

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company LOGOS Operating, LLC	Contact Larissa Farrell	
Address 2010 Afton Place, Farmington, NM 87401	Telephone No. 505-787-2027	
Facility Name JICARILLA L 5	Facility Type Gas Well Location	
Surface Owner JICARILLA	Mineral Owner JICARILLA	API No. 30-039-20431

LOCATION OF RELEASE

Unit Letter N	Section 33	Township 25N	Range 5W	Feet from the 940	North/South Line South	Feet from the 1850	East/West Line West	County RIO ARRIBA
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Latitude 36.35235 Longitude -107.36798 NAD83

NATURE OF RELEASE

Type of Release Water and Oil	Volume of Release 1-2bbls	Volume Recovered None
Source of Release: Separator	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 12/13/16 13:50 hr
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Bryce Hammond/Phone & Orson Harrison/Jason Sandoval/Email	
By Whom? Wayne Ritter	Date and Hour 12/16/16 15:00 hr	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

NMOCD
JUN 18 2018



Describe Cause of Problem and Remedial Action Taken.*

Pin hole in separator bulk head causing produced water & oil to spray out / Had crew pull separator dry / Brought in backhoe to scrape & dig up contaminated soil

DISTRICT III

Describe Area Affected and Cleanup Action Taken.*
35' x 2' area looks to be only on surface / Spill stayed on location / Contaminated soil mixed & hauled to TNT / During cleanup actions on 12/14/16 with Envirotech on location, a 20'x25' area, depth varying from 18" to 0", was dug to remove the contaminated soil / Ground was tested - results are attached

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Larissa Farrell	Approved by Environmental Specialist: 	
Title: Environmental/Regulatory Technician	Approval Date: 6/15/18	Expiration Date:
E-mail Address: lfarrell@logosresourcesllc.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 6/15/2018	Phone: 505-787-2027	

* Attach Additional Sheets If Necessary



Analytical Report

Report Summary

Client: Logos Operating, LLC

Chain Of Custody Number:

Samples Received: 12/15/2016 7:03:00AM

Job Number: 12035-0073

Work Order: P612058

Project Name/Location: Jicarilla L5 Spill Cleanup

Report Reviewed By:

A handwritten signature in black ink, appearing to read "Walter Hinchman", followed by a small checkmark.

Date: 12/16/16

Walter Hinchman, Laboratory Director

A handwritten signature in black ink, appearing to read "Tim Cain", followed by a small checkmark.

Date: 12/16/16

Tim Cain, Quality Assurance Officer

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Jicarilla L5 Spill Cleanup
Project Number: 12035-0073
Project Manager: Felipe Aragon

Reported:
16-Dec-16 11:09

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Section #1	P612058-01A	Soil	12/14/16	12/15/16	Glass Jar, 4 oz.
Section #2	P612058-02A	Soil	12/14/16	12/15/16	Glass Jar, 4 oz.
Section #3	P612058-03A	Soil	12/14/16	12/15/16	Glass Jar, 4 oz.
Background	P612058-04A	Soil	12/14/16	12/15/16	Plastic Baggie

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Jicarilla LS Spill Cleanup
Project Number: 12035-0073
Project Manager: Felipe Aragon

Reported:
16-Dec-16 11:22

Section #1
P612058-01 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		95.2 %		50-150	1651025	12/15/16	12/15/16	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1651028	12/15/16	12/15/16	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.9 %		50-150	1651025	12/15/16	12/15/16	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1651028	12/15/16	12/15/16	EPA 8015D	
Surrogate: n-Nonane		108 %		50-200	1651028	12/15/16	12/15/16	EPA 8015D	
Cation/Anion Analysis									
Chloride	ND	20.0	mg/kg	1	1651029	12/15/16	12/15/16	EPA 300.0	

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Logos Operating, LLC	Project Name:	Jicarilla L5 Spill Cleanup	Reported:
PO Box 18	Project Number:	12035-0073	16-Dec-16 11:22
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	

Section #2
P612058-02 (Solid)

Reporting								
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics by EPA 8021								
Benzene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Toluene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Ethylbenzene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
p,m-Xylene	0.35	0.20	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
o-Xylene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Total Xylenes	0.35	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Total BTEX	0.35	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Surrogate: 4-Bromochlorobenzene-PID		99.0 %		50-150	1651025	12/15/16	12/15/16	EPA 8021B
Nonhalogenated Organics by 8015								
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8015D
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1651028	12/15/16	12/15/16	EPA 8015D
Surrogate: 1-Chloro-4-fluorobenzene-FID		97.1 %		50-150	1651025	12/15/16	12/15/16	EPA 8015D
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1651028	12/15/16	12/15/16	EPA 8015D
Surrogate: n-Nonane		104 %		50-200	1651028	12/15/16	12/15/16	EPA 8015D
Cation/Anion Analysis								
Chloride	ND	20.0	mg/kg	1	1651029	12/15/16	12/15/16	EPA 300.0

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Logos Operating, LLC	Project Name:	Jicarilla L5 Spill Cleanup	Reported: 16-Dec-16 11:22
PO Box 18	Project Number:	12035-0073	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	

Section #3
P612058-03 (Solid)

Reporting								
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics by EPA 8021								
Benzene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Toluene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Ethylbenzene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
p,m-Xylene	ND	0.20	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
o-Xylene	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Total Xylenes	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Total BTEX	ND	0.10	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8021B
Surrogate: 4-Bromochlorobenzene-PID		97.7 %		50-150	1651025	12/15/16	12/15/16	EPA 8021B
Nonhalogenated Organics by 8015								
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1651025	12/15/16	12/15/16	EPA 8015D
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1651028	12/15/16	12/15/16	EPA 8015D
Surrogate: 1-Chloro-4-fluorobenzene-FID		96.8 %		50-150	1651025	12/15/16	12/15/16	EPA 8015D
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1651028	12/15/16	12/15/16	EPA 8015D
Surrogate: n-Nonane		107 %		50-200	1651028	12/15/16	12/15/16	EPA 8015D
Cation/Anion Analysis								
Chloride	ND	20.0	mg/kg	1	1651029	12/15/16	12/15/16	EPA 300.0

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Logos Operating, LLC	Project Name:	Jicarilla L5 Spill Cleanup	Reported: 16-Dec-16 11:22
PO Box 18	Project Number:	12035-0073	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1651025 - Purge and Trap EPA 5030A

Blank (1651025-BLK1)				Prepared & Analyzed: 14-Dec-16						
Benzene	ND	0.10	mg/kg							
Toluene	ND	0.10	"							
Ethylbenzene	ND	0.10	"							
p,m-Xylene	ND	0.20	"							
o-Xylene	ND	0.10	"							
Total Xylenes	ND	0.10	"							
Total BTEX	ND	0.10	"							
Surrogate: 4-Bromochlorobenzene-PID	7.75		"	8.00		96.9	50-150			

LCS (1651025-BS1)				Prepared & Analyzed: 14-Dec-16						
Benzene	4.50	0.10	mg/kg	5.00		90.0	70-130			
Toluene	4.43	0.10	"	5.00		88.7	70-130			
Ethylbenzene	4.45	0.10	"	5.00		89.1	70-130			
p,m-Xylene	8.73	0.20	"	10.0		87.4	70-130			
o-Xylene	4.32	0.10	"	5.00		86.5	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.99		"	8.00		99.9	50-150			

Matrix Spike (1651025-MS1)				Source: P612053-01	Prepared & Analyzed: 14-Dec-16					
Benzene	4.69	0.10	mg/kg	5.00	ND	93.8	54.3-133			
Toluene	4.55	0.10	"	5.00	ND	91.1	61.4-130			
Ethylbenzene	4.60	0.10	"	5.00	ND	92.1	61.4-133			
p,m-Xylene	9.04	0.20	"	10.0	ND	90.4	63.3-131			
o-Xylene	4.48	0.10	"	5.00	ND	89.7	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	7.95		"	8.00		99.4	50-150			

Matrix Spike Dup (1651025-MSD1)				Source: P612053-01	Prepared & Analyzed: 14-Dec-16					
Benzene	4.67	0.10	mg/kg	5.00	ND	93.5	54.3-133	0.373	20	
Toluene	4.58	0.10	"	5.00	ND	91.5	61.4-130	0.491	20	
Ethylbenzene	4.59	0.10	"	5.00	ND	91.9	61.4-133	0.220	20	
p,m-Xylene	9.01	0.20	"	10.0	ND	90.1	63.3-131	0.347	20	
o-Xylene	4.46	0.10	"	5.00	ND	89.2	63.3-131	0.555	20	
Surrogate: 4-Bromochlorobenzene-PID	8.06		"	8.00		101	50-150			

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Logos Operating, LLC	Project Name:	Jicarilla L5 Spill Cleanup	Reported: 16-Dec-16 11:09
PO Box 18	Project Number:	12035-0073	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1651025 - Purge and Trap EPA 5030A

Blank (1651025-BLK1)

Prepared & Analyzed: 14-Dec-16

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.76		"	8.00		97.0	50-150			

LCS (1651025-BS1)

Prepared & Analyzed: 14-Dec-16

Gasoline Range Organics (C6-C10)	54.4	20.0	mg/kg	60.9		89.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.79		"	8.00		97.4	50-150			

Matrix Spike (1651025-MS1)

Source: P612053-01

Prepared & Analyzed: 14-Dec-16

Gasoline Range Organics (C6-C10)	54.9	20.0	mg/kg	60.9	ND	90.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.59		"	8.00		94.9	50-150			

Matrix Spike Dup (1651025-MSD1)

Source: P612053-01

Prepared & Analyzed: 14-Dec-16

Gasoline Range Organics (C6-C10)	56.0	20.0	mg/kg	60.9	ND	91.9	70-130	1.99	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.79		"	8.00		97.4	50-150			

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Logos Operating, LLC	Project Name:	Jicarilla L5 Spill Cleanup	Reported: 16-Dec-16 11:09
PO Box 18	Project Number:	12035-0073	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
Batch 1651028 - DRO Extraction EPA 3570								
Blank (1651028-BLK1)				Prepared & Analyzed: 15-Dec-16				
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg					
Oil Range Organics (C28-C40+)	ND	50.0	"					
Surrogate: n-Nonane	58.1		"	50.0		116	50-200	
LCS (1651028-BS1)				Prepared & Analyzed: 15-Dec-16				
Diesel Range Organics (C10-C28)	454	25.0	mg/kg	500		90.7	38-132	
Surrogate: n-Nonane	53.3		"	50.0		107	50-200	
Matrix Spike (1651028-MS1)				Source: P612058-01 Prepared & Analyzed: 15-Dec-16				
Diesel Range Organics (C10-C28)	393	25.0	mg/kg	500	ND	78.5	38-132	
Surrogate: n-Nonane	54.1		"	50.0		108	50-200	
Matrix Spike Dup (1651028-MSD1)				Source: P612058-01 Prepared & Analyzed: 15-Dec-16				
Diesel Range Organics (C10-C28)	454	25.0	mg/kg	500	ND	90.8	38-132	14.5 20
Surrogate: n-Nonane	54.2		"	50.0		108	50-200	

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Logos Operating, LLC	Project Name:	Jicarilla LS Spill Cleanup	Reported: 16-Dec-16 11:09
PO Box 18	Project Number:	12035-0073	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1651029 - Anion Extraction EPA 300.0

Blank (1651029-BLK1)				Prepared & Analyzed: 15-Dec-16						
Chloride	ND	20.0	mg/kg							
LCS (1651029-BS1)				Prepared & Analyzed: 15-Dec-16						
Chloride	510	20.0	mg/kg	500		102	90-110			
Matrix Spike (1651029-MS1)				Source: P612058-01 Prepared & Analyzed: 15-Dec-16						
Chloride	513	20.0	mg/kg	500	ND	103	80-120			
Matrix Spike Dup (1651029-MSD1)				Source: P612058-01 Prepared & Analyzed: 15-Dec-16						
Chloride	512	20.0	mg/kg	500	ND	102	80-120	0.166	20	

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Jicarilla L5 Spill Cleanup
Project Number: 12035-0073
Project Manager: Felipe Aragon

Reported:
16-Dec-16 11:09

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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laboratory@envirotech-inc.com

Client: LAGOS
 Project: Jicarilla LS Spill Cleanup
 Sampler: F. Aragon
 Phone: _____
 Email(s): F. Aragon
 Project Manager: F. Aragon

RUSH? ☒ 1d
☐ 3d

Lab Use Only		Analysis and Method								Lab Only	
Lab WO#		GRO/DRO by 8015 O&G	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Hold				Lab Number	Correct Cont/Prsrv (s) Y/N
Job Number											
P 12058											
12035-0073											
1 of 1											

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015 O&G	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Hold						Lab Number	Correct Cont/Prsrv (s) Y/N
Section #1	12-14-16	1233	S	1-4oz /ice	X	X	X								1	X
Section #2	I	1234	I	I	X	X	X								2	I
Section #3	I	1546	I	I	X	X	X								3	I
Background	I	1600	I	1- Crutcher Bag				X							4	I

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only
<i>[Signature]</i>	12/15/16	7:03am	<i>[Signature]</i>	12/15/16	7:03am	**Received on Ice Y/ N
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 _____ T2 _____ T3 _____
						AVG Temp °C <u>11.0</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

**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.

☐ Sample(s) dropped off after hours to a secure drop off area. Chain of Custody Notes/Billing info:



5795 US Highway 64, Farmington, NM 87401
 Three Springs #65 Mercado Street Suite 115, Albuquerque, CO 81101

Ph: (505) 622-0615 Fx: (505) 622-1665
 Ph: (970) 259-0615 Fx: (800) 362-1879

