

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: LOGOS Operating LLC	OGRID 320608
Contact Name: Larissa Farrell	Contact Telephone 505-419-1100
Contact email: lfarrell@logosresourcesllc.com	Incident # (assigned by OCD)
Contact mailing address: 2010 Afton Pl Farmington, NM 87401	NCS 1917149081

NMOCD

MAY 16 2019

DISTRICT III

Location of Release Source

Latitude 36.929775 _____ Longitude -107.728663 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Nordhaus 710 Pipeline	Site Type Pipeline
Date Release Discovered 4/18/19	API# (if applicable) 30-045-27703

Unit Letter	Section	Township	Range	County
H	01	31N	09W	San Juan County

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Natural Gas	Volume Released (Mcf) 185 MCF	Volume Recovered (Mcf) 0
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Operator noticed fluid on ground. Shut in well to determine if it was a pipeline leak. It was determined it was a pipeline leak. Operations called 811 and repaired 27' of pipeline. Envirotech sampled the area and all criteria was met as per Table I (see attached results).

Smith, Cory, EMNRD

From: Smith, Cory, EMNRD
Sent: Thursday, June 20, 2019 1:45 PM
To: 'Larissa Farrell'
Subject: Nordhaus 710 Pipeline,

Larissa,

OCD received a C-141 for the Nordhaus 710 pipeline it has signatures for both initial and final.

The Closure of the C-141 portion has been denied for the following.

- Incorrect Operator Ogrid Number#
- No sampling diagram
- The notes say 27' of excavation but the site diagram scale is so large OCD can not determine sampling points etc. The Picture doesn't show any type of excavation?
- No Notice to the OCD
- No description of remedial activities
- Operator did not provide siting characteristics per 19.15.29. 11 NMAC (Distance to significant water course, residences, etc.)

Please review the closure requirements of 19.15.29 NMAC and resubmit. Please keep in mind that If the Operator does not submit a Site characterization /remediation plan that those requirements must be included in either the initial C-141 or the Final C-141..

The Initial C-141 for this site has been approved Please see below for the assigned incident#. Please remember Logos has 15 days from the date of discovery to submit a written C-141 and 90 days from the date of discovery to submit a characterization and remediation plan or a closure report. These time frames are unchanged with the above denial.

NCS1917149081 NORDHAUS #710 PIPELINE @ 30-045-27703

General Incident Information

Site Name: NORDHAUS #710 PIPELINE

Well: [30-045-27703] NORDHAUS #710

Facility:

Operator: [289408] LOGOS OPERATING, LLC

Status: Closure Not Approved

Type: Natural Gas Release

District: Aztec

Severity:

Surface Owner: Federal

County: San Juan (45)

Incident Location: H-01-31N-09W Lot: 0 FNL 0 FEL

Lat/Long: 36.929775,-107.728663 NAD83

Thanks,

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

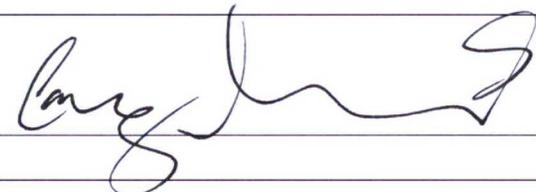
State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
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.
Printed Name: <u>Larissa Farrell</u> Title: <u>Environmental Technician</u> Signature:  Date: <u>5/16/19</u> email: <u>lfarrell@logosreosurcesllc.com</u> Telephone: <u>505-419-1100</u>
OCD Only Received by:  Date: <u>6/20/19</u>

Incident ID	
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Site Assessment/Characterization

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?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
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Facility ID	
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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.

Printed Name: Larissa Farrell Title: Environmental Technician

Signature:  Date: 5/16/19

email: lfarrell@logosresourcesllc.com Telephone: 505-419-1100

OCD Only

Received by: _____ Date: _____

Incident ID	
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Facility ID	
Application ID	

Closure

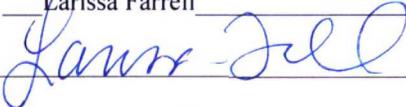
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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.

Printed Name: Larissa Farrell Title: Environmental Technician

Signature:  Date: 5/16/19

email: lfarrell@logosresourcesllc.com Telephone: 505-419-1100

OCD Only

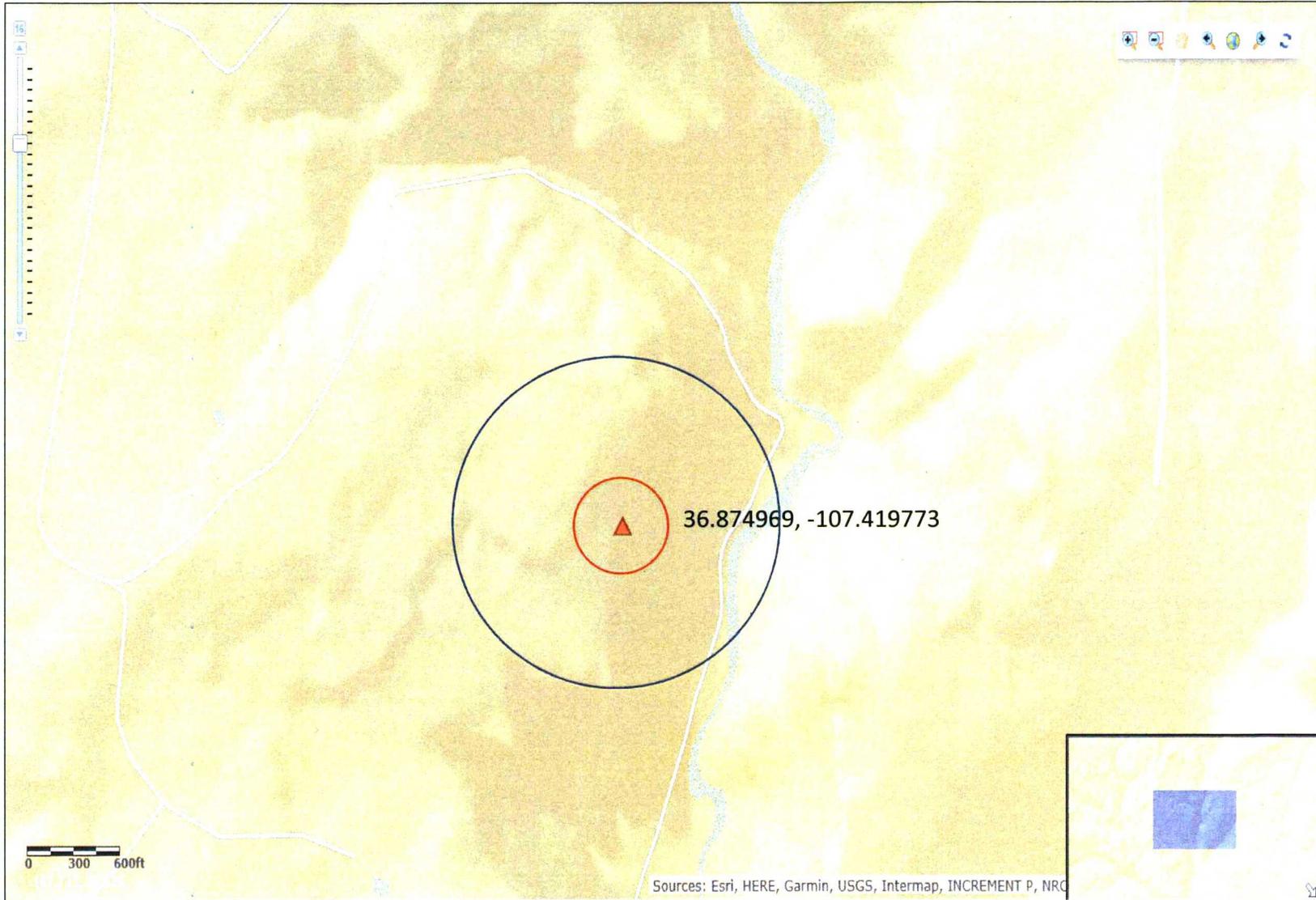
Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ **DENIED** Date: _____

Printed Name: _____ BY: Cory Smith *see EMAIL* Title: _____

DATE: 6/20/19 (505) 334-6178 Ext. 115



Legend

	300' Buffer
	1000' Buffer
	Release site

LOGOS Operating, LLC – Nordhaus 710 Pipeline
Scaled Site and Sampling Diagram
Unit H, Section 1, T31N, R9W
Rio Arriba County, NM





Legend

- NORDHAUS 710
- 📌 Nordhaus 710 Pipeline Leak

Legend

- Impacted Area

LOGOS Operating, LLC – Nordhaus 710 Pipeline
 Scaled Site and Sampling Diagram
 Unit H, Section 1, T31N, R9W
 San Juan County, NM

LOGOS
 RESOURCES II, LLC



New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
 (quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	SJ 04122 POD1	3	2	12	31N	09W	256703	4089166	

Driller License: 1357	Driller Company: BAILEY DRILLING COMPANY	
Driller Name: BAILEY, MARK		
Drill Start Date: 03/23/2015	Drill Finish Date: 03/30/2015	Plug Date:
Log File Date: 04/08/2015	PCW Rev Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield: 7 GPM
Casing Size: 5.00	Depth Well: 650 feet	Depth Water: 560 feet

Water Bearing Stratifications:	Top	Bottom	Description
	0	20	Sandstone/Gravel/Conglomerate
	500	650	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	0	550
	550	650

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

5/15/19 12:44 PM

POINT OF DIVERSION SUMMARY



Analytical Report

Report Summary

Client: Logos Operating, LLC

Samples Received: 4/26/2019

Job Number: 12035-0127

Work Order: P904127

Project Name/Location: Nordhas 710 Spill
Assessment Soil Sampling

Report Reviewed By:



Date: 4/30/19

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNi unless footnoted 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, currently holds the appropriate and available Utah TNi certification NM009792018-1 for the data reported.



Logos Operating, LLC	Project Name:	Nordhas 710 Spill Assessment Soil Sampling	Reported: 04/30/19 16:34
PO Box 18	Project Number:	12035-0127	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Contaminated Soil	P904127-01A	Soil	04/26/19	04/26/19	Glass Jar, 4 oz.
	P904127-01B	Soil	04/26/19	04/26/19	Glass Jar, 4 oz.

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Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Nordhas 710 Spill Assessment Soil Sampling Project Number: 12035-0127 Project Manager: Felipe Aragon	Reported: 04/30/19 16:34
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**Contaminated Soil
P904127-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	1918004	04/29/19	04/29/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1918004	04/29/19	04/29/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1918004	04/29/19	04/29/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1918004	04/29/19	04/29/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1918004	04/29/19	04/29/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1918004	04/29/19	04/29/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		100 %		50-150	1918004	04/29/19	04/29/19	EPA 8021B	

Nonhalogenated Organics by 8015

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1918004	04/29/19	04/29/19	EPA 8015D	
Diesel Range Organics (C10-C28)	81.2	25.0	mg/kg	1	1917048	04/29/19	04/29/19	EPA 8015D	
Oil Range Organics (C28-C40)	114	50.0	mg/kg	1	1917048	04/29/19	04/29/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		96.0 %		50-150	1918004	04/29/19	04/29/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		99.5 %		50-200	1917048	04/29/19	04/29/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	ND	20.0	mg/kg	1	1917042	04/26/19	04/26/19	EPA 300.0/9056A	
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Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Nordhas 710 Spill Assessment Soil Sampling Project Number: 12035-0127 Project Manager: Felipe Aragon	Reported: 04/30/19 16:34
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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 1918004 - Purge and Trap EPA 5030A

Blank (1918004-BLK1)

Prepared & Analyzed: 04/29/19 1

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 4-Bromochlorobenzene-PID	8.07		"	8.00		101	50-150			

LCS (1918004-BS1)

Prepared & Analyzed: 04/29/19 1

Benzene	4.64	0.0250	mg/kg	5.00		92.7	70-130			
Toluene	5.06	0.0250	"	5.00		101	70-130			
Ethylbenzene	5.04	0.0250	"	5.00		101	70-130			
p,m-Xylene	10.4	0.0500	"	10.0		104	70-130			
o-Xylene	5.04	0.0250	"	5.00		101	70-130			
Total Xylenes	15.4	0.0250	"	15.0		103	70-130			
Surrogate: 4-Bromochlorobenzene-PID	8.08		"	8.00		101	50-150			

Matrix Spike (1918004-MS1)

Source: P904127-01

Prepared & Analyzed: 04/29/19 1

Benzene	4.73	0.0250	mg/kg	5.00	ND	94.5	54.3-133			
Toluene	5.15	0.0250	"	5.00	ND	103	61.4-130			
Ethylbenzene	5.14	0.0250	"	5.00	ND	103	61.4-133			
p,m-Xylene	10.6	0.0500	"	10.0	ND	106	63.3-131			
o-Xylene	5.14	0.0250	"	5.00	ND	103	63.3-131			
Total Xylenes	15.7	0.0250	"	15.0	ND	105	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	8.09		"	8.00		101	50-150			

Matrix Spike Dup (1918004-MSD1)

Source: P904127-01

Prepared: 04/29/19 1 Analyzed: 04/29/19 2

Benzene	4.74	0.0250	mg/kg	5.00	ND	94.8	54.3-133	0.303	20	
Toluene	5.17	0.0250	"	5.00	ND	103	61.4-130	0.401	20	
Ethylbenzene	5.17	0.0250	"	5.00	ND	103	61.4-133	0.592	20	
p,m-Xylene	10.7	0.0500	"	10.0	ND	107	63.3-131	0.586	20	
o-Xylene	5.17	0.0250	"	5.00	ND	103	63.3-131	0.609	20	
Total Xylenes	15.8	0.0250	"	15.0	ND	106	63.3-131	0.593	20	
Surrogate: 4-Bromochlorobenzene-PID	8.08		"	8.00		101	50-150			

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Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Nordhas 710 Spill Assessment Soil Sampling Project Number: 12035-0127 Project Manager: Felipe Aragon	Reported: 04/30/19 16:34
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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 1917048 - DRO Extraction EPA 3570

Blank (1917048-BLK1)		Prepared: 04/29/19 0 Analyzed: 04/29/19 1								
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	48.5		"	50.0		96.9	50-200			
LCS (1917048-BS1)		Prepared: 04/29/19 0 Analyzed: 04/29/19 1								
Diesel Range Organics (C10-C28)	494	25.0	mg/kg	500		98.7	38-132			
Surrogate: n-Nonane	47.9		"	50.0		95.9	50-200			
Matrix Spike (1917048-MS1)		Source: P904130-01		Prepared: 04/29/19 0 Analyzed: 04/29/19 1						
Diesel Range Organics (C10-C28)	692	25.0	mg/kg	500	168	105	38-132			
Surrogate: n-Nonane	50.7		"	50.0		101	50-200			
Matrix Spike Dup (1917048-MSD1)		Source: P904130-01		Prepared: 04/29/19 0 Analyzed: 04/29/19 1						
Diesel Range Organics (C10-C28)	715	25.0	mg/kg	500	168	109	38-132	3.29	20	
Surrogate: n-Nonane	51.3		"	50.0		103	50-200			

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Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Nordhas 710 Spill Assessment Soil Sampling Project Number: 12035-0127 Project Manager: Felipe Aragon	Reported: 04/30/19 16:34
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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 1918004 - Purge and Trap EPA 5030A

Blank (1918004-BLK1)				Prepared & Analyzed: 04/29/19 1						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.54		"	8.00		94.3	50-150			
LCS (1918004-BS1)				Prepared & Analyzed: 04/29/19 1						
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.67		mg/kg	8.00		95.9	50-150			
LCS (1918004-BS2)				Prepared & Analyzed: 04/29/19 1						
Gasoline Range Organics (C6-C10)	55.7	20.0	mg/kg	50.0		111	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.74		"	8.00		96.7	50-150			
Matrix Spike (1918004-MS2)				Source: P904127-01		Prepared: 04/29/19 1 Analyzed: 04/29/19 2				
Gasoline Range Organics (C6-C10)	55.4	20.0	mg/kg	50.0	ND	111	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.79		"	8.00		97.3	50-150			
Matrix Spike Dup (1918004-MSD2)				Source: P904127-01		Prepared: 04/29/19 1 Analyzed: 04/29/19 2				
Gasoline Range Organics (C6-C10)	50.5	20.0	mg/kg	50.0	ND	101	70-130	9.17	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.78		"	8.00		97.2	50-150			

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Logos Operating, LLC PO Box 18 Flora Vista NM, 87415	Project Name: Nordhas 710 Spill Assessment Soil Sampling Project Number: 12035-0127 Project Manager: Felipe Aragon	Reported: 04/30/19 16:34
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Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1917042 - Anion Extraction EPA 300.0/9056A										
Blank (1917042-BLK1)										
				Prepared & Analyzed: 04/26/19 1						
Chloride	ND	20.0	mg/kg							
LCS (1917042-BS1)										
				Prepared: 04/26/19 1 Analyzed: 04/30/19 1						
Chloride	251	20.0	mg/kg	250	1500	236	90-110			
Matrix Spike (1917042-MS1)										
				Source: P904126-01 Prepared & Analyzed: 04/26/19 1						
Chloride	2090	20.0	mg/kg	250	1500	236	80-120			SPK2
Matrix Spike Dup (1917042-MSD1)										
				Source: P904126-01 Prepared & Analyzed: 04/26/19 1						
Chloride	1950	20.0	mg/kg	250	1500	181	80-120	6.85	20	SPK2

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Logos Operating, LLC	Project Name:	Nordhas 710 Spill Assessment Soil Sampling	Reported: 04/30/19 16:34
PO Box 18	Project Number:	12035-0127	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	

Notes and Definitions

- SPK2 The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to native analyte concentration at 4 times or greater than the spike concentration.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- ** Methods marked with ** are non-accredited methods.

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