cell: 505-320-1243





**From:** Vanessa Fields

**Sent:** Saturday, June 1, 2024 9:48 AM

**To:** Adeloye, Abiodun A <[aadeloye@blm.gov](mailto:aadeloye@blm.gov)>; Velez, Nelson, EMNRD <[Nelson.Velez@emnrd.nm.gov](mailto:Nelson.Velez@emnrd.nm.gov)>

**Cc:** Robert Bixler <[rbixler@logosresourcesllc.com](mailto:rbixler@logosresourcesllc.com)>; Bryan Lovato <[blovato@logosresourcesllc.com](mailto:blovato@logosresourcesllc.com)>; Etta Trujillo <[etrujillo@logosresourcesllc.com](mailto:etrujillo@logosresourcesllc.com)>; Lacey Granillo <[LGranillo@logosresourcesllc.com](mailto:LGranillo@logosresourcesllc.com)>; Krista McWilliams <[kmcwilliams@logosresourcesllc.com](mailto:kmcwilliams@logosresourcesllc.com)>

**Subject:** RE: [EXTERNAL] LOGOS Major Release 240 BBLS produced water Pump Canyon SWD #001 Sampling Notice incident ID (n#) nAPP2406454812

Good morning,

Final confirmation sampling has been scheduled for Tuesday June 4, 2024, at 9:30 am.

Please let me know if you have any questions.

Thank you,

Vanessa Fields

Regulatory Manager

Email: [vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)

Office: 505-787-2218

Cell: 505-320-1243



**From:** Vanessa Fields

**Sent:** Monday, March 4, 2024 6:06 PM

**To:** Adeloye, Abiodun A <[aadeloye@blm.gov](mailto:aadeloye@blm.gov)>

**Cc:** Robert Bixler <[rbixler@logosresourcesllc.com](mailto:rbixler@logosresourcesllc.com)>; Bryan Lovato <[blovato@logosresourcesllc.com](mailto:blovato@logosresourcesllc.com)>; Etta Trujillo <[etrujillo@logosresourcesllc.com](mailto:etrujillo@logosresourcesllc.com)>; Lacey Granillo <[LGranillo@logosresourcesllc.com](mailto:LGranillo@logosresourcesllc.com)>

**Subject:** RE: [EXTERNAL] LOGOS Major Release 240 BBLS produced water Pump Canyon SWD #001

Good evening Emmanuel,

Please find attached the MUE for the Pump Canyon SWD #001.

A sundry will be submitted as well.

Thank you,

Vanessa Fields

Regulatory Manager

Email: [vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)

Office: 505-787-2218

Cell: 505-320-1243



**From:** Adeloye, Abiodun A <[aadeloye@blm.gov](mailto:aadeloye@blm.gov)>  
**Sent:** Monday, March 4, 2024 4:00 PM  
**To:** Vanessa Fields <[vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)>  
**Cc:** Robert Bixler <[rbixler@logosresourcesllc.com](mailto:rbixler@logosresourcesllc.com)>; Bryan Lovato <[blovato@logosresourcesllc.com](mailto:blovato@logosresourcesllc.com)>; Etta Trujillo <[etrujillo@logosresourcesllc.com](mailto:etrujillo@logosresourcesllc.com)>; Lacey Granillo <[lgranillo@logosresourcesllc.com](mailto:lgranillo@logosresourcesllc.com)>  
**Subject:** RE: [EXTERNAL] LOGOS Major Release 220BBLS produced water Pump Canyon SWD #001

Thanks, Vanessa for the notification. I will visit the location tomorrow morning. Please fill out the MUE Form and provide as much details as possible and include any photos if available and send it to me and submit a Sundry Notice as well. Thank you.

Abiodun Adeloye (Emmanuel)  
 Natural Resources Specialist (NRS)  
 6251 College Blvd., Suite A  
 Farmington, NM 87402  
 Office: 505-564-7665  
 Mobile: 505-635-0984

**From:** Vanessa Fields <[vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)>  
**Sent:** Monday, March 4, 2024 3:05 PM  
**To:** Adeloye, Abiodun A <[aadeloye@blm.gov](mailto:aadeloye@blm.gov)>  
**Cc:** Robert Bixler <[rbixler@logosresourcesllc.com](mailto:rbixler@logosresourcesllc.com)>; Bryan Lovato <[blovato@logosresourcesllc.com](mailto:blovato@logosresourcesllc.com)>; Etta Trujillo <[etrujillo@logosresourcesllc.com](mailto:etrujillo@logosresourcesllc.com)>; Lacey Granillo <[lgranillo@logosresourcesllc.com](mailto:lgranillo@logosresourcesllc.com)>  
**Subject:** [EXTERNAL] LOGOS Major Release 220BBLS produced water Pump Canyon SWD #001

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good afternoon Emmanuel,

Per our conversation. LOGOS had a 220 BBL produced water release at the Pump Canyon SWD #001 today (March 4, 2024) at 9:00 am. The release was due to a pump failure.

All liquids remained on location and all free liquids have been disposed of.

LOGOS will submit an Initial MUEV by 9:00am on March 5, 2024

Please let me know if you have any questions.

## 30-045-26970 PUMP CANYON SWD #001

### General Well Information

Operator: [\[289408\]](#) LOGOS OPERATING, LLC

Status: Active

Well Type: Salt Water Disposal

Work Type: New

Direction: Vertical

Multi-Lateral: No

Mineral Owner: Federal

Surface Owner: Federal

Surface Location: J-07-30N-08W 1725 FSL 1850 FEL

Lat/Long: 36.8228951,-107.7140961 NAD83

GL Elevation: 5972

Vanessa Fields

Regulatory Manager

Email: [vfields@logosresourcesllc.com](mailto:vfields@logosresourcesllc.com)

Office: 505-787-2218

Cell: 505-320-1243





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

QUESTIONS

Action 379734

QUESTIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID:
	289408
	Action Number:
	379734
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2406454812
Incident Name	NAPP2406454812 PUMP CANYON SWD #001 @ 30-045-26970
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-045-26970] PUMP CANYON SWD #001

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PUMP CANYON SWD #001
Date Release Discovered	03/04/2024
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Motor   Produced Water   Released: 240 BBL   Recovered: 220 BBL   Lost: 20 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)	N/A

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QUESTIONS, Page 2

Action 379734

**QUESTIONS (continued)**

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 379734
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

**Initial Response**

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

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

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

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

I hereby agree and sign off to the above statement	Name: Vanessa Fields Title: Regulatory Manager Email: vfields@logosresourcesllc.com Date: 03/04/2024
--	---

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**Santa Fe, NM 87505**

QUESTIONS, Page 3

Action 379734

**QUESTIONS (continued)**

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID:
	289408
	Action Number:
	379734
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS****Site Characterization**

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

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Attached Document
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 300 and 500 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (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	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Greater than 5 (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	None
A 100-year floodplain	Greater than 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)	1860
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	1975
GRO+DRO	(EPA SW-846 Method 8015M)	585
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	03/04/2024
On what date will (or did) the final sampling or liner inspection occur	06/04/2024
On what date will (or was) the remediation complete(d)	06/04/2024
What is the estimated surface area (in square feet) that will be reclaimed	9042
What is the estimated volume (in cubic yards) that will be reclaimed	3
What is the estimated surface area (in square feet) that will be remediated	9042
What is the estimated volume (in cubic yards) that will be remediated	3

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 379734

**QUESTIONS (continued)**

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 379734
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**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	ENVIROTECH LANDFARM #1 [FEEM0112334691]
<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: Vanessa Fields Title: Regulatory Manager Email: vfields@logosresourcesllc.com Date: 08/30/2024
--	---

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 379734

**QUESTIONS (continued)**

Operator:  LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID:  289408
	Action Number:  379734
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Deferral Requests Only</b>	
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 379734

**QUESTIONS (continued)**

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID:	289408
	Action Number:	379734
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	349944
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	06/04/2024
What was the (estimated) number of samples that were to be gathered	20
What was the sampling surface area in square feet	9000

**Remediation Closure Request**

*Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.*

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	9042
What was the total volume (cubic yards) remediated	3
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	9042
What was the total volume (in cubic yards) reclaimed	3
Summarize any additional remediation activities not included by answers (above)	See attached remediation report

*The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.*

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Vanessa Fields Title: Regulatory Manager Email: vfields@logosresourcesllc.com Date: 08/30/2024
--	---



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QUESTIONS, Page 7  
  
Action 379734

QUESTIONS (continued)

Operator:  LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID:  289408
	Action Number:  379734
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS  
  
Action 379734

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID:
	289408
	Action Number:
	379734
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation has met 19.15.29 NMAC requirements. Soil impacts exceeding the reclamation standards have been left in place and are required to meet 19.15.29.13D (1) NMAC once the site is no longer reasonably needed for production or subsequent drilling ops.	11/4/2024