From: Smith, Cory, EMNRD
To: "Marie Florez"

Cc: Tamra Sessions; Robert Jordan

Subject: RE: Rosa Unit 315A Extension request - Deferral Request Denied nCS129538744

Date: Thursday, September 24, 2020 9:20:00 AM

Marie,

Looks like there was a copy and paste error in the original incident# here is the correct one NCS1929538744.

OCD approves the extension request with the following conditions of approval.

- Logos will apply gypsum at a minimum of 1' deep and till the soils at a minimum monthly.
- Logos will submit a closure report no later than January 1, 2021.

OCD also recommends that Logos apply water (preferable potable or clean water that is low in chlorides.) water over the gypsum raked area at least monthly to assist in the remediation. With the lack of precipitation over the summer months and the possibility of low precipitation in winter this would significantly increase the chances of success.

Please include this approval in your final C-141 in addition keep this email approval for your records as a paper copy will not be sent. If you have any additional questions please give me a call.

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

From: Marie Florez <mflorez@logosresourcesllc.com>

Sent: Wednesday, September 23, 2020 2:33 PM

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

Cc: Tamra Sessions <tsessions@logosresourcesllc.com>; Robert Jordan

<rjordan@logosresourcesllc.com>

Subject: [EXT] RE: Rosa Unit 315A Extension request - Deferral Request Denied nCS129538744

Here you go Cory!

Marie E. Florez

mflorez@logosresourcesllc.com



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

Sent: Wednesday, September 23, 2020 2:20 PM **To:** Marie Florez <mflorez@logosresourcesllc.com>

Cc: Tamra Sessions < tsessions@logosresourcesllc.com >; Robert Jordan

<riordan@logosresourcesllc.com>

Subject: RE: Rosa Unit 315A Extension request

Marie,

Please include the incident# and the laboratory results.

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

From: Marie Florez < mflorez@logosresourcesllc.com >

Sent: Wednesday, September 23, 2020 2:12 PM **To:** Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>

Cc: Tamra Sessions < tsessions@logosresourcesllc.com >; Robert Jordan

<riordan@logosresourcesllc.com>

Subject: [EXT] RE: Rosa Unit 315A Extension request

Importance: High

Corey,

After, treating the area during the months of July thru September the results from the 3rd test was identified once again with the Chloride content between 604 and 754 mg/kg which is still above the remediation level of 600 mg/kg.

Therefore, LOGOS is requesting an additional 60 days starting from 9/23/2020. This is to allow time for the Chloride concentration level to be reduced by adding more Gypsum to treat the soil and continuously raking the affected area.

3/2020-Added Gypsum and Micro-absorb AB2000.

 $7/2/2020-2^{nd}$ results identified the Chloride content between 602 and 640 mg/kg which is above the remediation level of 600 mg/kg.

10/2019- Added Micro-absorb AB2000

1/15/2019 original results identified the Chloride content between 686 and 1700 which is above the remediation level of 600 mg/kg.

Thanks,

Marie E. Florez

mflorez@logosresourcesllc.com



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

Sent: Tuesday, July 21, 2020 1:15 PM

To: Marie Florez < mflorez@logosresourcesllc.com >

Cc: Tamra Sessions < tsessions@logosresourcesllc.com >; Robert Jordan

<rjordan@logosresourcesllc.com>

Subject: RE: Rosa Unit 315A Deferral Request Denied nCS129538744

Marie.

OCD approves the extension request please submit the full closure report no later than September 25, 2020.

Please include this approval in your closure report.

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

From: Marie Florez < mflorez@logosresourcesllc.com>

Sent: Tuesday, July 21, 2020 12:49 PM

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

Cc: Tamra Sessions <a href="mailto:tsessions@logosresourcesllc.com; Robert Jordan

<riordan@logosresourcesllc.com>

Subject: [EXT] RE: Rosa Unit 315A Deferral Request Denied nCS129538744

Importance: High

Corey,

Per our phone conversation today, LOGOS is requesting an additional 60 days starting from 7/22/2020 to allow time for the Chloride concentration to continue reducing the content level.

The original results from 1/15/2019, identifies the Chloride content between 686 and 1700 which is above the remediation level of 600 mg/kg. In October 2019, LOGOS added Microabsorb AB2000 and then in March 2020, Gypsum was added and Mircroabsorb AB2000 was added again. With the chemical spread this allowed the content to be reduced between 602 and 640 mg/kg.

We will now spread additional bags of Gypsum to continue treating the soil.

Thanks,

Marie E. Florez

mflorez@logosresourcesllc.com



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

Sent: Monday, April 27, 2020 2:00 PM

To: Marie Florez

Subject: RE: Rosa Unit 315A Deferral Request Denied nCS129538744

Marie,

Forgot to include that the follow up report is required no late than July 28, 2020

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

From: Smith, Cory, EMNRD

Sent: Monday, April 27, 2020 1:56 PM

To: 'Marie Florez' < <u>mflorez@logosresourcesllc.com</u>>

Subject: Rosa Unit 315A Deferral Request Denied nCS129538744

Marie,

Again since Larissa in no longer working at Logos, OCD denied a deferral request for incident# nCS129538744 at the Rosa Unit 315A due to the following issues

• Site Characterization does not meet requirements of 19.15.29 NMAC No Sample depths, no information on remaining impacts, etc.

I have no clue the sampling depth of the Delineation points, there are also residual HC impacts above the 100 TPH reclamation that need to have some type of plan for remediation.

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



Analytical Report

Report Summary

Client: Logos Resources Samples Received: 9/11/2020

Job Number: 12035-0114 Work Order: P009059

Project Name/Location: Rosa Unit 315A

Report Reviewed By:	Walter Hinkman	Date:	9/17/20	
	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, 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.





Logos ResourcesProject Name:Rosa Unit 315A2010 Afton PlaceProject Number:12035-0114Farmington NM, 87401Project Manager:Robert Jordan

Project Number:12035-0114Reported:Project Manager:Robert Jordan09/17/20 09:25

Sample Summary

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SB-1 at 2'	P009059-01A	Soil	09/10/20	09/11/20	Glass Jar, 4 oz.
SB-4 at 2'	P009059-02A	Soil	09/10/20	09/11/20	Glass Jar, 4 oz.





Logos Resources 2010 Afton Place Farmington NM, 87401 Project Name: Project Number: Rosa Unit 315A

Project Manager:

12035-0114 Robert Jordan **Reported:** 09/17/20 09:25

SB-1 at 2' P009059-01 (Solid)

		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2038010





Logos Resources 2010 Afton Place Farmington NM, 87401 Project Name: Project Number: Rosa Unit 315A 12035-0114

Project Manager:

Robert Jordan

Reported: 09/17/20 09:25

SB-4 at 2' P009059-02 (Solid)

		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2038010





Logos ResourcesProject Name:Rosa Unit 315A2010 Afton PlaceProject Number:12035-0114Reported:Farmington NM, 87401Project Manager:Robert Jordan09/17/20 09:25

Anions by EPA 300.0/9056A - Quality Control

Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2038010-BLK1)							Prepared	& Analyzed:	09/15/20 1
Chloride	ND	20.0							
LCS (2038010-BS1)							Prepared	& Analyzed:	09/15/20 1
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2038010-MS1)					Source: Po	009058-01	Prepared	& Analyzed:	09/15/20 1
Chloride	474	20.0	250	198	110	80-120			
Matrix Spike Dup (2038010-MSD1)					Source: Po	009058-01	Prepared	& Analyzed:	09/15/20 1
Chloride	477	20.0	250	198	112	80-120	0.562	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.

(



2010 Afton PlaceProject Number:12035-0114Reported:Farmington NM, 87401Project Manager:Robert Jordan09/17/20 09:25

Notes and Definitions

999999999

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.



^
₽
\sim
Φ
ag
ñ

Client:	LOGOS Re	esources	II. LLC			Bill To				L	ab Us	se On	lv		100	T	AT		EPA Progra	ım
	Rosa Unit)	At	tention: Robert Jordan		Lah	WO#			Job		ber	172	1D	3D	RCRA	CWA	SDWA
	Manager:		ordan			ddress:		P	oğ	F	a			500						1025120202020 B
	2010 A				100/0000	ty, State, Zip			<u></u> ,					nd Me					Sta	ate
	te, Zip Far)1		none: 505-324-4145						T								UT AZ
	505-320-1		, 14111 07 1			nail:		5	2											
	jordan@lc		urceslle co	m		essions@logosresourcesllc.com		801	801				0.						TX OK	
Report d		, gosi eso.	ar cesire.ce			florez@logosresourcesllc.com		yd C	by C	3021	260	010	300	1 1					I I I	
Time	Date		T		111	norez@iogosi esourcesiic.com	Lab	ORC	/DR(ργ	by 8	ls 6	ide	1 1						
Sampled	Sampled	Matrix	No Containers	Sample ID			Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0						Ren	narks
8:15	9/10/20	S	1-4oz jar	SB-1 at 2			1						х							
8'30	9/10/20	S	1-4oz jar	SB-4 at 2	i		2						x							
						ē														
												-							<u> </u>	
Addition	al Instruc	tions:		l		A CONTRACTOR OF THE CONTRACTOR	THE RESIDENCE AND ADDRESS.													
I, (field sampl	er), attest to the	e validity and	authenticity of	this sample. I a	m aware that tamp	pering with or intentionally mislabelling the sample	e location, date or	0				1.00		-					the day they are sa on subsequent day	
	ed by: (Signa		Date C	/ /	Time	Reseived by: (Signature)	Date 9/a		Time	7:00						4	ab Us	e Only		100
Relinquish	ed by: (Signa	ature)	Date	11/20	8:00 Time	Received by: (Signature)	Date	, 00	Time	-00		Rece	eived	d on id	ce:	Y)/ N			
												T1	S 1			T2		ust f	<u>T3</u>	
Relinquish	ed by: (Signa	ature)	Date		Time	Received by: (Signature)	Date		Time			AVG	i Ten	np °C	L	+				
Sample Mat	rix: S - Soil, So	- Solid. Sg -	Sludge. A - A	queous. O - O	ther		Container	r Type	e: g - 1	glass.	p - p					r gla	ss, v -	VOA		
						ngements are made. Hazardous samples wil													bove samples	is applicable
						he laboratory is limited to the amount paid t														





Analytical Report

Report Summary

Client: Logos Resources Samples Received: 7/2/2020

Job Number: 12035-0114 Work Order: P007007

Project Name/Location: Rosa Unit 315A

Report Reviewed By:	Walter Hinkman	Date:	7/10/20	
	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, 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.





Project Name: Rosa Unit 315A Logos Resources 2010 Afton Place Project Number: 12035-0114 Reported: Farmington NM, 87401 Project Manager: Robert Jordan 07/10/20 13:22

Sample Summary

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SB-1 AT 2'	P007007-01A	Soil	07/02/20	07/02/20	Glass Jar, 4 oz.
SB-1 AT 4'	P007007-02A	Soil	07/02/20	07/02/20	Glass Jar, 4 oz.
SB-2 AT 2'	P007007-03A	Soil	07/02/20	07/02/20	Glass Jar, 4 oz.
SB-2 AT 4'	P007007-04A	Soil	07/02/20	07/02/20	Glass Jar, 4 oz.
SB-3 AT 2'	P007007-05A	Soil	07/02/20	07/02/20	Glass Jar, 4 oz.
SB-3 AT 4'	P007007-06A	Soil	07/02/20	07/02/20	Glass Jar, 4 oz.
SB-4 AT 2'	P007007-07A	Soil	07/02/20	07/02/20	Glass Jar, 4 oz.
SB-4 AT 4'	P007007-08A	Soil	07/02/20	07/02/20	Glass Jar, 4 oz.





Farmington NM, 87401

Project Name: Rosa Unit 315A Logos Resources 2010 Afton Place Project Number: 12035-0114

Project Manager: Robert Jordan

Reported: 07/10/20 13:22

SB-1 AT 2' P007007-01 (Solid)

		`					
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Volatile Organics by EPA 8021B	mg/kg	mg/kg				Batch:	2028004
Benzene	ND	0.0250	1	07/07/20	07/09/20		
Toluene	ND	0.0250	1	07/07/20	07/09/20		
Ethylbenzene	ND	0.0250	1	07/07/20	07/09/20		
p,m-Xylene	ND	0.0500	1	07/07/20	07/09/20		
o-Xylene	ND	0.0250	1	07/07/20	07/09/20		
Total Xylenes	ND	0.0250	1	07/07/20	07/09/20		
Surrogate: 4-Bromochlorobenzene-PID		98.0 %	50-150	07/07/20	07/09/20		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg				Batch:	2028008
Diesel Range Organics (C10-C28)	ND	25.0	1	07/08/20	07/08/20		
Oil Range Organics (C28-C40)	ND	50.0	1	07/08/20	07/08/20		
Surrogate: n-Nonane		86.9 %	50-200	07/08/20	07/08/20		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg				Batch:	2028004
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/07/20	07/09/20	·	·
Surrogate: 1-Chloro-4-fluorobenzene-FID		88.6 %	50-150	07/07/20	07/09/20		
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2028005
Chloride	640	20.0	1	07/07/20	07/07/20		



Reported: Farmington NM, 87401 07/10/20 13:22 Project Manager: Robert Jordan

SB-1 AT 4' P007007-02 (Solid)

		007007 02 (501	,				
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Volatile Organics by EPA 8021B	mg/kg	mg/kg				Batch:	2028004
Benzene	ND	0.0250	1	07/07/20	07/09/20		
Toluene	ND	0.0250	1	07/07/20	07/09/20		
Ethylbenzene	ND	0.0250	1	07/07/20	07/09/20		
p,m-Xylene	ND	0.0500	1	07/07/20	07/09/20		
o-Xylene	ND	0.0250	1	07/07/20	07/09/20		
Total Xylenes	ND	0.0250	1	07/07/20	07/09/20		
Surrogate: 4-Bromochlorobenzene-PID		97.9 %	50-150	07/07/20	07/09/20		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg				Batch:	2028008
Diesel Range Organics (C10-C28)	ND	25.0	1	07/08/20	07/08/20		
Oil Range Organics (C28-C40)	ND	50.0	1	07/08/20	07/08/20		
Surrogate: n-Nonane		99.8 %	50-200	07/08/20	07/08/20		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg				Batch:	2028004
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/07/20	07/09/20		
Surrogate: 1-Chloro-4-fluorobenzene-FID		88.2 %	50-150	07/07/20	07/09/20		
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2028005
Chloride	410	20.0	1	07/07/20	07/07/20		



Reported: Farmington NM, 87401 07/10/20 13:22 Project Manager: Robert Jordan

SB-2 AT 2' P007007-03 (Solid)

		007007 05 (501	.u)				
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Volatile Organics by EPA 8021B	mg/kg	mg/kg				Batch:	2028004
Benzene	ND	0.0250	1	07/07/20	07/09/20		
Toluene	ND	0.0250	1	07/07/20	07/09/20		
Ethylbenzene	ND	0.0250	1	07/07/20	07/09/20		
p,m-Xylene	ND	0.0500	1	07/07/20	07/09/20		
o-Xylene	ND	0.0250	1	07/07/20	07/09/20		
Total Xylenes	ND	0.0250	1	07/07/20	07/09/20		
Surrogate: 4-Bromochlorobenzene-PID		96.5 %	50-150	07/07/20	07/09/20		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg				Batch:	2028008
Diesel Range Organics (C10-C28)	ND	25.0	1	07/08/20	07/08/20		
Oil Range Organics (C28-C40)	ND	50.0	1	07/08/20	07/08/20		
Surrogate: n-Nonane		96.9 %	50-200	07/08/20	07/08/20		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg				Batch:	2028004
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/07/20	07/09/20		
Surrogate: 1-Chloro-4-fluorobenzene-FID		89.2 %	50-150	07/07/20	07/09/20		
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2028005
Chloride	189	20.0	1	07/07/20	07/07/20		



2010 Afton PlaceProject Number:12035-0114Reported:Farmington NM, 87401Project Manager:Robert Jordan07/10/20 13:22

SB-2 AT 4' P007007-04 (Solid)

		00:00: 0: (8011	,				
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Volatile Organics by EPA 8021B	mg/kg	mg/kg				Batch:	2028004
Benzene	ND	0.0250	1	07/07/20	07/09/20		
Toluene	ND	0.0250	1	07/07/20	07/09/20		
Ethylbenzene	ND	0.0250	1	07/07/20	07/09/20		
p,m-Xylene	ND	0.0500	1	07/07/20	07/09/20		
o-Xylene	ND	0.0250	1	07/07/20	07/09/20		
Total Xylenes	ND	0.0250	1	07/07/20	07/09/20		
Surrogate: 4-Bromochlorobenzene-PID		97.2 %	50-150	07/07/20	07/09/20		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg				Batch:	2028008
Diesel Range Organics (C10-C28)	ND	25.0	1	07/08/20	07/08/20		
Oil Range Organics (C28-C40)	ND	50.0	1	07/08/20	07/08/20		
Surrogate: n-Nonane		96.1 %	50-200	07/08/20	07/08/20		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg				Batch:	2028004
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/07/20	07/09/20		
Surrogate: 1-Chloro-4-fluorobenzene-FID		88.4 %	50-150	07/07/20	07/09/20		
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2028005
Chloride	421	20.0	1	07/07/20	07/07/20		



Farmington NM, 87401

Logos ResourcesProject Name:Rosa Unit 315A2010 Afton PlaceProject Number:12035-0114

Project Manager: Robert Jordan 07/10/20 13:22

SB-3 AT 2' P007007-05 (Solid)

			/				
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Volatile Organics by EPA 8021B	mg/kg	mg/kg				Batch:	2028004
Benzene	ND	0.0250	1	07/07/20	07/09/20		
Toluene	ND	0.0250	1	07/07/20	07/09/20		
Ethylbenzene	ND	0.0250	1	07/07/20	07/09/20		
p,m-Xylene	ND	0.0500	1	07/07/20	07/09/20		
o-Xylene	ND	0.0250	1	07/07/20	07/09/20		
Total Xylenes	ND	0.0250	1	07/07/20	07/09/20		
Surrogate: 4-Bromochlorobenzene-PID		97.4 %	50-150	07/07/20	07/09/20		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg				Batch:	2028008
Diesel Range Organics (C10-C28)	ND	25.0	1	07/08/20	07/08/20		
Oil Range Organics (C28-C40)	ND	50.0	1	07/08/20	07/08/20		
Surrogate: n-Nonane		100 %	50-200	07/08/20	07/08/20		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg				Batch:	2028004
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/07/20	07/09/20		
Surrogate: 1-Chloro-4-fluorobenzene-FID		89.6 %	50-150	07/07/20	07/09/20		
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2028005
Chloride	424	20.0	1	07/07/20	07/07/20		

Reported:



Project Name: Logos Resources Rosa Unit 315A 2010 Afton Place Project Number: 12035-0114

Reported: Farmington NM, 87401 07/10/20 13:22 Project Manager: Robert Jordan

SB-3 AT 4' P007007-06 (Solid)

		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Volatile Organics by EPA 8021B	mg/kg	mg/kg				Batch:	2028004
Benzene	ND	0.0250	1	07/07/20	07/09/20		
Toluene	ND	0.0250	1	07/07/20	07/09/20		
Ethylbenzene	ND	0.0250	1	07/07/20	07/09/20		
p,m-Xylene	ND	0.0500	1	07/07/20	07/09/20		
o-Xylene	ND	0.0250	1	07/07/20	07/09/20		
Total Xylenes	ND	0.0250	1	07/07/20	07/09/20		
Surrogate: 4-Bromochlorobenzene-PID		96.9 %	50-150	07/07/20	07/09/20		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg				Batch:	2028008
Diesel Range Organics (C10-C28)	ND	25.0	1	07/08/20	07/08/20		
Oil Range Organics (C28-C40)	ND	50.0	1	07/08/20	07/08/20		
Surrogate: n-Nonane		97.5 %	50-200	07/08/20	07/08/20		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg				Batch:	2028004
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/07/20	07/09/20		
Surrogate: 1-Chloro-4-fluorobenzene-FID		88.4 %	50-150	07/07/20	07/09/20		
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2028005
Chloride	441	20.0	1	07/07/20	07/07/20		



Project Name: Logos Resources Rosa Unit 315A 2010 Afton Place Project Number: 12035-0114

Reported: Farmington NM, 87401 Project Manager: 07/10/20 13:22 Robert Jordan

SB-4 AT 2' P007007-07 (Solid)

			,				
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Volatile Organics by EPA 8021B	mg/kg	mg/kg				Batch:	2028004
Benzene	ND	0.0250	1	07/07/20	07/09/20		
Toluene	ND	0.0250	1	07/07/20	07/09/20		
Ethylbenzene	ND	0.0250	1	07/07/20	07/09/20		
p,m-Xylene	ND	0.0500	1	07/07/20	07/09/20		
o-Xylene	ND	0.0250	1	07/07/20	07/09/20		
Total Xylenes	ND	0.0250	1	07/07/20	07/09/20		
Surrogate: 4-Bromochlorobenzene-PID		96.6 %	50-150	07/07/20	07/09/20		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg				Batch:	2028008
Diesel Range Organics (C10-C28)	ND	25.0	1	07/08/20	07/08/20		
Oil Range Organics (C28-C40)	ND	50.0	1	07/08/20	07/08/20		
Surrogate: n-Nonane		93.6 %	50-200	07/08/20	07/08/20		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg				Batch:	2028004
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/07/20	07/09/20		
Surrogate: 1-Chloro-4-fluorobenzene-FID		89.4 %	50-150	07/07/20	07/09/20		
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2028005
Chloride	602	20.0	1	07/07/20	07/07/20		



Farmington NM, 87401

Logos ResourcesProject Name:Rosa Unit 315A2010 Afton PlaceProject Number:12035-0114

Project Manager: Robert Jordan

Reported: 07/10/20 13:22

SB-4 AT 4' P007007-08 (Solid)

		00.00. 00 (801	,				
		Reporting					
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Volatile Organics by EPA 8021B	mg/kg	mg/kg				Batch:	2028004
Benzene	ND	0.0250	1	07/07/20	07/09/20		
Toluene	ND	0.0250	1	07/07/20	07/09/20		
Ethylbenzene	ND	0.0250	1	07/07/20	07/09/20		
p,m-Xylene	ND	0.0500	1	07/07/20	07/09/20		
o-Xylene	ND	0.0250	1	07/07/20	07/09/20		
Total Xylenes	ND	0.0250	1	07/07/20	07/09/20		
Surrogate: 4-Bromochlorobenzene-PID		97.4 %	50-150	07/07/20	07/09/20		
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg				Batch:	2028008
Diesel Range Organics (C10-C28)	ND	25.0	1	07/08/20	07/08/20		
Oil Range Organics (C28-C40)	ND	50.0	1	07/08/20	07/08/20		
Surrogate: n-Nonane		98.3 %	50-200	07/08/20	07/08/20		
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg				Batch:	2028004
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/07/20	07/09/20		
Surrogate: 1-Chloro-4-fluorobenzene-FID		89.0 %	50-150	07/07/20	07/09/20		
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch:	2028005
Chloride	342	20.0	1	07/07/20	07/07/20		



Project Name: Rosa Unit 315A Logos Resources 2010 Afton Place Project Number: 12035-0114 Reported: Farmington NM, 87401 07/10/20 13:22 Project Manager: Robert Jordan

Volatile Organics by EPA 8021B - Quality Control												
		Reporting	Spike	Source		REC		RPD				
Analyte	Result	Limit	Level	Result	REC	Limits RPD		D Limit	Notes			
	ma/ka	ma/ka	ma/ka	ma/ka	0/.	0/.	0/.	0/.				

Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2028004-BLK1)							Prepared	: 07/07/20 1 A	Analyzed: 07/09/20 1
Benzene	ND	0.0250							
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	7.84		8.00		98.0	50-150			
LCS (2028004-BS1)							Prepared	: 07/07/20 1 A	Analyzed: 07/09/20 1
Benzene	4.21	0.0250	5.00		84.3	70-130			
Toluene	4.41	0.0250	5.00		88.2	70-130			
Ethylbenzene	4.36	0.0250	5.00		87.2	70-130			
p,m-Xylene	8.66	0.0500	10.0		86.6	70-130			
o-Xylene	4.31	0.0250	5.00		86.3	70-130			
Total Xylenes	13.0	0.0250	15.0		86.5	0-200			
Surrogate: 4-Bromochlorobenzene-PID	8.05		8.00		101	50-150			
Matrix Spike (2028004-MS1)					Source: P	007007-01	Prepared	: 07/07/20 1 A	Analyzed: 07/09/20 1
Benzene	4.71	0.0250	5.00	ND	94.2	54.3-133			
Toluene	4.91	0.0250	5.00	ND	98.1	61.4-130			
Ethylbenzene	4.87	0.0250	5.00	ND	97.5	61.4-133			
p,m-Xylene	9.69	0.0500	10.0	ND	96.9	63.3-131			
o-Xylene	4.85	0.0250	5.00	ND	97.0	63.3-131			
Total Xylenes	14.5	0.0250	15.0	ND	96.9	0-200			
Surrogate: 4-Bromochlorobenzene-PID	8.01		8.00		100	50-150			
Matrix Spike Dup (2028004-MSD1)					Source: P	007007-01	Prepared	: 07/07/20 1 A	Analyzed: 07/09/20 1
Benzene	4.48	0.0250	5.00	ND	89.5	54.3-133	5.12	20	
Toluene	4.67	0.0250	5.00	ND	93.4	61.4-130	4.97	20	
Ethylbenzene	4.65	0.0250	5.00	ND	93.0	61.4-133	4.71	20	
p,m-Xylene	9.24	0.0500	10.0	ND	92.4	63.3-131	4.73	20	
o-Xylene	4.63	0.0250	5.00	ND	92.6	63.3-131	4.68	20	
Total Xylenes	13.9	0.0250	15.0	ND	92.4	0-200	4.72	200	
Surrogate: 4-Bromochlorobenzene-PID	8.02		8.00		100	50-150			





Project Name: Rosa Unit 315A Logos Resources 2010 Afton Place Project Number: 12035-0114 Reported: Farmington NM, 87401 07/10/20 13:22 Project Manager: Robert Jordan

Nonhalogenated Organics by EPA 8015D - DRO/ORO - Quality Control

Nonnalogenated Organics by EPA 8015D - DRO/ORO - Quanty Control													
Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes				
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%					
Blank (2028008-BLK1)							Prepared	l & Analyzed:	07/08/20 1				
Diesel Range Organics (C10-C28)	ND	25.0											
Oil Range Organics (C28-C40)	ND	50.0											
Surrogate: n-Nonane	52.4		50.0		105	50-200							
LCS (2028008-BS1)							Prepared	l & Analyzed:	07/08/20 1				
Diesel Range Organics (C10-C28)	468	25.0	500		93.6	38-132							
Surrogate: n-Nonane	49.1		50.0		98.2	50-200							
Matrix Spike (2028008-MS1)					Source: P	007007-01	Prepared	l & Analyzed:	07/08/20 1				
Diesel Range Organics (C10-C28)	483	25.0	500	ND	96.6	38-132							
Surrogate: n-Nonane	45.1		50.0		90.3	50-200							
Matrix Spike Dup (2028008-MSD1)					Source: P	007007-01	Prepared	l & Analyzed:	07/08/20 1				
Diesel Range Organics (C10-C28)	464	25.0	500	ND	92.9	38-132	3.97	20					
Surrogate: n-Nonane	41.9		50.0		83.9	50-200							



Project Name: Logos Resources Rosa Unit 315A 2010 Afton Place Project Number: 12035-0114 Reported: Farmington NM, 87401 07/10/20 13:22 Project Manager: Robert Jordan

Nonhalogenated Organics by EPA 8015D - GRO - Quality Control

	Nonnalogena	iteu Organics	DyEIAO	013D - G	KO - Qua	inty Cont	101		
Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2028004-BLK1)							Prepared	1: 07/07/20 1	Analyzed: 07/09/20 1
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.05		8.00		88.1	50-150			
LCS (2028004-BS2)							Prepared	l: 07/07/20 1 A	Analyzed: 07/09/20 1
Gasoline Range Organics (C6-C10)	45.5	20.0	50.0		91.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.16		8.00		89.5	50-150			
Matrix Spike (2028004-MS2)					Source: P	007007-01	Prepared	1: 07/07/20 1	Analyzed: 07/09/20 1
Gasoline Range Organics (C6-C10)	49.2	20.0	50.0	ND	98.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.24		8.00		90.5	50-150			
Matrix Spike Dup (2028004-MSD2)					Source: P	007007-01	Prepared	l: 07/07/20 1 A	Analyzed: 07/09/20 1
Gasoline Range Organics (C6-C10)	45.3	20.0	50.0	ND	90.7	70-130	8.21	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.20		8.00		89.9	50-150			



Logos ResourcesProject Name:Rosa Unit 315A2010 Afton PlaceProject Number:12035-0114Reported:Farmington NM, 87401Project Manager:Robert Jordan07/10/20 13:22

Anions by EPA 300.0/9056A - Quality Control

Analyte	Result mg/kg	Reporting Limit	Spike Level	Source Result mg/kg	REC	REC Limits	RPD %	RPD Limit %	Notes		
	під/кд	mg/kg	mg/kg	mg/kg	⁷⁰	70	70	% 0			
Rlank (2028005-BLK1) Prepared & Analyzed: 07/07/20											
Chloride	ND	20.0									
LCS (2028005-BS1)							Prepared & Analyzed: 07/07/20				
Chloride	251	20.0	250		100	90-110					
Matrix Spike (2028005-MS1)					Source: Po	007007-01	Prepared	07/07/20 1			
Chloride	899	20.0	250	640	103	80-120					
Matrix Spike Dup (2028005-MSD1)					Source: Po	007007-01	Prepared	& Analyzed:	07/07/20 1		
Chloride	901	20.0	250	640	104	80-120	0.240	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.

Page 14 of 16



Reported: 07/10/20 13:22 Farmington NM, 87401 Project Manager: Robert Jordan

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.



Client: LOGOS Resources II, LLC						Bill To		16	A. A. L.	La	ab Us	e On	ly			TAT		E	PA Progra	m
	Rosa Unit				A	ttention: Robert Jordan		Lab	WO#	15.7		Job 1	Vum	ber	1	D 31	F	RCRA	CWA	SDWA
	lanager:		ordan		A	ddress:			07		57	12	335	5011	1					
Address:	2010 A	fton Plac	e			City, State, Zip					21			nd Metl						ate
City, Stat	e, Zip Fai	mington	, NM 8740)1	P	hone: 505-324-4145													NM CO	UT AZ
Phone: 5	505-320-1	395			E	mail:		15	115			- 1								
Email: rj	ordan@lc	gosreso	urcesllc.co	m	t	sessions@logosresourcesllc.com		ıy 80	y 80	21	0	ا ۾ ا	0.0					1	TX OK	
Report d	ue by:				n	nflorez@logosresourcesllc.com		RO	ROb	y 80.	826	601	e 30							
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						Ren	narks
7:30	7/2	S		SB-1 at 2'			1	х	х	х			х							
7:35	7/2	S		SB-1 at 4'			2	х	х	х			х							
7:40	7/2	S		SB-2 at 2'			3	х	х	х			х							
7:45	7/2	S	1-4oz jar	SB-2 at 4'			P	х	х	х			х							
7:50	7/2	S		SB-3 at 2'			5	х	х	х			х							
7:55	7/2	S	1-4oz jar	SB-3 at 4'			0	х	х	х			х		1					
8:00	7/2	S		SB-4 at 2'			7	х	х	х			х							
8:05	7/2	S	1-4oz jar	SB-4 at 4'			8	х	х	х			х							
Addition	al Instruc	tions:						-												
				this sample. I ar		pering with or intentionally mislabelling the sample	e location, date or												e day they are sar subsequent days	
Relinquish	ed by: (Sign		Date		Time	Beceived by: (Signature)	Date 7.2.	20	Time	:0	0	Rece	eived	on ice		Lab Y /(Use C	Only		
Relinquished by: (Signature) Date Time					Received by: (Signature)	Date		Time		-					2 2	31.3	3	T3 30	8.0	
Relinquished by: (Signature) Date Time Received by: (Signature)					Received by: (Signature)	Date		Time			AVG									
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other						Container	Туре	: g - s	glass.					ber	glass.	v - VO	A		The state of the s	
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be re																			ove samples i	applicable
						the laboratory is limited to the amount paid f							255							255000

