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	NCS1920539720
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: LOGOS Operating, LLC	OGRID 289408
Contact Name: Larissa Farrell	Contact Telephone: 505787-2027
Contact email: lfarrell@logosresourcesllc.com	Incident # *(assigned by OCD)* NCS1920539720
Contact mailing address: 2010 Afton Pl Farmington, NM 87401	

Location of Release Source

Latitude 36.9280396 Longitude -107.4470901
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Rosa Unit 169D	Site Type: Well Site
Date Release Discovered: 7/15/2019	API# *(if applicable)* 30-03930755

Unit Letter	Section	Township	Range	County
J	03	31N	06W	Rio Arriba

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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 327	Volume Recovered (bbls) 35
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Transfer pump was not working properly causing fluid to spill out of the rock basket. BLM Inspectors identified the release and notified LOGOS personnel on 7/11/19. Once LOGOS was notified, personnel was on location within 20 minutes and had a crew onsite within an hour and a half.

State of New Mexico
Oil Conservation Division

Incident ID	
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The amount of fluid released.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, BLM (Emmanuel) and Larissa Farrell spoke at 8:32am on 7/11/2019. Larissa Farrell called Cory Smith at 12:07pm on 7/11/2019. BOR was notified on 7/11/19 at 3:12pm

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.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: Larissa Farrell Title: Env/Reg Technician

Signature: Larissa Farrell Date: 7/22/19

email: lfarrell@logosresourcesllc.com Telephone: (505) 787-2027

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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?	113 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☒ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ 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	
District RP	
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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: ___Env/Reg Technician_____

Signature: _____ Date: _10/14/19_____

email: _lfarrell@logosresourcesllc.com_____ Telephone: __(505) 787-2027_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
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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: Env/Reg Technician

Signature: Larissa Farrell Date: 10/14/19

email: lfarrell@logosresourcesllc.com Telephone: (505)787-2027

OCD Only

Received by: OCD Date: 10/15/19

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: Cory Date: 12/10/19

Printed Name: Cory Title: Environmental Specalist

LOGOS RESOURCES II, LLC

2010 Afton Place
Farmington, NM 87401
Phone: (505) 324-4145
Fax: (505) 326-6112

October 11, 2019

Cory Smith
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410
RE: Rosa Unit 240A Release (nCS1920539720)

The release at the Rosa Unit 169D was discovered on July 15, 2019 by BLM Inspectors. LOGOS Operating (LOGOS) was notified on July 16, 2019 and immediately shut in the well and dispatched a water truck to pull the fluid from the affected area. Approximately 327 bbls were released from the rock basket on the produced water tank. The secondary containment is not lined and fluid began seeping under the metal berm and left the location area on the southwest corner of the pad. The fluid followed the natural drainage down towards the lake for approximately 180'. LOGOS was able to recover 35 bbls of fluid from the secondary containment. Due to the sensitive archaeological area, LOGOS requested the services of La Plata Archaeological Consultants to conduct a survey to identify any possible impact to archaeological sites. The survey confirmed that there were no cultural resources impacted by this release. There is a cathodic well on the well pad that depicts groundwater at 113' below surface. LOGOS sampled the area on October 08, 2019 with the witness of NM Oil Conservation Division and BLM. The analytical results showed that all constituents were under the Table I thresholds and no further remediation was required. Please see attached analytical results

Sincerely,

Larissa Farrell
Environmental/Regulatory Technician

Legend

Impacted Area

LOGOS Operating, LLC – Rosa Unit 169D
30-039-30755
Sampling Diagram
Unit J, Section 3, T31N, R6W
Rio Arriba County, NM

LOGOS RESOURCES II, LLC

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Analytical Laboratory

Analytical Report

Report Summary

Client: Logos Operating, LLC

Samples Received: 10/8/2019
Job Number: 12035-0114
Work Order: P910032
Project Name/Location: Rosa 169D

Report Reviewed By: Walter Hinchman Date: 10/11/19

Walter Hinchman, Laboratory Director

NELAP ACCREDITED TNI LABORATORY

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, holds the Utah TNI certification NM009792018-1 for the data reported.
Envirotech, Inc, holds the Texas TNI certification T104704557-19-2 for the data reported.

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Analytical Laboratory

Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Rosa 169D-SS1	P910032-01A	Soil	10/08/19	10/08/19	Glass Jar, 4 oz.
	P910032-01B	Soil	10/08/19	10/08/19	Glass Jar, 4 oz.
Rosa 169D-SS2	P910032-02A	Soil	10/08/19	10/08/19	Glass Jar, 4 oz.
	P910032-02B	Soil	10/08/19	10/08/19	Glass Jar, 4 oz.
Rosa 169D-SS3	P910032-03A	Soil	10/08/19	10/08/19	Glass Jar, 4 oz.
	P910032-03B	Soil	10/08/19	10/08/19	Glass Jar, 4 oz.
Rosa 169D-SS4	P910032-04A	Soil	10/08/19	10/08/19	Glass Jar, 4 oz.
	P910032-04B	Soil	10/08/19	10/08/19	Glass Jar, 4 oz.

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Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

Rosa 169D-SS1
P910032-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*93.8 %*		*50-150*	*1941027*	*10/09/19*	*10/10/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
Oil Range Organics (C28-C40)	**50.3**	50.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
Surrogate: n-Nonane		*121 %*		*50-200*	*1941026*	*10/09/19*	*10/09/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*89.3 %*		*50-150*	*1941027*	*10/09/19*	*10/10/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**20.5**	20.0	mg/kg	1	1941028	10/09/19	10/09/19	EPA 300.0/9056A	

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Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

Rosa 169D-SS2
P910032-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*93.5 %*		*50-150*	*1941027*	*10/09/19*	*10/10/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
Surrogate: n-Nonane		*117 %*		*50-200*	*1941026*	*10/09/19*	*10/09/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*88.9 %*		*50-150*	*1941027*	*10/09/19*	*10/10/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1941028	10/09/19	10/09/19	EPA 300.0/9056A	

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Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

Rosa 169D-SS3
P910032-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*93.0 %*		*50-150*	*1941027*	*10/09/19*	*10/10/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
Surrogate: n-Nonane		*117 %*		*50-200*	*1941026*	*10/09/19*	*10/09/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.3 %*		*50-150*	*1941027*	*10/09/19*	*10/10/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**37.5**	20.0	mg/kg	1	1941028	10/09/19	10/09/19	EPA 300.0/9056A	

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Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

Rosa 169D-SS4
P910032-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*93.9 %*		*50-150*	*1941027*	*10/09/19*	*10/10/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
Surrogate: n-Nonane		*117 %*		*50-200*	*1941026*	*10/09/19*	*10/09/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*88.6 %*		*50-150*	*1941027*	*10/09/19*	*10/10/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1941028	10/09/19	10/09/19	EPA 300.0/9056A	

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Analytical Laboratory

Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

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
Batch 1941027 - Purge and Trap EPA 5030A										
Blank (1941027-BLK1)				Prepared: 10/09/19 1 Analyzed: 10/11/19 0						
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	*7.57*		"	*8.00*		*94.6*	*50-150*			
LCS (1941027-BS1)				Prepared: 10/09/19 1 Analyzed: 10/11/19 0						
Benzene	5.17	0.0250	mg/kg	5.00		103	70-130			
Toluene	5.15	0.0250	"	5.00		103	70-130			
Ethylbenzene	5.13	0.0250	"	5.00		103	70-130			
p,m-Xylene	10.3	0.0500	"	10.0		103	70-130			
o-Xylene	5.16	0.0250	"	5.00		103	70-130			
Total Xylenes	15.4	0.0250	"	15.0		103	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.57*		"	*8.00*		*94.6*	*50-150*			
Matrix Spike (1941027-MS1)	**Source: P910027-01**			Prepared: 10/09/19 1 Analyzed: 10/11/19 0						
Benzene	4.91	0.0250	mg/kg	5.00	ND	98.2	54.3-133			
Toluene	4.89	0.0250	"	5.00	ND	97.8	61.4-130			
Ethylbenzene	4.87	0.0250	"	5.00	ND	97.5	61.4-133			
p,m-Xylene	9.77	0.0500	"	10.0	ND	97.7	63.3-131			
o-Xylene	4.88	0.0250	"	5.00	ND	97.6	63.3-131			
Total Xylenes	14.6	0.0250	"	15.0	ND	97.6	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*7.16*		"	*8.00*		*89.6*	*50-150*			
Matrix Spike Dup (1941027-MSD1)	**Source: P910027-01**			Prepared: 10/09/19 1 Analyzed: 10/11/19 1						
Benzene	5.02	0.0250	mg/kg	5.00	ND	100	54.3-133	2.16	20	
Toluene	4.99	0.0250	"	5.00	ND	99.8	61.4-130	1.94	20	
Ethylbenzene	4.96	0.0250	"	5.00	ND	99.1	61.4-133	1.65	20	
p,m-Xylene	9.89	0.0500	"	10.0	ND	98.9	63.3-131	1.27	20	
o-Xylene	4.99	0.0250	"	5.00	ND	99.7	63.3-131	2.18	20	
Total Xylenes	14.9	0.0250	"	15.0	ND	99.2	63.3-131	1.58	20	
Surrogate: 4-Bromochlorobenzene-PID	*7.61*		"	*8.00*		*95.1*	*50-150*			

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1941026 - DRO Extraction EPA 3570										
Blank (1941026-BLK1)				Prepared: 10/09/19 0 Analyzed: 10/09/19 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	*58.4*		"	*50.0*		*117*	*50-200*			
LCS (1941026-BS1)				Prepared: 10/09/19 0 Analyzed: 10/09/19 1						
Diesel Range Organics (C10-C28)	537	25.0	mg/kg	500		107	38-132			
Surrogate: n-Nonane	*60.1*		"	*50.0*		*120*	*50-200*			
Matrix Spike (1941026-MS1)	**Source: P910028-01**			Prepared: 10/09/19 0 Analyzed: 10/09/19 1						
Diesel Range Organics (C10-C28)	767	25.0	mg/kg	500	220	109	38-132			
Surrogate: n-Nonane	*58.8*		"	*50.0*		*118*	*50-200*			
Matrix Spike Dup (1941026-MSD1)	**Source: P910028-01**			Prepared: 10/09/19 0 Analyzed: 10/09/19 1						
Diesel Range Organics (C10-C28)	777	25.0	mg/kg	500	220	112	38-132	1.33	20	
Surrogate: n-Nonane	*58.6*		"	*50.0*		*117*	*50-200*			

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Analytical Laboratory

Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1941027 - Purge and Trap EPA 5030A										
Blank (1941027-BLK1)				Prepared: 10/09/19 1 Analyzed: 10/11/19 0						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.07*		"	*8.00*		*88.4*	*50-150*			
LCS (1941027-BS2)				Prepared: 10/09/19 1 Analyzed: 10/11/19 1						
Gasoline Range Organics (C6-C10)	43.9	20.0	mg/kg	50.0		87.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.06*		"	*8.00*		*88.3*	*50-150*			
Matrix Spike (1941027-MS2)	**Source: P910027-01**			Prepared: 10/09/19 1 Analyzed: 10/11/19 1						
Gasoline Range Organics (C6-C10)	46.5	20.0	mg/kg	50.0	ND	93.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.07*		"	*8.00*		*88.4*	*50-150*			
Matrix Spike Dup (1941027-MSD2)	**Source: P910027-01**			Prepared: 10/09/19 1 Analyzed: 10/11/19 1						
Gasoline Range Organics (C6-C10)	46.2	20.0	mg/kg	50.0	ND	92.3	70-130	0.734	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.02*		"	*8.00*		*87.8*	*50-150*			

envirotech
Analytical Laboratory

Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

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 1941028 - Anion Extraction EPA 300.0/9056A										
Blank (1941028-BLK1)				Prepared & Analyzed: 10/09/19 1						
Chloride	ND	20.0	mg/kg							
LCS (1941028-BS1)				Prepared & Analyzed: 10/09/19 1						
Chloride	256	20.0	mg/kg	250		102	90-110			
Matrix Spike (1941028-MS1)	**Source: P910027-01**			Prepared & Analyzed: 10/09/19 1						
Chloride	295	20.0	mg/kg	250	36.3	103	80-120			
Matrix Spike Dup (1941028-MSD1)	**Source: P910027-01**			Prepared & Analyzed: 10/09/19 1						
Chloride	293	20.0	mg/kg	250	36.3	103	80-120	0.677	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 my differ slightly.

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Analytical Laboratory

Logos Operating, LLC	Project Name:	Rosa 169D	
PO Box 18	Project Number:	12035-0114	**Reported:**
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:29

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

Project Information | Chain of Custody | Page 1 of 1

Client: LOBOS	Report Attention	Lab Use Only	TAT / EPA Program
Project:	Report due by:	Lab WO# P910032	Job Number 12035-0114
Project Manager: L. Farrell	Attention:	1D / 3D: 3D	RCRA / CWA / SDWA
Address:	Address:	Analysis and Method	State: NM ✓ CO / UT / AZ / TX / OK
City, State, Zip	City, State, Zip		
Phone: 505 787-2027	Phone:		
Email: Hfarrell@lobosresourcesllc.com	Email:		

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	Remarks
11:09	10/8/19	S	2	Rosa 1691 SS1	1	✓	✓	✓			✓	
11:13	10/8/19	S	2	Rosa 1691 SS2	2	✓	✓	✓			✓	
11:20	10/8/19	S	2	Rosa 1691 SS3	3	✓	✓	✓			✓	
11:16	10/8/19	S	2	Rosa 1691 SS4	4	✓	✓	✓			✓	

Additional Instructions: Rush 3D. vis ice in cooler

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:

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
	10/8/19	3:49	Daina Lopez	10/8/19	15:49
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only: Received on ice: (Y) / N

T1 ____ T2 ____ T3 ____

AVG Temp °C 4

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
5795 US Highway 64, Farmington, NM 87401
24 Hour Emergency Response Phone (800) 362-1879
Ph (505) 632-1881 Fx (505) 632-1865
envirotech-inc.com
labadmin@envirotech-inc.com

Project Information | Chain of Custody | Page 1 of 1

Client:	LOGOS
Project:	Rosa 169D per client 10/9/19
Project Manager:	C. Farrell
Address:	
City, State, Zip	
Phone:	505 787-2027
Email:	cfarrell@logosresourcesllc.com

Report Attention

Report due by:	
Attention:	
Address:	
City, State, Zip	
Phone:	
Email:	

Lab Use Only

Lab WO#	P910032
Job Number	12035-0114

TAT: 1D | 3D ✓

EPA Program: RCRA | CWA | SDWA

State: NM ✓ | CO | UT | AZ | TX | OK

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	Remarks
11:09	10/8/19	S	2	Rosa 169D SS1	1	✓	✓	✓			✓	
11:13	10/8/19	S	2	Rosa 169D SS2	2	✓	✓	✓			✓	
11:20	10/8/19	S	2	Rosa 169D SS3	3	✓	✓	✓			✓	
11:16	10/8/19	S	2	Rosa 169D SS4	4	✓	✓	✓			✓	

Additional Instructions: Rush 3D. VIS ice in cooler

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:

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
	10/8/19	3:49	Dana Lopez	10/8/19	15:49
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only

Received on ice: (Y) / N

T1 T2 T3

AVG Temp °C 4

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.

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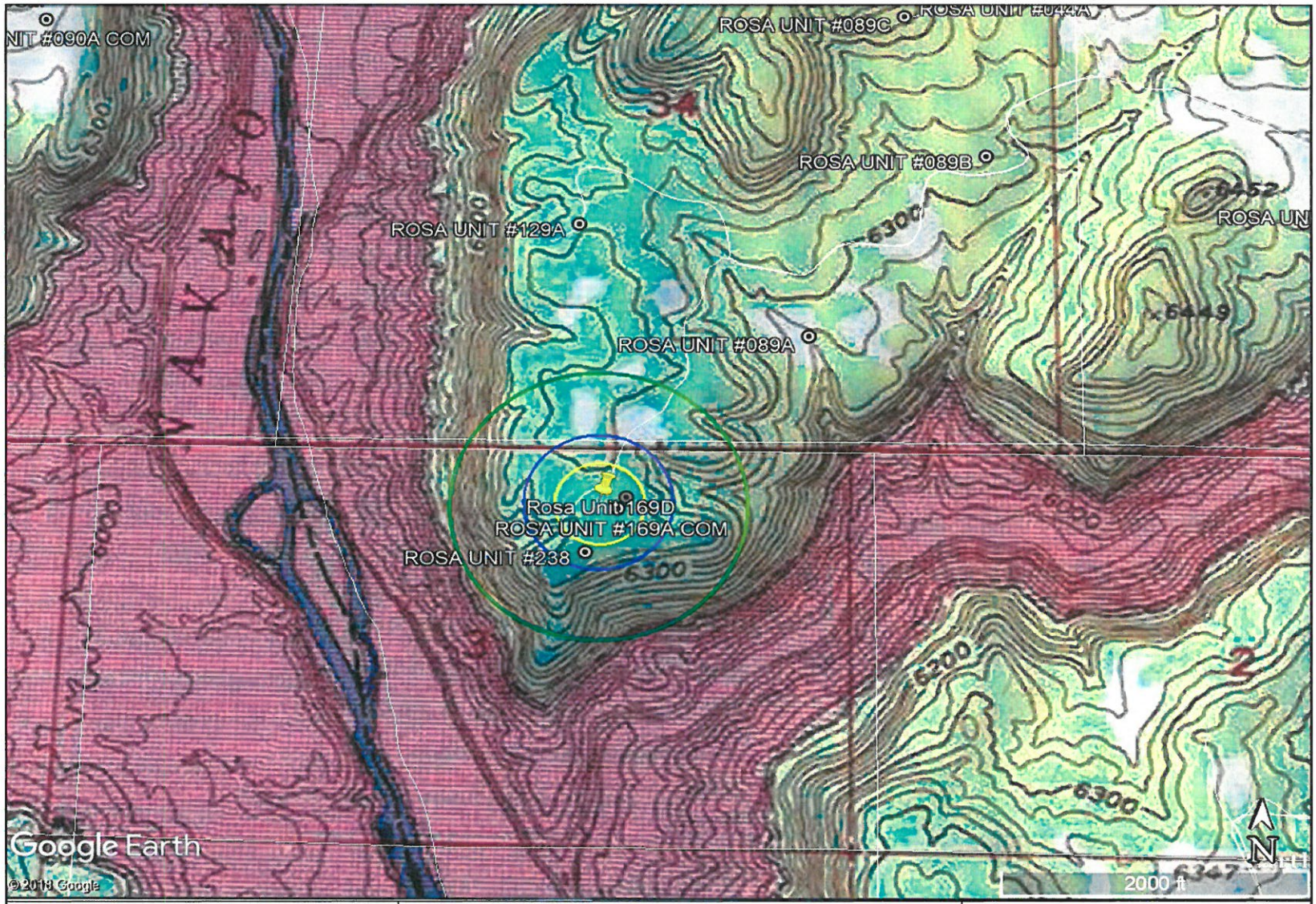

Legend

- 300' radius
- 500' radius
- 1000' radius

LOGOS Operating, LLC – Nordhaus 710 Pipeline
Hydrology Map
Unit H, Section 1, T31N, R9W
San Juan County, NM

LOGOS RESOURCES II, LLC

30-039-24501 3757

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICO

Operator Meridian Oil Co. Location: Unit SE Sec. 03 Twp 31 Rng 06

Name of Well/Wells or Pipeline Serviced

Rosa Unit Com #238

Elevation ____ Completion Date 6-10-93 Total Depth 416' Land Type F

Casing Strings, Sizes, Types & Depths 10/24 Set 58' of 8" PVC Casing. No Gas or Water But 19' of River Boulders Were Encountered During Casing

If Casing Strings are cemented, show amounts & types used Cemented with 18 Sacks

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

No

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. Damp at 110' and 155', Not enough for sample.

Depths gas encountered: No

Ground bed depth with type & amount of coke breeze used: 416'

110 bags of Asbury coke breeze.

Depths anodes placed: 395, 385, 375, 365, 355, 325, 315, 305, 295, 245, 235, 225, 215, 205, 195'

Depths vent pipes placed: 416'

Vent pipe perforations: Bottom 280'

Remarks:

RECEIVED
JAN 31 1994
OIL CON. DIV.
DIST. 3

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

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

RECEIVED

JUL 25 2019

Farmington Field Office
Bureau of Land Management

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No: NMSF-078772

6. If Indian, Allottee or Tribe Name:

7. If Unit of CA/Agreement, Name and/or No: Rosa Unit

1. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other

8. Well Name and No: Rosa Unit 169D Com

2. Name of Operator: LOGOS Operating, LLC

9. API Well No: 30-039-30755

3a. Address: 2010 Afton Pl, Farmington, NM 87401

3b. Phone No. *(include area code)*: (505) 787-2027

10. Field and Pool or Exploratory Area: Blanco MV/Basin DK/Basin MC

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*: Surface: 2395' FSL & 1720' FEL; BHL 2200' FSL & 700' FEL; Sec. 3 T31N R6W

11. Country or Parish, State: Rio Arriba, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Remediation Plan
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

LOGOS Operating, LLC will be applying gypsum/fertilizer to the area of release that was off location at the Rosa Unit Com 169D. This is the best available practice to ensure that the natural drainage and erosion controls are not impacted by excavation efforts as per conversation with Emmanuel on 7/23/2019. As per the produced water analysis (attached), there are no hazardous constituents that will be detrimental to the soil, vegetation or wildlife. LOGOS Operating, LLC will conduct confirmation sampling to ensure closure criteria from NMAC 19.15.29.12 Table I are not exceeded. After the analysis results have been received LOGOS Operating, LLC will submit the NMOCD C-141 closure report to all appropriate agencies.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*: Larissa Farrell — Title: Env/Reg Technician

Signature: Larissa Farrell — Date: 07/25/2019

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by: Steve Mason — Title: Supv NRS — Date: 9/6/19

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. — Office: FFO

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

OPERATOR

Operator: LOGOS Operating LLC

Well Name: Rosa Unit 169D Com

Legal Description: T31N, R6W, Sec. 3/3003903755

Conditions of Approval

Disclaimers: BLM's approval of this remediation plan does not relieve the lessee an operator from obtaining any other authorizations that may be required by other jurisdictional entities. These COA's may reiterate COAs attached to original permit though they do not negate any COA's attached to the original permit.

1. This location has a ranking of 10 due to being >100 feet depth to groundwater, <1,000 horizontal feet from surface water body and <1,000 within a wellhead protection area in accordance with NMOCD's Guidelines for Remediation of Leaks, Spills and Releases and BLM-FFO NTL 94-1. This release will need to be cleaned to this regulatory standards: therefore, TPH needs to be <1,000 ppm, BTEX <50 ppm, and benzene <10 ppm.

2. LOGOS will notify the BLM at least 24 hours prior to any confirmation soil sampling event. Contact Abiodun (Emmanuel) Adeloye at aadeloye@blm.gov or 505-564-7665 (office) or 505 635-0984 (cell)

3. Any disturbance of the interim reclaimed area will be appropriately reclaimed back to pre-project interim reclamation conditions. . This approval does not permit surface disturbance beyond area requested. If it is determined that additional surface disturbance is required for sufficient remediation, a new request shall be submitted via Sundry (form 3160-005).

4. All employees of the project, including the Operator and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles and company equipment. This includes all personnel associated with construction, use, maintenance and abandonment of the well pad, well facilities, access and pipelines. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16U.S.C. 470aa-mm).

5. If, in this operations, operator/lease holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM Field Manager. The BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by a BLM or permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project

to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

6. If monitoring confirms the presence of previously unidentified cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to the BLM Field Manager. The BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. A Bureau of Land Management or permitted cultural resources consultant may perform minor recordation, stabilization, or data recovery. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed.

7. If, in its operations, operator/holder damages, or is found to have damaged any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare and have executed a BLM approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

8. Perimeter berms should be constructed to control stormwater run-on and runoff.

9. Following attainment of NMOCD regulatory standards, the fill slope must be re-contoured and raked to blend with surrounding terrain.