



Incident Report: nAPP2325041967

Facility Name: WO Hughes #007

API Number: 30-039-23464

Location: Unit H, Section 08, Township 24 North, Range 03 West, Rio Arriba, New Mexico

Subject: Incident Report and Compliance with 19.15.29 NMAC

Dear Mr. Velez,

On **September 6, 2023**, a release incident occurred at the **LOGOS WO Hughes #007** facility due to a pinhole in the production tank. This failure resulted in the release of 33 barrels (BBLs) oil of and 42 BBLs of produced water onto the pad.

Incident Details

- **Cause of Release:** Pinhole in production tank
- **Volume Released:** 33 barrels (BBLs) oil of and 42 BBLs of produced water onto the pad.
- **Volume Recovered:** 1 BBL (via water truck)
- **Initial Release Area Dimensions:** 20 feet by 25 feet, average depth of 1 inch, totaling approximately **550 square feet**

The release was contained within the facility's pad and did not migrate beyond the operational area. The volume calculations were verified using telemetry data.

Immediate Response and Corrective Actions

LOGOS initiated immediate containment and cleanup measures, in compliance with **19.15.29.8 NMAC**, which governs releases. A water truck was deployed promptly to recover all free liquid from the site. The affected area was skimmed and cleaned to prevent potential environmental impacts.

LOGOS has ensured that remediation efforts conform to **19.15.29.12 NMAC**, which requires the proper removal of contaminants to protect soil and water quality.

Geological and Hydrological Context

The **WO Hughes #007** is in the San Juan Basin within the Ojo Alamo Formation, which consists of interbedded sandstones, conglomeratic sandstones, and shales. Groundwater in the area is associated with fluvial and alluvial sandstone aquifers.

The attached siting criteria confirm the following:

- **Floodplain and Wetlands:** The site is not 300' within a floodplain or wetland.
- **Depth to Groundwater:** Jillison Federal SWD #001 Depth to groundwater is 110' below ground surface with an elevation of 6919'. The WO Hughes #007 is approximately 0.40 miles upgradient from the Jillison Federal SWD # 001 6922' making the estimated depth to groundwater at the WO Hughes #007 of 113' below ground surface.
- **Karst Features:** The area is not located above karst terrain.
- **Spring of Private Domestic Well:** The site is located 687' from a sinkhole
- **Municipal Boundaries:** The site is located more than 5 miles from a municipal boundary

These factors ensure compliance with **19.15.29.10 NMAC**, which mandates the protection of groundwater and other environmental receptors.

Environmental Impact Assessment

On March 12, 2024, LOGOS representatives performed sampling. A representative from the NMOCD nor the BLM were present at the confirmation sampling. LOGOS removed 40 cyds from the remediation area. It was believed that a legacy release was encountered at SB 5 area. After remediation LOGOS collected 6 (5)- point confirmation samples were collected from the release area. The sampling area was 1,114 sq ft in size (6) 200 sq ft (5)- point No odor or staining was observed during the sampling event.

Sample result SB (5) was over the regulatory standards. LOGOS further excavated a foot in the area of SB #5 and collected another 200 sq ft 5-point composite sample. The final sample was below regulatory standards based on the analytical results provided below in table 2.

Based on the remediation that occurred from LOGOS and the analytical results being below regulatory standards and the geological characteristics of the site, there is no evidence of environmental impact. The containment measures and remediation actions satisfy NMOCD's regulatory requirements for release management.

Documentation and Reporting

In accordance with **19.15.29.9 NMAC**, this report includes the following:

1. **Incident Description:** Cause, volume released, recovered, and containment measures.
2. **Site Characterization:** Detailed area dimensions and environmental setting.
3. **Remediation Plan:** Steps taken to mitigate the release and prevent further impact.



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 Cl 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 Cl 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 Cl 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

Release Area**Pipeline Area:**

Based off the El Paso Pipeline books, LOGOS has the pipeline takeaway ties into LOGOS WO Hughes #002 which is roughly 0.22 miles from the WO Hughes #007. No other pipelines are referenced in the WO Hughes #007 vicinity.



Sample Area



5 -point composite sample area on March 12, 2024 samples SB 1,SB2, SB3,SB4,SB5 and SB 6 at a depth of 4' below ground surface. Samples were collected at 200' sections

Table 1

3/12/2024 Analytical Results								
Sample Description	Date 3/12/2024	TPH (MG/KG	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						
SB-1 @ 4'	3/12/2024	267 mg/kg	ND	146 mg/kg	121 mg/kg	ND	ND	ND
SB-2 @ 4'	3/12/2024	ND	ND	ND	ND	ND	ND	ND
SB-3 @ 4'	3/12/2024	44.1 mg/kg	ND	44.1 mg/kg	ND	ND	ND	ND
SB-4 @4'	3/12/2024	108.5 mg/kg	ND	52.5 mg/kg	56 mg/kg	ND	ND	24.7 mg/kg
SB-5 @4'	3/12/2024	2438 mg/kg	ND	1660 mg/kg	778 mg/kg	ND	ND	ND
SB-6 @4'	3/12/2024	1216 mg/kg	ND	809 mg/kg	407 mg/kg	ND	ND	ND

Sample SB-5 was over the regulatory requirements. LOGOS further remediated another foot in the reference area of SB-5. (One) 1 -5-point composite sampling consisting of 200sgft was collected based on the referenced photos below. A new sample was collected in the area of SB 5, and we are below regulatory requirements. Once the sample results were determined to be below regulatory requirements LOGOS backfilled the excavation area.

Table 2

5/31/2024 Analytical Results								
Sample Description	Date 5/31/2024		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					
SB- 5 (2) @ 5'	5/3/2024		ND	42.3 mg/kg	ND	ND	ND	ND

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.





SB 6 5-point
composite sampling



SB 3, 4 & 5 5-point
composite samples

SB 1, 2 5 5-point composite samples

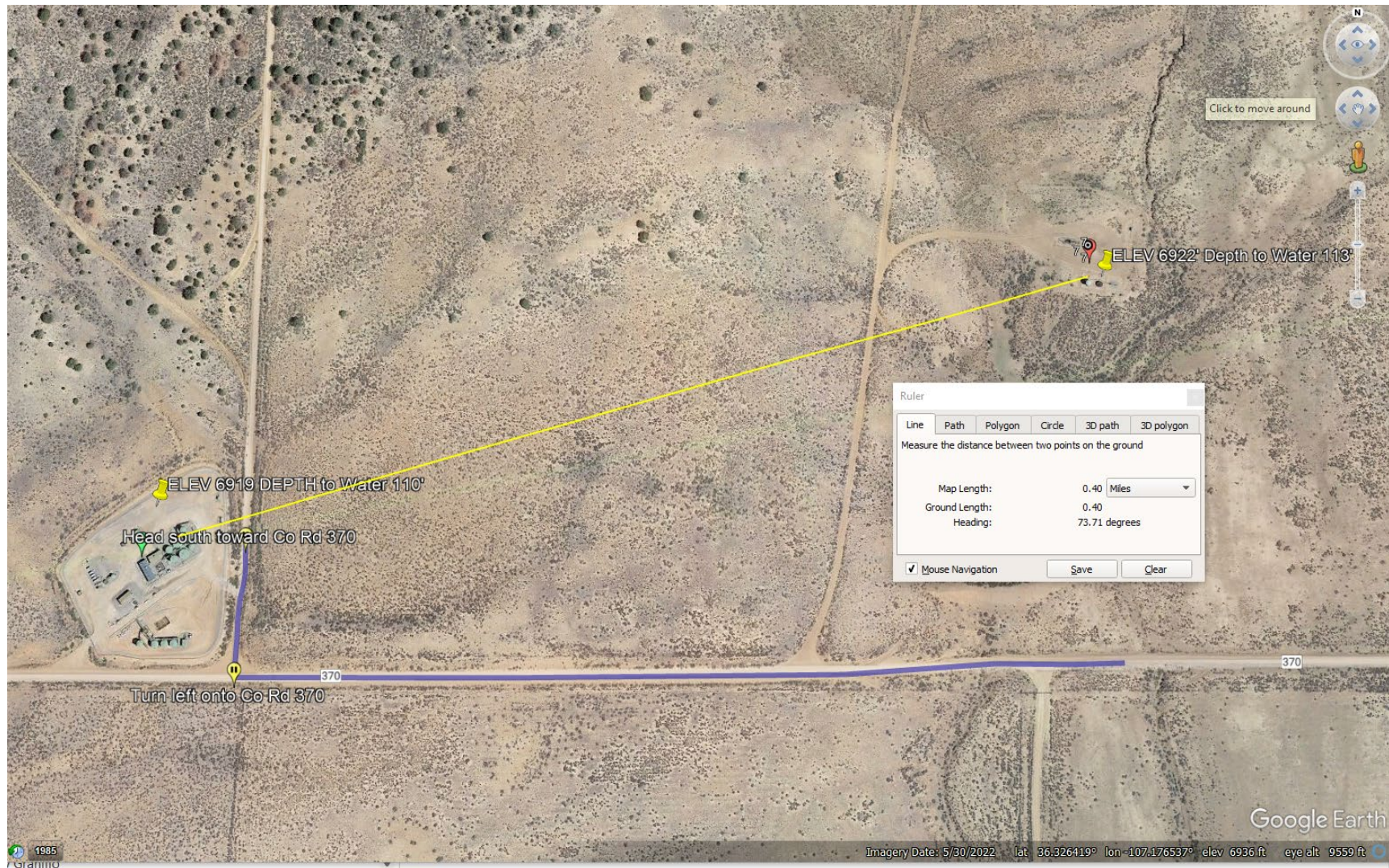


Final clean up Area

WO Hughes #007 Backfill



WO Hughes Depth to water 113'





#1 30-039-25465

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICOOperator Meridian Oil Inc. Location: Unit F Sec. 08 Twp 24 Rng 03

Name of Well/Wells or Pipeline Served _____

Jillson Federal SWD #1Elevation 690' Completion Date 6/9/95 Total Depth 488' Land Type FCasing Strings, Sizes, Types & Depths 6/7 Set 98' of 8" PVC Casing.No Gas, Water, or Boulders were encountered during casing.If Casing Strings are cemented, show amounts & types used CementedWith 35 Sacks.

If Cement or Bentonite Plugs have been placed, show depths & amounts used

NONE

Depths & thickness of water zones with description of water: Fresh, Clear,

Salty, Sulphur, Etc. HIT FRESH WATER AT 110' AND MOREWATER AT 290'Depths gas encountered: NONEGround bed depth with type & amount of coke breeze used: 488' Depth.Used 129 Sacks of Asbury 218R (6450#)Depths anodes placed: 465', 457', 449', 441', 430', 352', 344', 336', 328', 297', 289', 281', 273', 266', + 165'.Depths vent pipes placed: Surface To 488'.Vent pipe perforations: Bottom 360'.

Remarks: _____

RECEIVED
JAN 11 1996

OIL CON. DIV.

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°11'9"W 36°19'47"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000
Basemap Imagery Source: USGS National Map 2023

Legend

SEE HIS 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, XE, 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
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance
MAP PANELS		Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped

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 6/13/2024 at 10:04 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.

Report to:
Vanessa Fields



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Logos Resources

Project Name: W.O Hughes #7

Work Order: E403114

Job Number: 12035-0114

Received: 3/12/2024

Revision: 2

Report Reviewed By:

Walter Hinchman
Laboratory Director
3/15/24

5796 U.S. Hwy 64
Farmington, NM 87401

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



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way.
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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: 3/15/24

Vanessa Fields
2010 Afton Place
Farmington, NM 87401



Project Name: W.O Hughes #7
Workorder: E403114
Date Received: 3/12/2024 12:22:00PM

Vanessa Fields,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/12/2024 12:22:00PM, under the Project Name: W.O Hughes #7.

The analytical test results summarized in this report with the Project Name: W.O Hughes #7 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

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Sample Summary

Logos Resources	Project Name:	W.O Hughes #7	Reported: 03/15/24 15:29
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SB 1	E403114-01A	Soil	03/12/24	03/12/24	Glass Jar, 2 oz.
SB 2	E403114-02A	Soil	03/12/24	03/12/24	Glass Jar, 2 oz.
SB 3	E403114-03A	Soil	03/12/24	03/12/24	Glass Jar, 2 oz.
SB 4	E403114-04A	Soil	03/12/24	03/12/24	Glass Jar, 2 oz.
SB 5	E403114-05A	Soil	03/12/24	03/12/24	Glass Jar, 2 oz.
SB 6	E403114-06A	Soil	03/12/24	03/12/24	Glass Jar, 2 oz.



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: W.O Hughes #7
Project Number: 12035-0114
Project Manager: Vanessa Fields

Reported:
3/15/2024 3:29:56PM

SB 1

E403114-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Benzene	ND	0.0250	1	03/12/24	03/14/24	
Ethylbenzene	ND	0.0250	1	03/12/24	03/14/24	
Toluene	ND	0.0250	1	03/12/24	03/14/24	
o-Xylene	ND	0.0250	1	03/12/24	03/14/24	
p,m-Xylene	ND	0.0500	1	03/12/24	03/14/24	
Total Xylenes	ND	0.0250	1	03/12/24	03/14/24	
Surrogate: 4-Bromochlorobenzene-PID	96.3 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/12/24	03/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	87.6 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2411066	
Diesel Range Organics (C10-C28)	146	25.0	1	03/13/24	03/13/24	
Oil Range Organics (C28-C36)	121	50.0	1	03/13/24	03/13/24	
Surrogate: n-Nonane	110 %	50-200		03/13/24	03/13/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2411092	
Chloride	ND	20.0	1	03/13/24	03/13/24	



Sample Data

Logos Resources	Project Name:	W.O Hughes #7	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Vanessa Fields	3/15/2024 3:29:56PM

SB 2

E403114-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Benzene	ND	0.0250	1	03/12/24	03/14/24	
Ethylbenzene	ND	0.0250	1	03/12/24	03/14/24	
Toluene	ND	0.0250	1	03/12/24	03/14/24	
o-Xylene	ND	0.0250	1	03/12/24	03/14/24	
p,m-Xylene	ND	0.0500	1	03/12/24	03/14/24	
Total Xylenes	ND	0.0250	1	03/12/24	03/14/24	
Surrogate: 4-Bromochlorobenzene-PID	94.7 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/12/24	03/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.3 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2411066	
Diesel Range Organics (C10-C28)	ND	25.0	1	03/13/24	03/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/13/24	03/13/24	
Surrogate: n-Nonane	110 %	50-200		03/13/24	03/13/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2411092	
Chloride	ND	20.0	1	03/13/24	03/13/24	



Sample Data

Logos Resources	Project Name:	W.O Hughes #7	Reported: 3/15/2024 3:29:56PM
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	

SB 3

E403114-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Benzene	ND	0.0250	1	03/12/24	03/14/24	
Ethylbenzene	ND	0.0250	1	03/12/24	03/14/24	
Toluene	ND	0.0250	1	03/12/24	03/14/24	
o-Xylene	ND	0.0250	1	03/12/24	03/14/24	
p,m-Xylene	ND	0.0500	1	03/12/24	03/14/24	
Total Xylenes	ND	0.0250	1	03/12/24	03/14/24	
Surrogate: 4-Bromochlorobenzene-PID	96.2 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/12/24	03/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.2 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2411066	
Diesel Range Organics (C10-C28)	44.1	25.0	1	03/13/24	03/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	03/13/24	03/13/24	
Surrogate: n-Nonane	112 %	50-200		03/13/24	03/13/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2411092	
Chloride	ND	20.0	1	03/13/24	03/13/24	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: W.O Hughes #7
Project Number: 12035-0114
Project Manager: Vanessa Fields

Reported:
3/15/2024 3:29:56PM

SB 4

E403114-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Benzene	ND	0.0250	1	03/12/24	03/14/24	
Ethylbenzene	ND	0.0250	1	03/12/24	03/14/24	
Toluene	ND	0.0250	1	03/12/24	03/14/24	
o-Xylene	ND	0.0250	1	03/12/24	03/14/24	
p,m-Xylene	ND	0.0500	1	03/12/24	03/14/24	
Total Xylenes	ND	0.0250	1	03/12/24	03/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.5 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/12/24	03/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	93.5 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg	Analyst: KM		Batch: 2411066	
Diesel Range Organics (C10-C28)	52.5	25.0	1	03/13/24	03/13/24	
Oil Range Organics (C28-C36)	56.0	50.0	1	03/13/24	03/13/24	
<i>Surrogate: n-Nonane</i>						
	110 %	50-200		03/13/24	03/13/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg	Analyst: DT		Batch: 2411092	
Chloride	24.7	20.0	1	03/13/24	03/13/24	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: W.O Hughes #7
Project Number: 12035-0114
Project Manager: Vanessa Fields

Reported:
3/15/2024 3:29:56PM

SB 5

E403114-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: BA		Batch: 2411059
Benzene	ND	0.0250	1	03/12/24	03/14/24	
Ethylbenzene	ND	0.0250	1	03/12/24	03/14/24	
Toluene	ND	0.0250	1	03/12/24	03/14/24	
o-Xylene	ND	0.0250	1	03/12/24	03/14/24	
p,m-Xylene	ND	0.0500	1	03/12/24	03/14/24	
Total Xylenes	ND	0.0250	1	03/12/24	03/14/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.0 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: BA		Batch: 2411059
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/12/24	03/14/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.1 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: KM		Batch: 2411066
Diesel Range Organics (C10-C28)	1660	25.0	1	03/13/24	03/13/24	
Oil Range Organics (C28-C36)	778	50.0	1	03/13/24	03/13/24	
<i>Surrogate: n-Nonane</i>						
	112 %	50-200		03/13/24	03/13/24	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: DT		Batch: 2411092
Chloride	ND	20.0	1	03/13/24	03/13/24	



Sample Data

Logos Resources	Project Name:	W.O Hughes #7	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Vanessa Fields	3/15/2024 3:29:56PM

SB 6

E403114-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Benzene	ND	0.0250	1	03/12/24	03/14/24	
Ethylbenzene	ND	0.0250	1	03/12/24	03/14/24	
Toluene	ND	0.0250	1	03/12/24	03/14/24	
o-Xylene	ND	0.0250	1	03/12/24	03/14/24	
p,m-Xylene	ND	0.0500	1	03/12/24	03/14/24	
Total Xylenes	ND	0.0250	1	03/12/24	03/14/24	
Surrogate: 4-Bromochlorobenzene-PID	92.9 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA		Batch: 2411059	
Gasoline Range Organics (C6-C10)	ND	20.0	1	03/12/24	03/14/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	94.5 %	70-130		03/12/24	03/14/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM		Batch: 2411066	
Diesel Range Organics (C10-C28)	809	25.0	1	03/13/24	03/15/24	
Oil Range Organics (C28-C36)	407	50.0	1	03/13/24	03/15/24	
Surrogate: n-Nonane	88.8 %	50-200		03/13/24	03/15/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT		Batch: 2411092	
Chloride	ND	20.0	1	03/13/24	03/13/24	



QC Summary Data

Logos Resources	Project Name:	W.O Hughes #7	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	3/15/2024 3:29:56PM

Volatile Organics by EPA 8021B

Analyst: BA

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

Blank (2411059-BLK1)Prepared: 03/12/24 Analyzed: 03/15/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							

Surrogate: 4-Bromochlorobenzene-PID7.698.0096.170-130

LCS (2411059-BS1)Prepared: 03/12/24 Analyzed: 03/15/24

Benzene	4.95	0.0250	5.00		98.9	70-130			
Ethylbenzene	4.77	0.0250	5.00		95.4	70-130			
Toluene	4.92	0.0250	5.00		98.3	70-130			
o-Xylene	4.85	0.0250	5.00		97.0	70-130			
p,m-Xylene	9.73	0.0500	10.0		97.3	70-130			
Total Xylenes	14.6	0.0250	15.0		97.2	70-130			

Surrogate: 4-Bromochlorobenzene-PID7.738.0096.770-130

Matrix Spike (2411059-MS1)Source: E403111-01Prepared: 03/12/24 Analyzed: 03/15/24

Benzene	5.03	0.0250	5.00	ND	101	54-133			
Ethylbenzene	4.85	0.0250	5.00	ND	96.9	61-133			
Toluene	5.00	0.0250	5.00	ND	100	61-130			
o-Xylene	4.92	0.0250	5.00	ND	98.4	63-131			
p,m-Xylene	9.88	0.0500	10.0	ND	98.8	63-131			
Total Xylenes	14.8	0.0250	15.0	ND	98.7	63-131			

Surrogate: 4-Bromochlorobenzene-PID7.738.0096.670-130

Matrix Spike Dup (2411059-MSD1)Source: E403111-01Prepared: 03/12/24 Analyzed: 03/15/24

Benzene	5.00	0.0250	5.00	ND	100	54-133	0.548	20	
Ethylbenzene	4.82	0.0250	5.00	ND	96.3	61-133	0.618	20	
Toluene	4.98	0.0250	5.00	ND	99.5	61-130	0.523	20	
o-Xylene	4.90	0.0250	5.00	ND	98.1	63-131	0.390	20	
p,m-Xylene	9.82	0.0500	10.0	ND	98.2	63-131	0.647	20	
Total Xylenes	14.7	0.0250	15.0	ND	98.2	63-131	0.561	20	

Surrogate: 4-Bromochlorobenzene-PID7.748.0096.870-130



QC Summary Data

Logos Resources	Project Name:	W.O Hughes #7	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	3/15/2024 3:29:56PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2411059-BLK1) Prepared: 03/12/24 Analyzed: 03/15/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.98		8.00		87.3	70-130			

LCS (2411059-BS2) Prepared: 03/12/24 Analyzed: 03/15/24

Gasoline Range Organics (C6-C10)	42.4	20.0	50.0		84.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.13		8.00		89.2	70-130			

Matrix Spike (2411059-MS2) Source: E403111-01 Prepared: 03/12/24 Analyzed: 03/15/24

Gasoline Range Organics (C6-C10)	40.2	20.0	50.0	ND	80.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.09		8.00		88.7	70-130			

Matrix Spike Dup (2411059-MSD2) Source: E403111-01 Prepared: 03/12/24 Analyzed: 03/15/24

Gasoline Range Organics (C6-C10)	40.9	20.0	50.0	ND	81.8	70-130	1.71	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.11		8.00		88.9	70-130			



QC Summary Data

Logos Resources	Project Name:	W.O Hughes #7	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	3/15/2024 3:29:56PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2411066-BLK1)					Prepared: 03/13/24 Analyzed: 03/13/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	53.7		50.0		107	50-200			

LCS (2411066-BS1)					Prepared: 03/13/24 Analyzed: 03/13/24				
Diesel Range Organics (C10-C28)	279	25.0	250		111	38-132			
Surrogate: n-Nonane	51.7		50.0		103	50-200			

Matrix Spike (2411066-MS1)					Source: E403114-05		Prepared: 03/13/24 Analyzed: 03/13/24		
Diesel Range Organics (C10-C28)	1770	25.0	250	1660	44.1	38-132			
Surrogate: n-Nonane	53.0		50.0		106	50-200			

Matrix Spike Dup (2411066-MSD1)					Source: E403114-05		Prepared: 03/13/24 Analyzed: 03/13/24		
Diesel Range Organics (C10-C28)	2110	25.0	250	1660	181	38-132	17.6	20	M4
Surrogate: n-Nonane	55.9		50.0		112	50-200			



QC Summary Data

Logos Resources	Project Name:	W.O Hughes #7	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	3/15/2024 3:29:56PM

Anions by EPA 300.0/9056A

Analyst: DT

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 (2411092-BLK1)					Prepared: 03/13/24 Analyzed: 03/13/24				
Chloride	ND	20.0							
LCS (2411092-BS1)					Prepared: 03/13/24 Analyzed: 03/13/24				
Chloride	251	20.0	250		101	90-110			
Matrix Spike (2411092-MS1)					Source: E403091-03		Prepared: 03/13/24 Analyzed: 03/13/24		
Chloride	255	20.0	250	ND	102	80-120			
Matrix Spike Dup (2411092-MSD1)					Source: E403091-03		Prepared: 03/13/24 Analyzed: 03/13/24		
Chloride	264	20.0	250	ND	105	80-120	3.22	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:	W.O Hughes #7	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Vanessa Fields	03/15/24 15:29

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

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

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






envirotech

Envirotech Analytical Laboratory

Printed: 3/14/2024 5:14:32PM

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:	03/12/24 12:22	Work Order ID:	E403114
Phone:	(505) 787-9100	Date Logged In:	03/12/24 13:09	Logged In By:	Angelina Pineda
Email:	vfields@logosresourcesllc.com	Due Date:	03/14/24 17:00 (2 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: Vanessa FieldsSample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

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

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client InstructionComments/Resolution

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

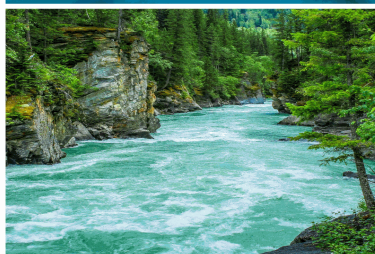
Date



envirotech Inc.

Report to:

Vanessa Fields



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Logos Resources

Project Name: W.O Hughes #7

Work Order: E405002

Job Number: 12035-0114

Received: 5/1/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
5/3/24

5796 U.S. Hwy 64
Farmington, NM 87401

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



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

Date Reported: 5/3/24

Vanessa Fields
2010 Afton Place
Farmington, NM 87401



Project Name: W.O Hughes #7
Workorder: E405002
Date Received: 5/1/2024 1:37:00PM

Vanessa Fields,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/1/2024 1:37:00PM, under the Project Name: W.O Hughes #7.

The analytical test results summarized in this report with the Project Name: W.O Hughes #7 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

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Sample Summary

Logos Resources	Project Name:	W.O Hughes #7	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	05/03/24 11:44

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
W O Hughes #7	E405002-01A	Soil	05/01/24	05/01/24	Glass Jar, 2 oz.



Sample Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: W.O Hughes #7 Project Number: 12035-0114 Project Manager: Vanessa Fields	Reported: 5/3/2024 11:44:10AM
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W O Hughes #7
E405002-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RKS		Batch: 2418081	
Benzene	ND	0.0250	1	05/01/24	05/02/24	
Ethylbenzene	ND	0.0250	1	05/01/24	05/02/24	
Toluene	ND	0.0250	1	05/01/24	05/02/24	
o-Xylene	ND	0.0250	1	05/01/24	05/02/24	
p,m-Xylene	ND	0.0500	1	05/01/24	05/02/24	
Total Xylenes	ND	0.0250	1	05/01/24	05/02/24	
Surrogate: 4-Bromochlorobenzene-PID	97.4 %	70-130		05/01/24	05/02/24	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS		Batch: 2418081	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/01/24	05/02/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	97.5 %	70-130		05/01/24	05/02/24	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KH		Batch: 2418091	
Diesel Range Organics (C10-C28)	42.3	25.0	1	05/02/24	05/02/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/02/24	05/02/24	
Surrogate: n-Nonane	82.5 %	50-200		05/02/24	05/02/24	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF		Batch: 2418089	
Chloride	ND	20.0	1	05/02/24	05/02/24	



QC Summary Data

Logos Resources	Project Name:	W.O Hughes #7	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	5/3/2024 11:44:10AM

Volatile Organics by EPA 8021B

Analyst: RKS

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 (2418081-BLK1) Prepared: 05/01/24 Analyzed: 05/01/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.43		8.00		92.9	70-130			

LCS (2418081-BS1) Prepared: 05/01/24 Analyzed: 05/01/24

Benzene	5.21	0.0250	5.00		104	70-130			
Ethylbenzene	5.24	0.0250	5.00		105	70-130			
Toluene	5.32	0.0250	5.00		106	70-130			
o-Xylene	5.31	0.0250	5.00		106	70-130			
p,m-Xylene	10.7	0.0500	10.0		107	70-130			
Total Xylenes	16.0	0.0250	15.0		107	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.46		8.00		93.2	70-130			

Matrix Spike (2418081-MS1) Source: E405004-02 Prepared: 05/01/24 Analyzed: 05/01/24

Benzene	4.88	0.0250	5.00	ND	97.5	54-133			
Ethylbenzene	4.87	0.0250	5.00	ND	97.4	61-133			
Toluene	4.96	0.0250	5.00	ND	99.3	61-130			
o-Xylene	4.95	0.0250	5.00	ND	99.0	63-131			
p,m-Xylene	9.95	0.0500	10.0	ND	99.5	63-131			
Total Xylenes	14.9	0.0250	15.0	ND	99.3	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.54		8.00		94.2	70-130			

Matrix Spike Dup (2418081-MSD1) Source: E405004-02 Prepared: 05/01/24 Analyzed: 05/01/24

Benzene	5.59	0.0250	5.00	ND	112	54-133	13.7	20	
Ethylbenzene	5.60	0.0250	5.00	ND	112	61-133	14.0	20	
Toluene	5.70	0.0250	5.00	ND	114	61-130	13.9	20	
o-Xylene	5.71	0.0250	5.00	ND	114	63-131	14.2	20	
p,m-Xylene	11.4	0.0500	10.0	ND	114	63-131	14.0	20	
Total Xylenes	17.2	0.0250	15.0	ND	114	63-131	14.1	20	
Surrogate: 4-Bromochlorobenzene-PID	7.55		8.00		94.3	70-130			



QC Summary Data

Logos Resources	Project Name:	W.O Hughes #7	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	5/3/2024 11:44:10AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

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 (2418081-BLK1) Prepared: 05/01/24 Analyzed: 05/01/24

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

LCS (2418081-BS2) Prepared: 05/01/24 Analyzed: 05/01/24

Gasoline Range Organics (C6-C10)	52.4	20.0	50.0		105	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.68		8.00		96.0	70-130			

Matrix Spike (2418081-MS2) Source: E405004-02 Prepared: 05/01/24 Analyzed: 05/01/24

Gasoline Range Organics (C6-C10)	55.8	20.0	50.0	ND	112	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.00		8.00		100	70-130			

Matrix Spike Dup (2418081-MSD2) Source: E405004-02 Prepared: 05/01/24 Analyzed: 05/01/24

Gasoline Range Organics (C6-C10)	51.1	20.0	50.0	ND	102	70-130	8.83	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.98		8.00		99.8	70-130			



QC Summary Data

Logos Resources	Project Name:	W.O Hughes #7	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	5/3/2024 11:44:10AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KH

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

Blank (2418091-BLK1) Prepared: 05/02/24 Analyzed: 05/02/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	39.7		50.0		79.4	50-200			

LCS (2418091-BS1) Prepared: 05/02/24 Analyzed: 05/02/24

Diesel Range Organics (C10-C28)	266	25.0	250		106	38-132			
Surrogate: n-Nonane	40.4		50.0		80.8	50-200			

Matrix Spike (2418091-MS1) Source: E405005-04 Prepared: 05/02/24 Analyzed: 05/02/24

Diesel Range Organics (C10-C28)	277	25.0	250	ND	111	38-132			
Surrogate: n-Nonane	41.6		50.0		83.2	50-200			

Matrix Spike Dup (2418091-MSD1) Source: E405005-04 Prepared: 05/02/24 Analyzed: 05/02/24

Diesel Range Organics (C10-C28)	229	25.0	250	ND	91.6	38-132	19.1	20	
Surrogate: n-Nonane	39.4		50.0		78.8	50-200			



QC Summary Data

Logos Resources	Project Name:	W.O Hughes #7	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Vanessa Fields	5/3/2024 11:44:10AM

Anions by EPA 300.0/9056A

Analyst: WF

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

Blank (2418089-BLK1)					Prepared: 05/02/24 Analyzed: 05/02/24				
Chloride	ND	20.0							
LCS (2418089-BS1)					Prepared: 05/02/24 Analyzed: 05/02/24				
Chloride	249	20.0	250		99.6	90-110			
Matrix Spike (2418089-MS1)					Source: E405005-03		Prepared: 05/02/24 Analyzed: 05/02/24		
Chloride	264	200	250	ND	106	80-120			
Matrix Spike Dup (2418089-MSD1)					Source: E405005-03		Prepared: 05/02/24 Analyzed: 05/02/24		
Chloride	264	200	250	ND	105	80-120	0.178	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:	W.O Hughes #7	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Vanessa Fields	05/03/24 11:44

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



Project Information

Chain of Custody

Client: <u>Logos Resources</u> Project: <u>W.O. Hughes #7</u> Project Manager: <u>Vanessa Fields</u> Address: <u>2010 Afton Pl.</u> City, State, Zip: <u>Farmington nm 87402</u> Phone: <u>505 320 1243</u> Email: <u>vfields@logosresourcesllc.com</u> Report due by:					Bill To Attention: <u>Vanessa Fields</u> Address: <u>2010 Afton Pl.</u> City, State, Zip: <u>Farmington nm 87402</u> Phone: <u>505 320 1243</u> Email: <u>vfields@logosresourcesllc.com</u> <u>lgrani110@logosresourcesllc.com</u>					Lab Use Only Lab WO# <u>E 405002</u> Job Number <u>12035-01/4</u> Analysis and Method					TAT 1D <input checked="" type="checkbox"/> 2D <input type="checkbox"/> 3D <input type="checkbox"/> Standard <input type="checkbox"/>				EPA Program CWA <input type="checkbox"/> SDWA <input type="checkbox"/> RCRA <input type="checkbox"/>	
										State NM <input checked="" type="checkbox"/> CO <input type="checkbox"/> UT <input type="checkbox"/> AZ <input type="checkbox"/> TX <input type="checkbox"/>										
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	BGDOC - NM	TCEQ 1005- TX	Remarks						
0:41am	5/1/24	S	1	W O Hughes #7	1	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. Sampled by: Jason Merchan

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

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only Received on ice: <u>Y</u> / N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
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.



Envirotech Analytical Laboratory

Printed: 5/2/2024 10:50:47AM

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
 Phone: (505) 787-9100
 Email: vfields@logosresourcesllc.com

Date Received: 05/01/24 13:37
 Date Logged In: 05/01/24 14:20
 Due Date: 05/02/24 17:00 (1 day TAT)

Work Order ID: E405002
 Logged In By: Angelina Pineda

Chain of Custody (COC)

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

Carrier: Jason Meechan

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

Sample Turn Around Time (TAT)

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

Sample Cooler

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

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

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

Sample Container

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

Field Label

20. Were field sample labels filled out with the minimum information:
 Sample ID? Yes
 Date/Time Collected? Yes
 Collectors name? No

Sample Preservation

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

Multiphase Sample Matrix

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

Subcontract Laboratory

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

Client InstructionComments/Resolution

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

Date



envirotech Inc.



Incident Report: nAPP2325041967

Facility Name: WO Hughes #007

API Number: 30-039-23464

Location: Unit H, Section 08, Township 24 North, Range 03 West, Rio Arriba, New Mexico

Subject: Incident Report and Compliance with 19.15.29 NMAC

Dear Mr. Velez,

On **September 6, 2023**, a release incident occurred at the **LOGOS WO Hughes #007** facility due to a pinhole in the production tank. This failure resulted in the release of 33 barrels (BBLs) oil of and 42 BBLs of produced water onto the pad.

Incident Details

- **Cause of Release:** Pinhole in production tank
- **Volume Released:** 33 barrels (BBLs) oil of and 42 BBLs of produced water onto the pad.
- **Volume Recovered:** 1 BBL (via water truck)
- **Initial Release Area Dimensions:** 20 feet by 25 feet, average depth of 1 inch, totaling approximately **550 square feet**

The release was contained within the facility's pad and did not migrate beyond the operational area. The volume calculations were verified using telemetry data.

Immediate Response and Corrective Actions

LOGOS initiated immediate containment and cleanup measures, in compliance with **19.15.29.8 NMAC**, which governs releases. A water truck was deployed promptly to recover all free liquid from the site. The affected area was skimmed and cleaned to prevent potential environmental impacts.

LOGOS has ensured that remediation efforts conform to **19.15.29.12 NMAC**, which requires the proper removal of contaminants to protect soil and water quality.

Geological and Hydrological Context

The **WO Hughes #007** is in the San Juan Basin within the Ojo Alamo Formation, which consists of interbedded sandstones, conglomeratic sandstones, and shales. Groundwater in the area is associated with fluvial and alluvial sandstone aquifers.

The attached siting criteria confirm the following:

- **Floodplain and Wetlands:** The site is not 300' within a floodplain or wetland.
- **Depth to Groundwater:** Jillison Federal SWD #001 Depth to groundwater is 110' below ground surface with an elevation of 6919'. The WO Hughes #007 is approximately 0.40 miles upgradient from the Jillison Federal SWD # 001 6922' making the estimated depth to groundwater at the WO Hughes #007 of 113' below ground surface.
- **Karst Features:** The area is not located above karst terrain.
- **Spring of Private Domestic Well:** The site is located 687' from a sinkhole
- **Municipal Boundaries:** The site is located more than 5 miles from a municipal boundary

These factors ensure compliance with **19.15.29.10 NMAC**, which mandates the protection of groundwater and other environmental receptors.

Environmental Impact Assessment

On March 12, 2024, LOGOS representatives performed sampling. A representative from the NMOCD nor the BLM were present at the confirmation sampling. LOGOS removed 40 cyds from the remediation area. It was believed that a legacy release was encountered at SB 5 area. After remediation LOGOS collected 6 (5)- point confirmation samples were collected from the release area. The sampling area was 1,114 sq ft in size (6) 200 sq ft (5)- point No odor or staining was observed during the sampling event.

Sample result SB (5) was over the regulatory standards. LOGOS further excavated a foot in the area of SB #5 and collected another 200 sq ft 5-point composite sample. The final sample was below regulatory standards based on the analytical results provided below in table 2.

Based on the remediation that occurred from LOGOS and the analytical results being below regulatory standards and the geological characteristics of the site, there is no evidence of environmental impact. The containment measures and remediation actions satisfy NMOCD's regulatory requirements for release management.

Documentation and Reporting

In accordance with **19.15.29.9 NMAC**, this report includes the following:

1. **Incident Description:** Cause, volume released, recovered, and containment measures.
2. **Site Characterization:** Detailed area dimensions and environmental setting.
3. **Remediation Plan:** Steps taken to mitigate the release and prevent further impact.



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 Cl 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 Cl 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 Cl 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

Release Area**Pipeline Area:**

Based off the El Paso Pipeline books, LOGOS has the pipeline takeaway ties into LOGOS WO Hughes #002 which is roughly 0.22 miles from the WO Hughes #007. No other pipelines are referenced in the WO Hughes #007 vicinity.



Sample Area



5 -point composite sample area on March 12, 2024 samples SB 1,SB2, SB3,SB4,SB5 and SB 6 at a depth of 4' below ground surface. Samples were collected at 200' sections

Table 1

3/12/2024 Analytical Results								
Sample Description	Date 3/12/2024	TPH (MG/KG	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						
SB-1 @ 4'	3/12/2024	267 mg/kg	ND	146 mg/kg	121 mg/kg	ND	ND	ND
SB-2 @ 4'	3/12/2024	ND	ND	ND	ND	ND	ND	ND
SB-3 @ 4'	3/12/2024	44.1 mg/kg	ND	44.1 mg/kg	ND	ND	ND	ND
SB-4 @4'	3/12/2024	108.5 mg/kg	ND	52.5 mg/kg	56 mg/kg	ND	ND	24.7 mg/kg
SB-5 @4'	3/12/2024	2438 mg/kg	ND	1660 mg/kg	778 mg/kg	ND	ND	ND
SB-6 @4'	3/12/2024	1216 mg/kg	ND	809 mg/kg	407 mg/kg	ND	ND	ND

Sample SB-5 was over the regulatory requirements. LOGOS further remediated another foot in the reference area of SB-5. (One) 1 -5-point composite sampling consisting of 200sgft was collected based on the referenced photos below. A new sample was collected in the area of SB 5, and we are below regulatory requirements. Once the sample results were determined to be below regulatory requirements LOGOS backfilled the excavation area.

Table 2

5/31/2024 Analytical Results								
Sample Description	Date 5/31/2024		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					
SB- 5 (2) @ 5'	5/3/2024		ND	42.3 mg/kg	ND	ND	ND	ND

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.





SB 6 5-point
composite sampling



SB 3, 4 & 5 5-point
composite samples

SB 1, 2 5 5-point composite samples



Final clean up Area

WO Hughes #007 Backfill





Incident Report: nAPP2325041967

Facility Name: WO Hughes #007

API Number: 30-039-23464

Location: Unit H, Section 08, Township 24 North, Range 03 West, Rio Arriba, New Mexico

Subject: Incident Report and Compliance with 19.15.29 NMAC

Dear Mr. Velez,

On **September 6, 2023**, a release incident occurred at the **LOGOS WO Hughes #007** facility due to a pinhole in the production tank. This failure resulted in the release of 33 barrels (BBLs) oil of and 42 BBLs of produced water onto the pad.

Incident Details

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- **Initial Release Area Dimensions:** 20 feet by 25 feet, average depth of 1 inch, totaling approximately **550 square feet**

The release was contained within the facility's pad and did not migrate beyond the operational area. The volume calculations were verified using telemetry data.

Immediate Response and Corrective Actions

LOGOS initiated immediate containment and cleanup measures, in compliance with **19.15.29.8 NMAC**, which governs releases. A water truck was deployed promptly to recover all free liquid from the site. The affected area was skimmed and cleaned to prevent potential environmental impacts.

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Geological and Hydrological Context

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The attached siting criteria confirm the following:

- **Floodplain and Wetlands:** The site is not 300' within a floodplain or wetland.
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- **Karst Features:** The area is not located above karst terrain.
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- **Municipal Boundaries:** The site is located more than 5 miles from a municipal boundary

These factors ensure compliance with **19.15.29.10 NMAC**, which mandates the protection of groundwater and other environmental receptors.

Environmental Impact Assessment

On March 12, 2024, LOGOS representatives performed sampling. A representative from the NMOCD nor the BLM were present at the confirmation sampling. LOGOS removed 40 cyds from the remediation area. It was believed that a legacy release was encountered at SB 5 area. After remediation LOGOS collected 6 (5)- point confirmation samples were collected from the release area. The sampling area was 1,114 sq ft in size (6) 200 sq ft (5)- point No odor or staining was observed during the sampling event.

Sample result SB (5) was over the regulatory standards. LOGOS further excavated a foot in the area of SB #5 and collected another 200 sq ft 5-point composite sample. The final sample was below regulatory standards based on the analytical results provided below in table 2.

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Documentation and Reporting

In accordance with **19.15.29.9 NMAC**, this report includes the following:

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	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 Cl 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 Cl 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

Release Area**Pipeline Area:**

Based off the El Paso Pipeline books, LOGOS has the pipeline takeaway ties into LOGOS WO Hughes #002 which is roughly 0.22 miles from the WO Hughes #007. No other pipelines are referenced in the WO Hughes #007 vicinity.



Sample Area



5 -point composite sample area on March 12, 2024 samples SB 1,SB2, SB3,SB4,SB5 and SB 6 at a depth of 4' below ground surface. Samples were collected at 200' sections

Table 1

3/12/2024 Analytical Results								
Sample Description	Date 3/12/2024	TPH (MG/KG	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)
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19.15.29.12 NMAC		1000 mg/kg						20,000 mg/kg
		2500 mg/kg						
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SB-2 @ 4'	3/12/2024	ND	ND	ND	ND	ND	ND	ND
SB-3 @ 4'	3/12/2024	44.1 mg/kg	ND	44.1 mg/kg	ND	ND	ND	ND
SB-4 @4'	3/12/2024	108.5 mg/kg	ND	52.5 mg/kg	56 mg/kg	ND	ND	24.7 mg/kg
SB-5 @4'	3/12/2024	2438 mg/kg	ND	1660 mg/kg	778 mg/kg	ND	ND	ND
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Sample SB-5 was over the regulatory requirements. LOGOS further remediated another foot in the reference area of SB-5. (One) 1 -5-point composite sampling consisting of 200sgft was collected based on the referenced photos below. A new sample was collected in the area of SB 5, and we are below regulatory requirements. Once the sample results were determined to be below regulatory requirements LOGOS backfilled the excavation area.

Table 2

5/31/2024 Analytical Results								
Sample Description	Date 5/31/2024		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					
SB- 5 (2) @ 5'	5/3/2024		ND	42.3 mg/kg	ND	ND	ND	ND

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.





SB 6 5-point
composite sampling



SB 3, 4 & 5 5-point
composite samples

SB 1, 2 5 5-point composite samples



Final clean up Area

WO Hughes #007 Backfill



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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS

Action 399191

QUESTIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 399191
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2325041967
Incident Name	NAPP2325041967 WO HUGHES #007 @ 30-039-23464
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-039-23464] W O HUGHES #007

Location of Release Source	
Please answer all the questions in this group.	
Site Name	WO HUGHES #007
Date Release Discovered	09/06/2023
Surface Owner	Private

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Equipment Failure Tank (Any) Crude Oil Released: 33 BBL Recovered: 1 BBL Lost: 32 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure Tank (Any) Produced Water Released: 42 BBL Recovered: 0 BBL Lost: 42 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)	Size of release area is 20x25x1

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QUESTIONS, Page 2

Action 399191

QUESTIONS (continued)

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 399191
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

Initial Response

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

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

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

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

I hereby agree and sign off to the above statement	Name: Vanessa Fields Title: Regulatory Manager Email: vfields@logosresourcesllc.com Date: 12/17/2024
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QUESTIONS, Page 3

Action 399191

QUESTIONS (continued)

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 399191
	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	OCD Imaging Records Lookup
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 300 and 500 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (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	Between 200 and 300 (ft.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 200 and 300 (ft.)
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	Between 300 and 500 (ft.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

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

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

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

Chloride (EPA 300.0 or SM4500 Cl B)	24.7
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	2438
GRO+DRO (EPA SW-846 Method 8015M)	1660
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	09/23/2023
On what date will (or did) the final sampling or liner inspection occur	05/01/2024
On what date will (or was) the remediation complete(d)	05/01/2024
What is the estimated surface area (in square feet) that will be reclaimed	1114
What is the estimated volume (in cubic yards) that will be reclaimed	40
What is the estimated surface area (in square feet) that will be remediated	1114
What is the estimated volume (in cubic yards) that will be remediated	40

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

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

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Action 399191

QUESTIONS (continued)

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 399191
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	ENVIROTECH LANDFARM #2 [FEEM0112336756]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Vanessa Fields Title: Regulatory Manager Email: vfields@logosresourcesllc.com Date: 12/17/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 399191

QUESTIONS (continued)

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
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QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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Action 399191

QUESTIONS (continued)

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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	338419
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/01/2024
What was the (estimated) number of samples that were to be gathered	1
What was the sampling surface area in square feet	400

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	1114
What was the total volume (cubic yards) remediated	40
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	1114
What was the total volume (in cubic yards) reclaimed	40
Summarize any additional remediation activities not included by answers (above)	see attached 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: 12/17/2024
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Action 399191

QUESTIONS (continued)

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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 399191

CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
nvez	None	3/18/2025