

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 <rjordan@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 <Cory.Smith@state.nm.us>
Cc: Tamra Sessions <tsessions@logosresourcesllc.com>; Robert Jordan <rjordan@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- 2nd 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 <tsessions@logosresourcesllc.com>; Robert Jordan
<rjordan@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 Microabsorb 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 later 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' <mflorez@logosresourcesllc.com>
Subject: Rosa Unit 315A Deferral Request Denied nCS129538744

Marie,

Again since Larissa is 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:



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.
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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 Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 315A
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
09/17/20 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: Rosa Unit 315A Project Number: 12035-0114 Project Manager: Robert Jordan	Reported: 09/17/20 09:25
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SB-1 at 2'
P009059-01 (Solid)

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch: 2038010
Chloride	754	20.0	1	09/15/20	09/15/20	



Logos Resources	Project Name:	Rosa Unit 315A	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Robert Jordan	09/17/20 09:25

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

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/kg	mg/kg				Batch: 2038010
Chloride	604	20.0	1	09/15/20	09/15/20	



Logos Resources	Project Name:	Rosa Unit 315A	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Robert Jordan	09/17/20 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
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LCS (2038010-BS1)

Prepared & Analyzed: 09/15/20 1

Chloride	252	20.0	250	101	90-110
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Matrix Spike (2038010-MS1)

Source: P009058-01 Prepared & Analyzed: 09/15/20 1

Chloride	474	20.0	250	198	110	80-120
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Matrix Spike Dup (2038010-MSD1)

Source: P009058-01 Prepared & Analyzed: 09/15/20 1

Chloride	477	20.0	250	198	112	80-120	0.562	20
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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 may differ slightly.



Logos Resources
 2010 Afton Place
 Farmington NM, 87401

Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 09/17/20 09:25

Notes and Definitions

9999999999

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.



Page 7 of 7

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:



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.

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 315A
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
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.

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Logos Resources
 2010 Afton Place
 Farmington NM, 87401

 Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 07/10/20 13:22

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

Analyte	Result	Reporting 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	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	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	
<i>Surrogate: n-Nonane</i>						
	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	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	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	

Logos Resources
 2010 Afton Place
 Farmington NM, 87401

 Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 07/10/20 13:22

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

Analyte	Result	Reporting 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	

Logos Resources
 2010 Afton Place
 Farmington NM, 87401

 Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 07/10/20 13:22

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

Analyte	Result	Reporting 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	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	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	
<i>Surrogate: n-Nonane</i>						
	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	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	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	

Logos Resources
 2010 Afton Place
 Farmington NM, 87401

 Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 07/10/20 13:22

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

Analyte	Result	Reporting 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	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	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	
<i>Surrogate: n-Nonane</i>						
	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	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	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	

Logos Resources
 2010 Afton Place
 Farmington NM, 87401

 Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 07/10/20 13:22

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

Analyte	Result	Reporting 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	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	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	
<i>Surrogate: n-Nonane</i>						
	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	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	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	

Logos Resources
 2010 Afton Place
 Farmington NM, 87401

 Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 07/10/20 13:22

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

Analyte	Result	Reporting 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	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	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	
<i>Surrogate: n-Nonane</i>						
	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	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	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	

Logos Resources
 2010 Afton Place
 Farmington NM, 87401

 Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 07/10/20 13:22

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

Analyte	Result	Reporting 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	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	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	
<i>Surrogate: n-Nonane</i>						
	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	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	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	

Logos Resources
 2010 Afton Place
 Farmington NM, 87401

 Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 07/10/20 13:22

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

Analyte	Result	Reporting 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	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	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	
<i>Surrogate: n-Nonane</i>						
	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	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	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	

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

Volatile Organics by EPA 8021B - 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 (2028004-BLK1)

Prepared: 07/07/20 1 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 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: P007007-01

Prepared: 07/07/20 1 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: P007007-01

Prepared: 07/07/20 1 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			

Logos Resources
 2010 Afton Place
 Farmington NM, 87401

 Project Name: Rosa Unit 315A
 Project Number: 12035-0114
 Project Manager: Robert Jordan

Reported:
 07/10/20 13:22

Nonhalogenated Organics by EPA 8015D - DRO/ORO - 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 (2028008-BLK1)

Prepared & Analyzed: 07/08/20 1

 Diesel Range Organics (C10-C28)
 Oil Range Organics (C28-C40)

 ND
 ND
 25.0
 50.0

Surrogate: n-Nonane

 52.4
 50.0
 105
 50-200

LCS (2028008-BS1)

Prepared & 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: P007007-01

Prepared & 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: P007007-01

Prepared & 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

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

Nonhalogenated Organics by EPA 8015D - GRO - 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 (2028004-BLK1)

Prepared: 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: 07/07/20 1 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: P007007-01

Prepared: 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: P007007-01

Prepared: 07/07/20 1 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 Resources	Project Name:	Rosa Unit 315A	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Robert Jordan	07/10/20 13:22

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 (2028005-BLK1)

Prepared & Analyzed: 07/07/20 1

Chloride	ND	20.0							
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LCS (2028005-BS1)

Prepared & Analyzed: 07/07/20 1

Chloride	251	20.0	250		100	90-110			
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Matrix Spike (2028005-MS1)

Source: P007007-01

Prepared & Analyzed: 07/07/20 1

Chloride	899	20.0	250	640	103	80-120			
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Matrix Spike Dup (2028005-MSD1)

Source: P007007-01

Prepared & Analyzed: 07/07/20 1

Chloride	901	20.0	250	640	104	80-120	0.240	20	
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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 may differ slightly.

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 315A
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
07/10/20 13:22

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.

