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	NCS1927552019
District RP	
Facility ID	
Application ID	

# **Release Notification**

# **Responsible Party**

Responsible Party: LOGOS Operating, LLC			C	OGRID: 2	289408		
Contact Name: Tamra Sessions				Contact To	Contact Telephone: 505-324-4145		
Contact ema	il: tsessions(	@logosresourcesllo	c.com	Incident #	# (assigned by OCD)		
Contact mail 87401	ing address:	2010 Afton Place	Farmington, NM				
			Location	of Release S	Source		
Latitude 36.8	723412		(NAD 83 in dec	Longitude - imal degrees to 5 decir	-107.3201752		
Site Name: R	osa Unit 376	δA		Site Type:	: Well		
Date Release	Discovered:	9/3/2019		API# (if app	pplicable): 30-039-29705		
Unit Letter	Section	Township	Range	Cour	inty		
Е	25	31N	5W	Rio Aı	Arriba		
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): Unknown   Volume Recovered (bbls): 0    Is the concentration of dissolved chloride in the produced water >10,000 mg/l?   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:							
		drocarbon staining indicate volume siz		ent berms from a p	prior release, no visible sign of current leak, staining		

Received by OCD: 7/24/2020 4:01:32 PM ate of New Mexico
Page 2 Oil Conservation Division

	Page 2 0
Incident ID	NCS1927552019
District RP	
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?
release as defined by 19.15.29.7(A) NMAC?	
☐ Yes ⊠ No	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
	Initial Response
The responsible p	party must undertake the following actions immediately unless they could create a safety hazard that would result in injury
☐ The source of the rele	ease has been stopped.
The impacted area ha	is been secured to protect human health and the environment.
Released materials ha	ave been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☐ All free liquids and re	ecoverable materials have been removed and managed appropriately.
If all the actions described	d above have not been undertaken, explain why:
has begun, please attach	IAC the responsible party may commence remediation immediately after discovery of a release. If remediation a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred at area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the info	rmation given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and
	required to report and/or file certain release notifications and perform corrective actions for releases which may endanger ment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have
failed to adequately investig	ate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In
addition, OCD acceptance of and/or regulations.	f a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws
Printed Name: Tamra S	Sessions Title:Regulatory Specialist
Simular Ha	Date: _7/24/20
Signature:	
email: _tsessions@logosr	resourcesllc.com Telephone: _(505) 324-4145
OCD Only	
100 100 100 100 100 100 100 100 100 100	
Received by:	Date:

Received by OCD:	7/24/2020 4:01:32 PM ate of New Mexico
Page 3	Oil Conservation Division

Incident ID	NCS1927552019	Page 3 of
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?	88(ft bgs)			
Did this release impact groundwater or surface water?				
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?				
Are the lateral extents of the release overlying an unstable area such as karst geology?				
Are the lateral extents of the release within a 100-year floodplain?				
Did the release impact areas <b>not</b> 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 ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil			
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 well 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	S.			

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.

Received by OCD: 7/24/2020 4:01:32 PM ate of New Mexico
Page 4 Oil Conservation Division

		Daga A of
Incident ID	NCS1927552019	Page 4 of 3
District RP		
Facility ID		
Application ID		

Received by OCD:	7/24/2020	4:01:32 PMate of New Mexico
Page 6		Oil Conservation Division

		Dans 5 of
Incident ID	NCS1927552019	Page 5 of 3
District RP		
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 m	ust be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.11 NMA	AC
Photographs of the remediated site prior to backfill or photos of the must be notified 2 days prior to liner inspection)	liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC Distric	ct 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 and regulations all operators are required to report and/or file certain release may endanger public health or the environment. The acceptance of a C-14 should their operations have failed to adequately investigate and remediate human health or the environment. In addition, OCD acceptance of a C-141 compliance with any other federal, state, or local laws and/or regulations. restore, reclaim, and re-vegetate the impacted surface area to the conditions accordance with 19.15.29.13 NMAC including notification to the OCD where the temperature of the temperature	the notifications and perform corrective actions for releases which a report by the OCD does not relieve the operator of liability contamination that pose a threat to groundwater, surface water, a report does not relieve the operator of responsibility for the responsible party acknowledges they must substantially state existed prior to the release or their final land use in the reclamation and re-vegetation are complete.  [Supplementary Specialist
OCD Only	
Received by:	Date:
Closure approval by the OCD does not relieve the responsible party of liabi remediate contamination that poses a threat to groundwater, surface water, h party of compliance with any other federal, state, or local laws and/or regular	numan health, or the environment nor does not relieve the responsible
Closure Approved by:  Printed Name: Cory Smith	Date: 3/26/2021
Printed Name: Cory Smith	Title: Environmental Specialist



July 24, 2020

Cory Smith New Mexico Oil Conservation Division 1000 Rio Brazos Road Aztec, New Mexico 87410

Incident # nCS1927552019

RE: Hydrocarbon staining in tank containment berms from a prior release, no visible sign of current leak, staining characteristics appear to indicate volume size was reportable at <a href="the Rosa Unit 376A">the Rosa Unit 376A</a> well site. Located in Section 25, Township 31 North, Range 5 West, Rio Arriba, New Mexico.

Dear Mr. Smith,

On September 10, 2019, LOGOS Operating, LLC pulled remaining stormwater, steam cleaned, spread nitrogen and sprayed simple green over the gravel. The entire area was raked in.

A confirmation sample was scheduled and taken on November 1, 2019. The secondary containment was divided into two areas SS1 and SS2. Two 5-point composite samples were collected, as documented in the enclosed Aerial Site map, and Figure 1 – Site pictures. This application was rejected by NMOCD due to no photos of remediation.

LOGOS requested for an extension due to the COVID-19 shut down.

LOGOS collected composite grab samples from SS1 and SS2, placed into Ziploc bags, mixed, and added into individual laboratory 4-ounce jars, capped head space free and transported on ice to Envirotech. The samples were analyzed for TPH as gasoline diesel, and oil range organics (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.

Final Sample Results									
Sample Date S		Sample	EPA Method 8015		EPA Method 8021		EPA Method 300.0		
Description		Depth	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)	
19.15.	29.13 (D) NM	AC		100 mg/kg		10 mg/kg	50 mg/kg	600 mg/kg	
19.15.29.12 NMAC		1000 mg/kg 2500 mg/kg				20,000 mg/kg			
SS-1	11/1/2019	grab	ND	ND	ND	ND	ND	71.6	
SS-2	11/1/2019	grab	ND	ND	59.9	ND	ND	120	

The historical release was contained in the secondary containment of an active well site, depth to groundwater was assessed as being greater than 50 feet, but less than 100 feet. The groundwater data is documented in the enclosed TOPO Site Map. The Rosa Unit 377A cathodic data has GW @ 200' with an elevation of 6543' and the elevation for the Rosa Unit 376A is at 6436' with an estimated GW @±88 feet.

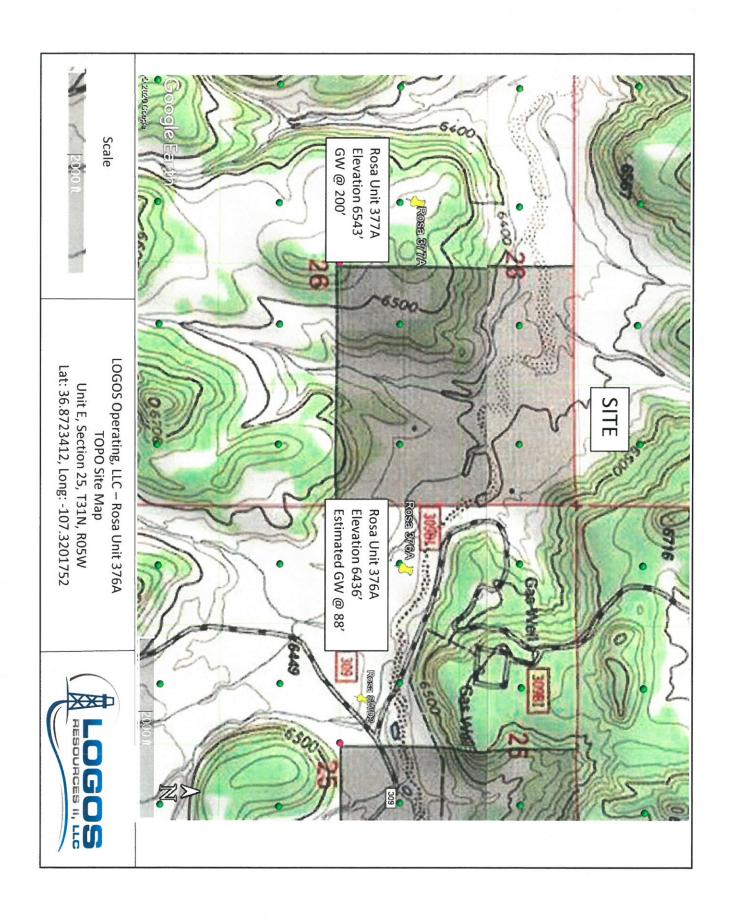
Therefore, based on the composite grab sample activities and the laboratory analytical results confirms that concentrations of contaminants are below the applicable release, remediation/reclamation limits and no further action is required and LOGOS request a release and remediation/reclamation closure approval from NMOCD.

Sincerely,

Tamra Sessions Regulatory Specialist Cell: 505-330-9333 Office: 505-324-4145

tsessions@logosresourcesllc.com





In Service Report

Company Name: Williams Production Co.

In Service Date: 7-7-09 Power Source: Solar

Well Name: Rosa Unit # 377A

Dual Well Name: KWH Meter:

**Ground Bed Data** 

Date Drilled: 7-6-09

Total Depth: 500'

Casing:

1 ST Water Depth: 200'

Gas Depth: Anodes: 10

Date Anodes Installed: 7-6-09

Hole Size: 6 3/4"

Depth:

2 ND Water Depth:

Other:

Type: Silicon Iron

Weight: 45 lbs.

SX#

7 6.6

|7 420

115

Anode Depth:

2 4.8 11 6.7 9 7.2 10 6.9

3 8.9 111

|4 8.1 12 |4 450

|5 4.2 |13

Cement:

8 4.6

Anode Output:

11 480 |2 470 9 400 10 390

Size: 8" PVC

Number:

|3 460 111

|5 440 113

14 115

Model PV II

|8 410

Vent Pipe:

Cement:

Size: 1" PVC

Coke:40 bags Total Weight: 2500 lbs.

Perforation: 140' Type: Loresco SWS

12

From:500' To: 360' From: 500' To: 360'

From:

From:360'

To: To: Surface

Solar Data

Type:

Manufacturer: J. A. Electronics

SX:

Ground Bed Fill Material: 1/2" Rock

DC Rating: Volts: 12

DC Output: Day:

Off:

On:

Volts: 6 Night: Volts: 4

Serial# 2090049 Amps: 6

Amps: 5.6 Amps: 4.2

Well Amps

Well #1 Rosa 381A

Casing: Flow Line: Day: 5.3 Night:

.6 4.1 .5

-.78

-1.09

Well #2

Flow Line: Casing: Day:

Night:

Well #3

Well #3

Casing: Day:

Casing:

Night:

Pipe To Soil Potential

Well #1 Casing: Flow Line:

> -.69 -1.04

Well #2 Off: On:

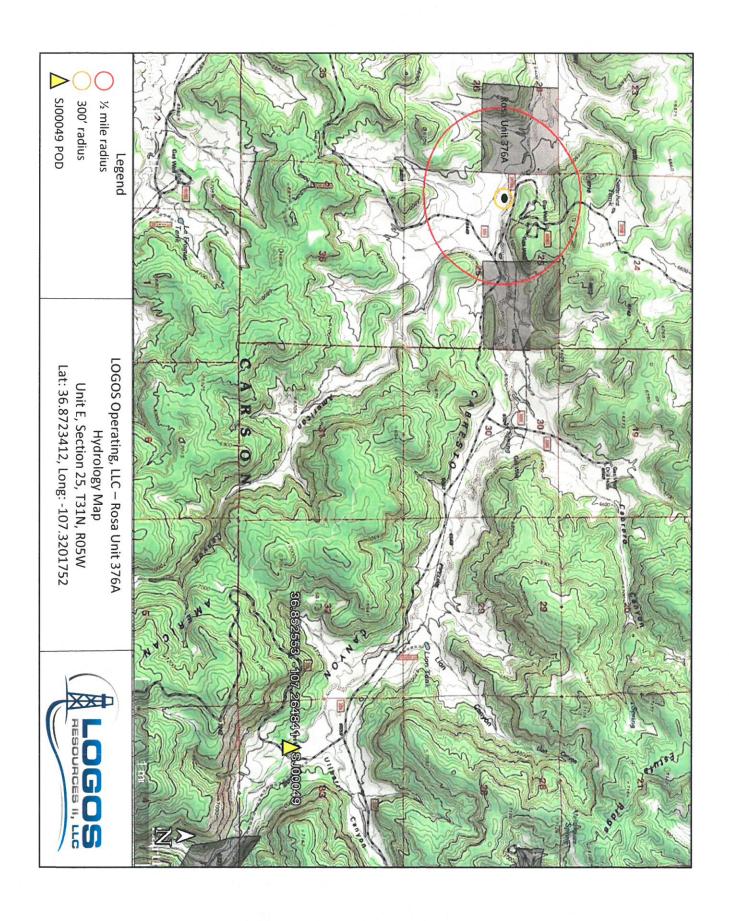
Casing: Flow Line: Off: On:

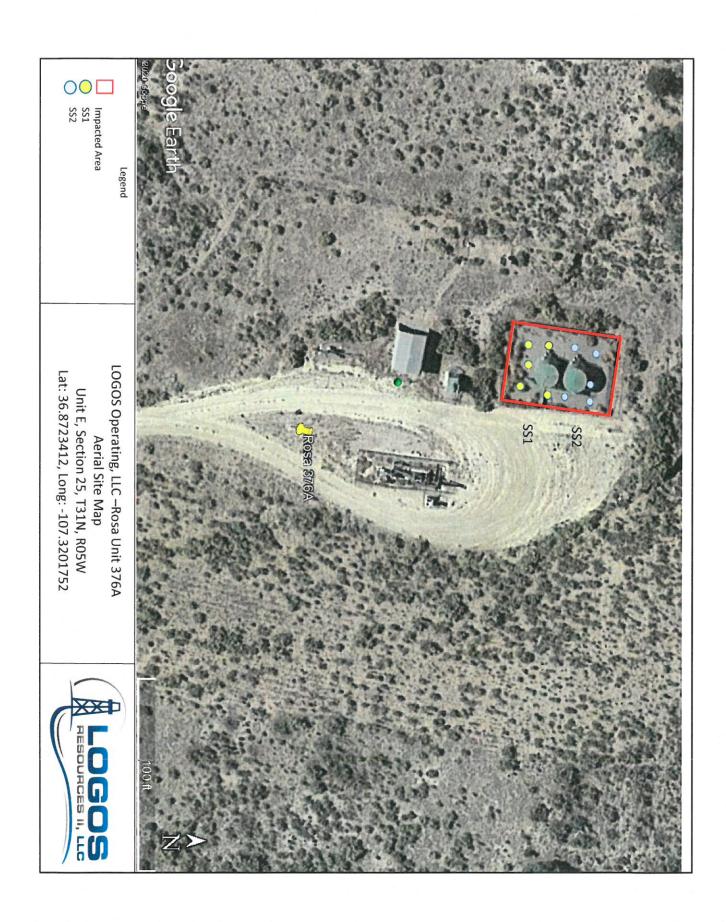
Flow Line:

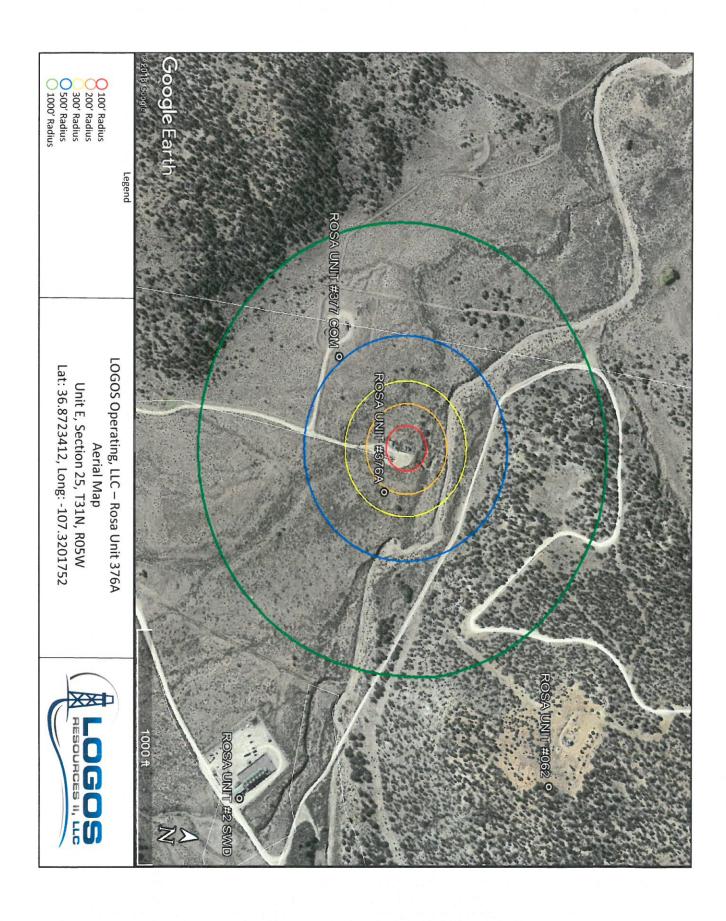
Flow Line:

Remarks:

	DITK		1				
In Lieu of Form 3160-4 (July 1992)	O:TK C:FU C:W	DEPARTMENT	D STATES OF THE INTERIO	OR ULI X y Z	SUBMIT IN DUPLICATE	FORM APPROVE OMB NO. 1004-0 Expires: Februar	137
		BUREAU OF LA	ND MANAGEME		Sec other instructions on everse side)		ATION AND LEASE NO.
	WELL COMPL	ETION OF PE	COMPLETION R	EPOPT AND I	OC*	6. IF INDIAN,ALLO	TTEE OR
	WELL COMIT	LETION OR REC	CONTLETION K	EFORT AND L	,	7. UNIT AGREEME	NT NAME
ь. түре	OF WELL: FOIL WEL OF COMPLETION: VEW WELL WORK	_	DRY OTHER  UG BACK DIFF.RESVR			· · · · · · · · · · · · · · · · · · ·	Rosa Unit
2. NAMI	OF OPERATOR	WILLIAMS PRO	DUCTION COMPANY	1	EGEIVEL		NAME, WELL NO It COM #377A
1. ADDR	ESS AND TELEPHONE I		Aztec, NM 87410 (505		MON 0 3 5008	9 API WELL NO 30-03	9-29925 0051
At St At to	rface:1895' FNL &	Report location clearly 1915' FWL, Sec 26 (F	and in accordance with a	any State requiremen	WPX	Basi	POOL, OR WILDCAT n Fruitland Coal
							ea 26-31N-5W
				14. PERMIT NO.	DATE ISSUED	12 COUNTY OR Rio Arriba	13 STATE New Mexico
15. DATE SPUDDED 8-29-08	16. DATE T.D. REACHED 9-22-08		(READY TO PRODUCE) 24-08	18 ELEVATIONS (DR	43' GR	19. ELEVATION CAS	INGHEAD
20. 10TAL DEPTH, 1 3691' MD	10 & TVD / 3497' TVD	21, PLUG, BACK T.D., 3679' MD / 3485'		22. IF MULTCOMP., HOW MANY	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
		MPLETION - TOP, BOTTON	L NAME (NID AND TVD)*			25. WAS DIRECTION	AL SURVEY MADE
26. TYPE ELECTRIC	d Coal: 3460' – 359 AND OTHER LOGS RUI only on this well					YES 27. WAS WELL COR	ED
CASING S	(Report all strings set in wi IZE/GRADE. ", K-55	WEIGHT, LB/FT 36.0#	DEPTH SET (MD) 337'	110LE SIZE 12-1/4"	TOP OF CEMENT, CEM		AMOUNT PULLED
7",	K-55	23.0#	3453'	8-3/4"	525 SX – SU	RFACE	
29.LINER RECORD SIZE	TOP (MD)	BOTTOM (MD) -	SACKS CEMENT*	SCREEN (MD)	30. TUBING RECORD SIZE	DEPTH SET (NID)	PACKER SET (ND)
5-1/2", 15.5#. K-55	3301,	3679'	0 \$X		2-7/8", 6.5#. 1-55	3617'	
31 PERFORATION R	ECORD (Interval, size, and	क्षमकोष्टा)		32.ACID, SHOT, FRAC DEPTH INTERVAL (MD)	TURE, CEMENT SQUEEZE, E AMOUI	TC. NT AND KIND OF MAT	ERIAL USED
Busin Fruitland Q	i <u>onl</u> - 3460' - 3591'	MD			Well was not fraced or	r acidized	
33.1ºRODUÇTION							
DATE OF FIRST	PRODUCTION	PRODUC	TION METIIOD (Flowing, gas		of pump)		IS (PRODUCING OR SI) waiting on tic-in
10-17-08	TESTED I br	CHOKE SIZE 2"	PROD'N FOR TEST PERIOD	OIL - BBL.	GAS – MCF	WATER - BBL	GAS-OIL RATIO
FLOW THE PRESS 0 oz	CASING PRESSURE 32 oz	CALCULATED	24-HOUR RATE	OIL - BBI.	GAS - MCF 869 mcl/d	WATER - BBL.	OIL GRAVITY-API (CORK.)
		med, etc.): TO BE SOLD	Urc WELLBORE DIACO				LWHOLD THE THE TOTAL OF THE
35 LIST OF ATTACHI  36. I hereby certify that			NES, WELLBORE DIAGR	one and the second seco		MG:	U 3 2008
/		Hoggi &	TITLE D		10-27-08.	CADIMANA	CO. 2005
, 6				MOCD "/+/	- d	- 43	WINES OFFICE







# **Field Notes for Spill Closure**

Well Name:		Rosa Unit	376A			e e	
Date of Arrival:	11/1/2019						
Observe Area							
	Removed contamina	ited soils		Yes	Х	No	
	What chemical was	used to clean-u	p contamii	nated area:		-17-2-1	
		gypsum and nit	rogen	No need to re	emove so	il just applied chemic	al
Take Picture:	х	Before	Х	After			
Entire Spill Containment:	Х	Dry		Wet			
	If wet: Rain, Moist, etc						
Site Delineation  x	Sample 1: Composite (Grab San	mple)	х	Yes		No	
	Was (2) five-point sa	imple taken:	Х	Yes		No	
×	Sample 2: Delineation (Hand A	uger)		Yes	х	No	
	Depths	SB - 1	1'	2'		3' 4'	
		SB - 2	1'	2'		3' 4'	
		SB - 3	1'	2'		3' 4'	
		SB - 4	1'	2'		3' 4'	
<u>Soil</u>	Did soil have odor:	If so, what kind		Yes	Х	No	7
	Was soil discolored:	If so, what colo		Yes		No	
		Slightly discolo		rown			
	Was the soil sandy:			Yes	х	No	

## **Tamra Sessions**

From:

Smith, Cory, EMNRD < Cory.Smith@state.nm.us>

Sent:

Thursday, March 26, 2020 9:08 AM

To:

Marie Florez

Cc:

Powell, Brandon, EMNRD; Robert Jordan; Tamra Sessions; Krista McWilliams

Subject:

RE: C-141 Extension request - update due to COVID 19

Marie,

OCD has approved the extension request for the below 3 incidents until June 26, 2020. Please include this approval in your final C-141

Thank you,

Cory

From: Marie Florez <mflorez@logosresourcesllc.com>

Sent: Wednesday, March 25, 2020 8:45 AM

To: Smith, Cory, EMNRD < Cory. Smith@state.nm.us>

Cc: Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>; Robert Jordan <rjordan@logosresourcesllc.com>; Tamra

Sessions <tsessions@logosresourcesllc.com>; Krista McWilliams <kmcwilliams@logosresourcesllc.com>

Subject: [EXT] RE: C-141 Extension request - update due to COVID 19

Importance: High

Corey,

Per the OCD Notice effective March 17, inspectors will not be performing any inspections that require other parties to be on site, therefore LOGOS will postpone for final sampling during this time due to COVID 19 and is requesting an additional extension for the following wells.

Thank you,

Marie E. Florez

mflorez@logosresourcesllc.com



From: Marie Florez

Sent: Wednesday, March 18, 2020 8:01 AM

To: 'Smith, Cory, EMNRD'

Cc: Powell, Brandon, EMNRD; Robert Jordan; Tamra Sessions

Subject: RE: C-141 Extension request

LOGOS is requesting ±2 week extension after March 30th to conduct a final sample and complete all paperwork.

Marie E. Florez

mflorez@logosresourcesllc.com



From: Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]

Sent: Wednesday, March 18, 2020 7:35 AM

To: Marie Florez

Cc: Powell, Brandon, EMNRD; Robert Jordan; Tamra Sessions

Subject: RE: C-141 Extension request

Marie,

How long of an extension is Logos requesting?

From: Marie Florez <mflorez@logosresourcesllc.com>

Sent: Tuesday, March 17, 2020 5:23 PM

To: Smith, Cory, EMNRD < Cory.Smith@state.nm.us>

Cc: Powell, Brandon, EMNRD < Brandon. Powell@state.nm.us>; Robert Jordan < rjordan@logosresourcesllc.com>; Tamra

Sessions < tsessions@logosresourcesllc.com >

Subject: [EXT] C-141 Extension request

Importance: High

Corey,

LOGOS is requesting an extension on the following rejected applications due to change in staff, timing of paperwork handoff and weather delay.

Logos plans to close C-141's per requirements pending results of samples. Test results should be received by March 30, 2020.

<u>Y9RHI-191202-C-1410</u> – Closure Report Denied. Does not meet requirements per <u>19.15.29.12</u>. No photos of remediation. Samples don't meet reclamation requirements.

Incident # ncs1927552565

API: 30-039-29941

Well Name: Rosa Unit 322A - Deadline March 20

Section: 23 Township: 31N Range: 5W Unit Letter: E

<u>ADBLN-191205-C-1410</u> – Closure Report Denied, Incomplete C-141 for deferral. Closure/delineation samples do not meet the requirements of 19.15.29.12/13.

Incident # ncs1929540332

API: 30-039-25058

Well Name: Rosa Unit 312 - Deadline March 30

Section:28 Township:31N Range: 4W Unit Letter: L KFEG9-191125-C-1410 - Closure Report Denied. Does not meet requirements per 19.15.29.12. No photos of remediation.

Incident # ncs1927552019

API: 30-039-29705

Well Name: Rosa Unit 376A - Deadline March 20

Section:25 Township:31N Range: 5W Unit Letter: E

If you have any questions or concern please let us know.

Thanks,

Marie E. Florez

Regulatory Specialist Cell: 505-419-8420 Office: 505-787-2218

mflorez@logosresourcesllc.com



### **Tamra Sessions**

From:

Larissa Farrell

Sent:

Friday, July 10, 2020 1:24 PM

To:

Tamra Sessions

Subject:

Fw: Confirmation Sampling

Importance:

High

From: Larissa Farrell

Sent: Tuesday, October 29, 2019 9:20 AM

To: Smith, Cory, EMNRD; Powell, Brandon, EMNRD

**Cc:** Miller JJ (jjmiller@fs.fed.us) **Subject:** Confirmation Sampling

Good morning,

LOGOS Operating will be conducting confirmation sampling at the following locations on Friday November 1, 2019 beginning at 10:00am.

Rosa Unit 376A - 30-039-29705

Rosa Unit 322A - 30-039-29941

Rosa Unit 312 - 30-03925058

Thank you,

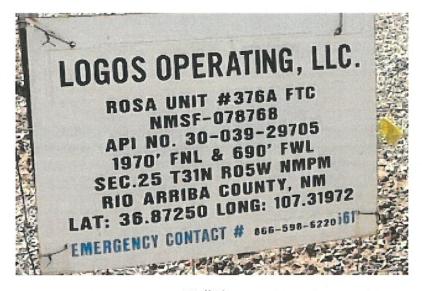
Larissa Farrell
Environmental/Regulatory Technician

Office: (505) 787-2027 Cell: (505) 419-1100

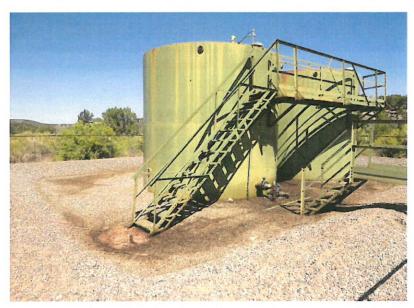
Ifarrell@logosresourcesllc.com



LOGOS Operating, LLC
Site Pictures
Rosa Unit 376A
Figure: 1



Well Sign



**Impacted Area** 



**Impacted Area** 



**Impacted Area** 



Cleaning



Cleaning



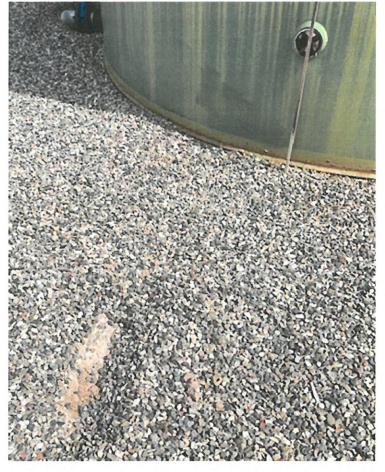
Gypsum added

**SS1 Composite Grab Sampling** 







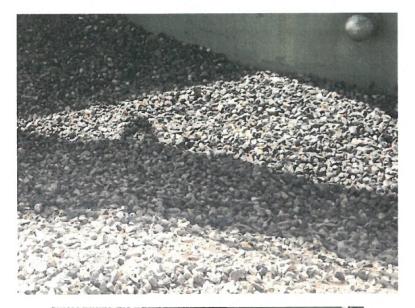


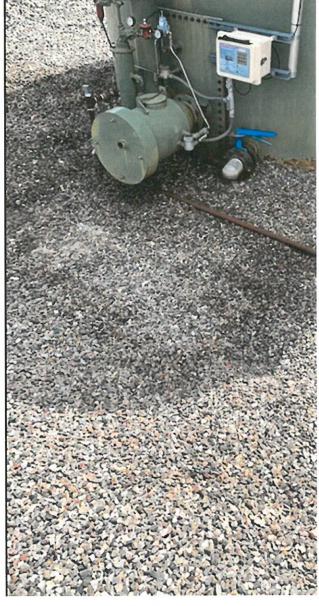


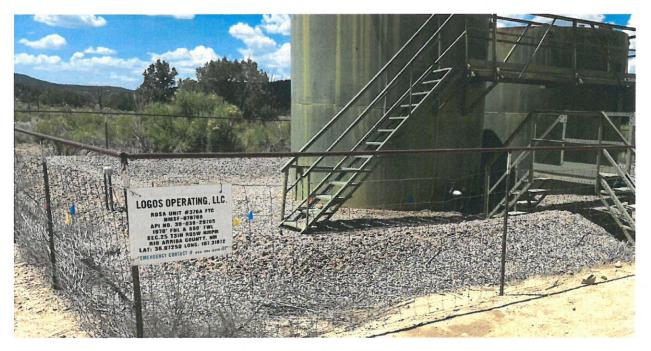
SS2 Composite Grab Sampling











After



After



# **Analytical Report**

## **Report Summary**

Client: Logos Operating, LLC

Samples Received: 11/1/2019 Job Number: 12035-0114 Work Order: P911003

Project Name/Location: Rosa Unit

Report Reviewed By:	Walter Hankinson	Date:	11/11/19	
	Walter Hinchman, Laboratory Director			

Supplement to analytical report generated on: 11/7/19 7:14 am



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.

5796 Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

envirotech-inc.com
.
Labadmin@envirotech-inc.com

24 Hour Emergency Response Phone (800) 362-1879

----

Page 1 of 11



Logos Operating, LLC

PO Box 18

Flora Vista NM, 87415

Project Name:

Project Number:

Project Manager:

Rosa Unit 12035-0114 Larissa Farrell

Reported: 11/11/19 15:45

# **Analytical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Rosa Unit 376A SS1	P911003-01A	Soil	11/01/19	11/01/19	Glass Jar, 4 oz.
	P911003-01B	Soil	11/01/19	11/01/19	Glass Jar, 4 oz.
Rosa Unit 376A SS2	P911003-02A	Soil	11/01/19	11/01/19	Glass Jar, 4 oz.
	P911003-02B	Soil	11/01/19	11/01/19	Glass Jar, 4 oz.
Rosa Unit 322A	P911003-03A	Soil	11/01/19	11/01/19	Glass Jar, 4 oz.
	P911003-03B	Soil	11/01/19	11/01/19	Glass Jar, 4 oz.
Rosa Unit 312	P911003-04A	Soil	11/01/19	11/01/19	Glass Jar, 4 oz.
	P911003-04B	Soil	11/01/19	11/01/19	Glass Jar, 4 oz.

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

envirotech-inc.com

Labadmin@envirotech-inc.com

24 Hour Emergency Response Phone (800) 362-1879

Page 2 of 11



Project Name:

Rosa Unit

PO Box 18

Project Number:

12035-0114

Reported:

Flora Vista NM, 87415

Project Manager: Larissa Farrell

11/11/19 15:45

#### Rosa Unit 376A SS1 P911003-01 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		100 %	50-	-150	1944038	11/01/19	11/04/19	EPA 8021B	
Nonhalogenated Organics by 8015 - DRO/OF	RO			. 31				24	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1945003	11/04/19	11/04/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1945003	11/04/19	11/04/19	EPA 8015D	
Surrogate: n-Nonane		95.8 %	50-	-200	1945003	11/04/19	11/04/19	EPA 8015D	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		85.4 %	50-	150	1944038	11/01/19	11/04/19	EPA 8015D	
Anions by 300.0/9056A									
Chloride	71.6	40.0	mg/kg	2	1945002	11/04/19	11/05/19	EPA 300.0/9056A	

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

envirotech-inc.com

24 Hour Emergency Response Phone (800) 362-1879

Page 3 of 11



Project Name:

Rosa Unit

PO Box 18

Project Number:

12035-0114

Reported:

Flora Vista NM, 87415

Project Manager:

Larissa Farrell

11/11/19 15:45

#### Rosa Unit 376A SS2 P911003-02 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021						11			
Benzene	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		101 %	50-	150	1944038	11/01/19	11/04/19	EPA 8021B	
Nonhalogenated Organics by 8015 - DRO	O/ORO	- 10							
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1945003	11/04/19	11/04/19	EPA 8015D	
Oil Range Organics (C28-C40)	59.9	50.0	mg/kg	1	1945003	11/04/19	11/04/19	EPA 8015D	
Surrogate: n-Nonane		102 %	50-	200	1945003	11/04/19	11/04/19	EPA 8015D	
Nonhalogenated Organics by 8015 - GRO	)								
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1944038	11/01/19	11/04/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		85.2 %	50-	150	1944038	11/01/19	11/04/19	EPA 8015D	
Anions by 300.0/9056A									
Chloride	120	40.0	mg/kg	2	1945002	11/04/19	11/05/19	EPA 300.0/9056A	

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

envirotech-inc.com

Page 4 of 11

24 Hour Emergency Response Phone (800) 362-1879



Project Name:

Rosa Unit

PO Box 18 Flora Vista NM, 87415 Project Number: Project Manager: 12035-0114

Larissa Farrell

Reported: 11/11/19 15:45

## Volatile Organics by EPA 8021 - Quality Control

## **Envirotech Analytical Laboratory**

	G24 (00000 - 2000 -	Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1944038 - Purge and Trap EPA 5030A								4		
Blank (1944038-BLK1)				Prepared:	11/01/19 1 A	Analyzed: 1	1/04/19 2			
Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250								
o,m-Xylene	ND	0.0500	"							
p-Xylene	ND	0.0250								
Total Xylenes	ND	0.0250	"							
Surrogate: 4-Bromochlorobenzene-PID	8.19		u	8.00		102	50-150			
LCS (1944038-BS1)				Prepared:	11/01/19 1 A	analyzed: 1	1/05/19 0			
Benzene	5.05	0.0250	mg/kg	5.00		101	70-130			
Toluene	5.15	0.0250	"	5.00		103	70-130			
Ethylbenzene	5.04	0.0250	11	5.00		101	70-130			
o,m-Xylene	10.0	0.0500	н	10.0		100	70-130			
o-Xylene	4.98	0.0250	"	5.00		99.6	70-130			
Total Xylenes	15.0	0.0250	**	15.0		100	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.53		"	8.00		94.2	50-150			
Matrix Spike (1944038-MS1)	Sou	rce: P910199-	01	Prepared:	11/01/19 1 A	Analyzed: 1	1/05/19 1			
Benzene	5.02	0.0250	mg/kg	5.00	ND	100	54.3-133			
Toluene	5.13	0.0250	н.	5.00	ND	103	61.4-130			
Ethylbenzene	5.03	0.0250	н	5.00	ND	101	61.4-133			
o,m-Xylene	10.0	0.0500	95	10.0	ND	100	63.3-131			
o-Xylene	5.03	0.0250	10.	5.00	ND	101	63.3-131			
Total Xylenes	15.0	0.0250		15.0	ND	100	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	8.25		n n	8.00		103	50-150			
Matrix Spike Dup (1944038-MSD1)	Sou	rce: P910199-	01	Prepared:	11/01/19 1 A	Analyzed: 1	1/05/19 1			
Benzene	5.06	0.0250	mg/kg	5.00	ND	101	54.3-133	0.683	20	
Foluene	5.10	0.0250	"	5.00	ND	102	61.4-130	0.505	20	
Ethylbenzene	5.00	0.0250		5.00	ND	100	61.4-133	0.591	20	
p,m-Xylene	9.95	0.0500		10.0	ND	99.5	63.3-131	0.697	20	
p-Xylene	4.96	0.0250	н	5.00	ND	99.2	63.3-131	1.30	20	
Total Xylenes	14.9	0.0250	н	15.0	ND	99.4	63.3-131	0.899	20	
Surrogate: 4-Bromochlorobenzene-PID	8.13		и	8.00		102	50-150			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

envirotech-inc.com

Page 5 of 11

24 Hour Emergency Response Phone (800) 362-1879



Project Name:

Rosa Unit

PO Box 18 Flora Vista NM, 87415 Project Number: Project Manager: 12035-0114

Larissa Farrell

Reported: 11/11/19 15:45

# Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

#### **Envirotech Analytical Laboratory**

	P. 1.	Reporting	**	Spike	Source	0/DEC	%REC	PPP	RPD	N
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1945003 - DRO Extraction EPA 3570		11111111111111111								
Blank (1945003-BLK1)				Prepared:	11/04/19 1 A	Analyzed: 1	1/05/19 0			
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	53.9		"	50.0		108	50-200			
LCS (1945003-BS1)				Prepared &	& Analyzed:	11/04/19 1				
Diesel Range Organics (C10-C28)	480	25.0	mg/kg	500		96.0	38-132			
Surrogate: n-Nonane	48.8		"	50.0		97.6	50-200			
Matrix Spike (1945003-MS1)	Sou	rce: P910199-	01	Prepared &	& Analyzed:	11/04/19 1				
Diesel Range Organics (C10-C28)	506	25.0	mg/kg	500	ND	101	38-132			
Surrogate: n-Nonane	48.8		"	50.0	_ = 111	97.7	50-200			
Matrix Spike Dup (1945003-MSD1)	Sou	rce: P910199-	01	Prepared &	k Analyzed:	11/04/19 1				
Diesel Range Organics (C10-C28)	517	25.0	mg/kg	500	ND	103	38-132	2.31	20	
Surrogate: n-Nonane	49.9		11	50.0		99.9	50-200			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

envirotech-inc.com

24 Hour Emergency Response Phone (800) 362-1879

Page 6 of 11



Project Name:

Rosa Unit

PO Box 18

12035-0114 Project Number: Project Manager:

Reported:

Flora Vista NM, 87415

Larissa Farrell

11/11/19 15:45

## Nonhalogenated Organics by 8015 - GRO - Quality Control

#### **Envirotech Analytical Laboratory**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1944038 - Purge and Trap EPA 5030A										
Blank (1944038-BLK1)				Prepared:	11/01/19 1 A	Analyzed:	11/04/19 2			
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.79		"	8.00		84.8	50-150			
LCS (1944038-BS2)				Prepared:	11/01/19 1 A	Analyzed:	11/05/19 1			
Gasoline Range Organics (C6-C10)	46.5	20.0	mg/kg	50.0		92.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.86		"	8.00		85.7	50-150			
Matrix Spike (1944038-MS2)	Sou	rce: P910199-	01	Prepared:	11/01/19 1 /	Analyzed:	11/05/19 1			
Gasoline Range Organics (C6-C10)	48.1	20.0	mg/kg	50.0	ND	96.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.82		"	8.00		85.3	50-150			
Matrix Spike Dup (1944038-MSD2)	Sou	rce: P910199-	01	Prepared: 1	1/01/19 1 /	Analyzed:	1/05/19 1			
Gasoline Range Organics (C6-C10)	48.8	20.0	mg/kg	50.0	ND	97.6	70-130	1.41	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.79		"	8.00		84.8	50-150			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

envirotech-inc.com

24 Hour Emergency Response Phone (800) 362-1879

Page 7 of 11



Project Name:

Rosa Unit

PO Box 18

Project Number: Project Manager: 12035-0114

Reported:

Flora Vista NM, 87415

Larissa Farrell

11/11/19 15:45

#### Anions by 300.0/9056A - Quality Control

#### **Envirotech Analytical Laboratory**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1945002 - Anion Extraction EPA	300.0/9056A									
Blank (1945002-BLK1)				Prepared: 1	1/04/19 0 A	Analyzed: 1	11/04/19 1			
Chloride	ND	20.0	mg/kg							
LCS (1945002-BS1)				Prepared: 1	1/04/19 0 A	Analyzed: 1	11/04/19 1			
Chloride	256	20.0	mg/kg	250		102	90-110			
Matrix Spike (1945002-MS1)	Source	e: P910166-	01	Prepared: 1	1/04/19 0 A	Analyzed: 1	11/04/19 1			
Chloride	284	20.0	mg/kg	250	27.1	103	80-120			
Matrix Spike Dup (1945002-MSD1)	Source	e: P910166-	01	Prepared: 1	1/04/19 0 A	Analyzed: 1	1/04/19 1			
Chloride	283	20.0	mg/kg	250	27.1	102	80-120	0.335	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.

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

envirotech-inc.com

24 Hour Emergency Response Phone (800) 362-1879

Labadmin@envirotech-inc.com

Page 8 of 11

41 4	10%	205						Lab Use Only								- 1		D 4 D		
lient:	100	100				Report Attention	1								T/			PA Progra		
roject:	4	10.00	saFa	1- 5- 1		eport due by: ttention:		Lab	WOH	2			Num	ber >\\4	1D	30	RCRA	CWA	SDWA	
ddress:	lanager:	LUAL	sacra	VV FIL		ddress:		P	1100	-5				nd Meti	- l			C+	ate	
ity, Stat	e 7in					ty, State, Zip		$\vdash$	1		Т	Allai	7515 01	IO WIEL	T				UT AZ	
	505-	4119-	11(2)		_	none:		20	ıs									T.V.	01 /4	
				nicesllo	CON F	nail:		, 801	801	1	_		0					TX OK		
		J						100	0 67	10 by	807	8260	5010	8	tal P					
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	6010 Total P				Ren	narks	
2:3	11/1/19	5	7	Rosa	Unit	376A SSI	1	1	1 -	1			4							
)-33	11/1/19	S	2	Rosa	a Unit	376A SS2	2	L	4	- 6			L							
:39	11/1/19	5	2	Ros	ia Un	it 322A	3	V	1	L			L							
):33	11/1/19	5	2	Po	Sa Il	it 3/2	4	L	L	_ ر			_	-						
		_																		
							Section Associated									1				
																1			-	
																$\top$	$\top$			
							555									$\top$	1			
																	$\top$			
dition	al Instruct	tions:	L			0.2		_										1		
/ \				f this sample. I a		pering with or intentionally mishabelling the far	nole location, date de	1										he day they are s subsequent day		
muishe	d by: (Signa	ture)	Date	11/19	7:44	Received by: (Signature)	Date		Time	44		Rece	eived	on ice		b Use / N	Only			
Inquishe	d by: (Signa	ture)	Date	, ,	Time	Received by: (Signature)	Date		Time			T1			T2			Т3		
nquishe	d by: (Signa	ture)	Date		Time	Received by: (Signature)	Date		Time				Tem	p °C	4					
ple Matr	x: S - Soil, Sd	- Solid, Sg -	Sludge, A -	Aqueous, O - O	ther		Containe	г Туре	2: g - g	lass,			_		ber glas	5, v - V	OA			
		ed 30 days af	ter results a	re reported un	less other arrang	ements are made. Hazardous samples with laboratory is limited to the amount paid	ll be returned to clier											amples is ap	olicable	

Client: 0005 Project: Research United Project Manager: Lan Ssa Fanze il Address:	Report Attention Report due by: Attention: Address:			WO#	130%		Job I	Numb	ero119		Personal Property lies	RCRA	PA Program  CWA SDWA  State
ity, State, Zip hone: 505-419-1100 mail: Ha We 11 Q 1005 VE 50 W CSM (0)	City, State, Zip Phone: Email:	Lab	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	6010 Total P				NM CO UT AZ
Sampled Sampled Matrix Containers Sample ID		Number	DRO/	GRO/	ВТЕХ	VOC	Meta	Chlor	6010				Remarks
	Lnit 376A SSI	1	V		U			1					
2:33 11/119 S 2 Rosal	unit 376A SSZ	3	L	- 4	- 4	/		4					
1:39 11/11/9 5 2 Rosa	Unit 322A	3	0	V	L	-		4	-				
0:33 11/1/19 S 2 Prosa	1 Mit 312	4	L	L	- (	_		4					
		E STATE OF											
		WAS ASS											
Additional Instructions:	^												
(field sampler), attest to the validity and authenticity of this sample. I am awa		Ibration date of	)										he day they are sampled or
me of collection is considered read and may be grounds for legal action. Sam eliminus speid by: (Signature) Date   1   1   9   7   7   7   7   7   7   7   7   7	Received by: Signature)	Date   1-1-19		Time	44		Rece	eived	on ice:	Lal	Use / N	Only	
letinquished by: (Signature) Date Time	Received by: (Signature)	Date		Time			T1			T2			Т3
telinquished by: (Signature) Date Time	Received by: (Signature)	Date		Time			AVG	Tem	p°C_				
ample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _ lote: Samples are discarded 30 days after results are reported unless o		Container				p - po	oly/pl	astic,	ag - am	er glass			

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 9383

#### **CONDITIONS OF APPROVAL**

Operator:			OGRID:	Action Number:	Action Type:
LOGOS OPERATING, LLC	2010 Afton Place	Farmington, NM87401	289408	9383	C-141

OCD Reviewer	Condition
csmith	None