

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	nCS1921756251
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: LOGOS Operating, LLC	OGRID 289408
Contact Name: Vanessa Fields	Contact Telephone (505)787-2027
Contact email: lfarrell@logosresourcesllc.com	Incident # (assigned by OCD) nCS1921756251
Contact mailing address 2010 Afton Pl Farmington, NM 87401	

Location of Release Source

Latitude 36.8663635 Longitude -107.37464
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Rosa Unit 267	Site Type: Well
Date Release Discovered: 7/19/2019	API# (if applicable) 30-039-25012

Unit Letter	Section	Township	Range	County
M	28	31N	5W	Rio Arriba

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 15	Volume Recovered (bbls) 13
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Tank was recently replaced and the dump valve was left open. Produced water was released into the secondary containment, saturating the ground outside the containment. All free liquids were removed via hydrovac.

Incident ID	nCS1921756251
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 must be included in the closure report.*

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Vanessa Fields

Title: Log Manager

Signature: [Signature]

Date: 6/17/2022

email: vfields@logosresourcesllc.com

Telephone: (505) 320-1243

OCD Only

Received by: _____

Date: _____

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

Closure Approved by: Nelson Velez

Date: 07/01/2022

Printed Name: Nelson Velez

Title: Environmental Specialist – Adv



Nelson Velez
New Mexico Oil Conservation Division

Incident # **nCS1921756251**

RE: API: 30-039-25012

Well Name: Rosa Unit 267

Unit Letter: M, Section: 28 Township: 31N, Range: 05W

Dear Mr. Velez,

The release at the Rosa Unit 267 was discovered on July 19, 2019. LOGOS Operating (LOGOS) immediately shut in the well and dispatched a water truck to pull the fluid from the affected area. Approximately 15 bbl. were released from the valve that was left open on the newly installed tank. The secondary containment is not lined, and fluid began seeping under the metal berm and left the location area on the southwest corner of the pad. LOGOS was able to recover 13 bbl. of fluid from the secondary containment. There is a cathodic well on the pad that depicts groundwater at 240' below surface. Gypsum and nitrogen were raked into the gravel in the secondary containment. LOGOS sampled the area on October 08, 2019, with the witness of NM Oil Conservation Division. All analytical results did not meet the 4' reclamation requirements. The original C-141 was submitted to the NMOCD and denied due to not meeting the closure requirements per 19.15.29.

Due to changes in staff and Covid 19, the referenced release final C-141 was never submitted to the NMOCD.

On October 08, 2021, LOGOS notified BLM and NMOCD for final confirmation sample to be taken on October 14, 2021.

Per the results analytical report from Envirotech SS-1 was above content level. LOGOS must remediate.

10/8/2021 Analytical Results								
Sample Description	Date 10/8/2021	Sample Depth	EPA Method 8015		EPA Method 8021		EPA Method 300.0	
			GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)
		Surface						
19.15.29.13 (D) NMAC			4' reclamation requirements 100 mg/kg			10 mg/kg	50 mg/kg	600 mg/kg
19.15.29.12 NMAC			1000 mg/kg					10,000 mg/kg
			2500 mg/kg					
SS1	10/8/2021	N/A	ND	291	754	ND	ND	699

Delineation was conducted on the Rosa Unit #267 and confirmation sampling was conducted on October 06, 2021.


10/24/2021 Analytical Results								
Sample Description	Date 10/24/2021	Sample Depth 4'	EPA Method 8015		EPA Method 8021		EPA Method 300.0	
			GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)
19.15.29.13 (D) NMAC			4' reclamation requirements 100 mg/kg			10 mg/kg	50 mg/kg	600 mg/kg
19.15.29.12 NMAC			1000 mg/kg					10,000 mg/kg
			2500 mg/kg					
SD 1	10/24/2021		ND	ND	ND	ND	ND	101
SD 2	10/24/2021		ND	ND	ND	ND	ND	179
SD 3	10/24/2021		ND	ND	ND	ND	ND	199
SD 4	10/24/2021		ND	ND	ND	ND	ND	331

Remediation began and the site affected by the release was excavated to 3' bgs. Confirmation sampling was conducted on November 11, 2021.

11/11/2021 Analytical Results								
Sample Description	Date 11/11/2021	Sample Depth	EPA Method 8015		EPA Method 8021		EPA Method 300.0	
			GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)
		Max 3'						
19.15.29.13 (D) NMAC			4' reclamation requirements 100 mg/kg			10 mg/kg	50 mg/kg	600 mg/kg
19.15.29.12 NMAC			1000 mg/kg					10,000 mg/kg
			2500 mg/kg					
SB 1 Grab Wall	11/11/2021		ND	ND	ND	ND	ND	62.7
SB 2 Grab Bottom	11/11/2021		ND	ND	ND	ND	ND	78.8
SB 2	11/11/2021	1'	ND	ND	ND	ND	ND	178
SB 2	11/11/2021	3'	ND	ND	ND	ND	ND	136
SB 3	11/11/2021	1'	ND	ND	ND	ND	ND	138
SB 3	11/11/2021	3'	ND	ND	ND	ND	ND	121
SB 4	11/11/2021	1'	ND	108	274	ND	ND	90.1
SB 4	11/11/2021	3'	ND	29.7	72.0	ND	ND	86.4
SB 5	11/11/2021	1'	ND	ND	ND	ND	ND	2,400
SB 5	11/11/2021	3'	ND	ND	ND	ND	ND	108

Final Confirmation sampling occurred on December 9, 2021. All analytical results were below regulatory standards after further remediation.

12/09/2021 Analytical Results								
Sample Description	Date 12/09/2021	Sample Depth Max 4'	EPA Method 8015		EPA Method 8021		EPA Method 300.0	
			GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)
19.15.29.13 (D) NMAC			4' reclamation requirements 100 mg/kg			10 mg/kg	50 mg/kg	600 mg/kg
19.15.29.12 NMAC			1000 mg/kg					10,000 mg/kg
			2500 mg/kg					
SB 4 Base	12/09/2021	4'	ND	ND	ND	ND	ND	51.0
SB 4 Wall	12/09/2021	4'	ND	ND	ND	ND	ND	104
SB 5 Base	12/09/2021	4'	ND	ND	ND	ND	ND	208
SB 5 Wall	12/09/2021	4'	ND	ND	ND	ND	ND	293
SB 6 Base	12/09/2021	4'	ND	ND	ND	ND	ND	49.6

Table I Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≤ 50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
51 feet-100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
<div><div>>100 feet</div><div></div></div>	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

The samples that were collected were placed into individual laboratory 4-ounce jars, capped head space free and transported on ice to Envirotech. The samples were analyzed for TPH (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.

All final confirmation sampling that was collected was below NMOCD 19.15.29 closure standard of

Therefore, based on the site 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. LOGOS request a release and remediation/reclamation closure approval from NMOCD.

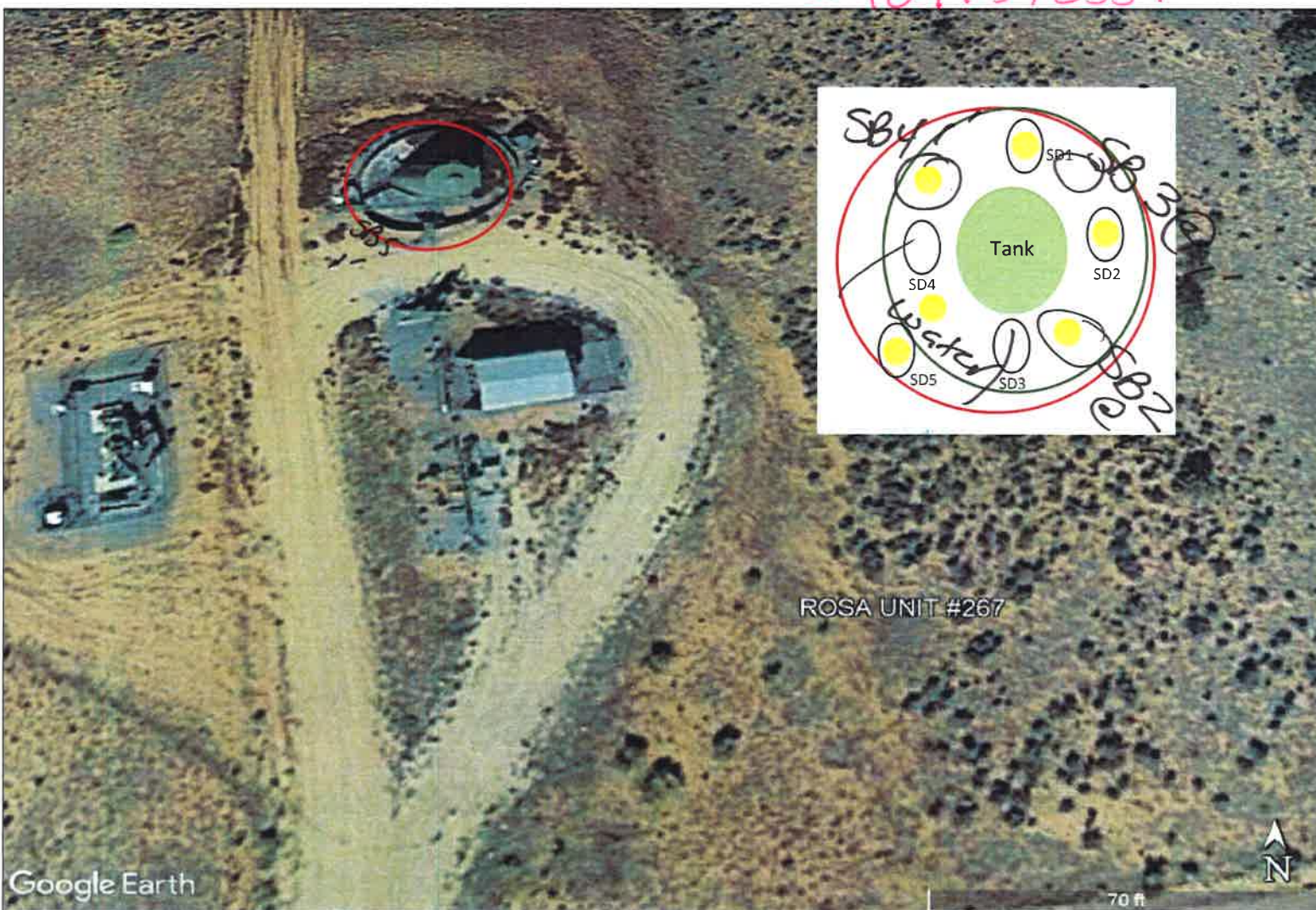
Sincerely,

Vanessa Fields
Regulatory Manager
Cell: 505-320-1243





316.8663635
- 107.372551



- Legend
- Affected Area
 - Sampling Point
 - Secondary Containment
 - Delineation

Rosa Unit 267 – API: 30-039-25012
Sampling Diagram
Unit M, Section 28, T31N, R5W
Rio Arriba County, NM



5.2.2022

5.2.2022

Marie Florez

From: Marie Florez
Sent: Wednesday, November 10, 2021 1:51 PM
To: Fletcher Christian
Subject: FW: Rosa Unit 267- 36.8663635,-107.374640 - Notification for Final Confirmation sample - Re-schedule for Thursday

Marie E. Florez

mflorez@logosresourcesllc.com



From: Marie Florez
Sent: Tuesday, November 9, 2021 7:27 AM
To: mike.bratcher@state.nm.us; A Adeloze Abiodun <aadeloze@blm.gov>; L Demarco Jaime <jdemarco@blm.gov>; Smith Cory EMNRD <Cory.Smith@state.nm.us>
Cc: Robert Bixler <rbixler@logosresourcesllc.com>; Robert Jordan <rjordan@logosresourcesllc.com>; David Dryer <ddryer@logosresourcesllc.com>; Chris Clark <cclark@logosresourcesllc.com>; Marcia Brueggenjohann <mbrueggenjohann@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Joyner Ryan <rjoyner@blm.gov>
Subject: RE: Rosa Unit 267- 36.8663635,-107.374640 - Notification for Final Confirmation sample - Re-schedule for Thursday

LOGOS is notifying OCD (2) business day prior to conducting final sampling on the following well.

Date: November 11, 2021 (Thursday)
Time: 10:30am

Incident # nCS1921756251

Surface: Federal

API: [30-039-25012](#)
Well Name: Rosa Unit 267
Section: 28
Township: 31N
Range: 5W
Unit Letter: M
Footage: 1115 FSL 1200 FWL
Lat 36.8663635
Long -107.374640

Marie E. Florez

mflorez@logosresourcesllc.com



From: Marie Florez

Sent: Friday, November 5, 2021 6:50 AM

To: mike.bratcher@state.nm.us; A Adelaye Abiodun <aadeloye@blm.gov>; L Demarco Jaime <ldemarco@blm.gov>; Smith Cory EMNRD <Cory.Smith@state.nm.us>

Cc: Robert Bixler <rbixler@logosresourcesllc.com>; Robert Jordan <rjordan@logosresourcesllc.com>; David Dryer <ddryer@logosresourcesllc.com>; Chris Clark <cclark@logosresourcesllc.com>; Marcia Brueggjenjohann <mbrueggjenjohann@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Joyner Ryan <rjoyner@blm.gov>

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Surface: Federal

API: 30-039-25012

Well Name: Rosa Unit 267

Section: 28

Township:31N

Range: 5W

Unit Letter: M

Footage: 1115 FSL 1200 FWL

Lat 36.8663635

Long -107.374640

Thanks,

Marie E. Florez
LOGOS Resources, LLC
505-419-8420

From: [Marie Florez](#)
To: [Adeloye, Abiodun A](#); mike.bratcher@state.nm.us; [Demarco, Jaime L](#); [Smith Cory EMNRD](#)
Cc: [Robert Bixler](#); [Robert Jordan](#); [David Dryer](#); [Marcia Brueggjenjohann](#); [Etta Trujillo](#); [Joyner, Ryan N](#); [Fletcher Christian](#)
Subject: RE: [EXTERNAL] RE: Rosa Unit 267- 36.8663635,-107.374640 - Notification for Final Confirmation sample - UPDATE
Date: Monday, November 29, 2021 12:19:00 PM

Update:

After receiving the confirmation sample reports from Envirotech, 2 of the 5 samples were above content level. LOGOS will remediate and schedule to re-sample later.

Thanks,

Marie E. Florez

mflorez@logosresourcesllc.com



From: Adeloye, Abiodun A <aadeloye@blm.gov>
Sent: Tuesday, November 9, 2021 4:18 PM
To: Marie Florez <mflorez@logosresourcesllc.com>; mike.bratcher@state.nm.us; [Demarco, Jaime L](#) <jdemarco@blm.gov>; [Smith Cory EMNRD](#) <Cory.Smith@state.nm.us>
Cc: [Robert Bixler](#) <rbiexler@logosresourcesllc.com>; [Robert Jordan](#) <rjordan@logosresourcesllc.com>; [David Dryer](#) <ddryer@logosresourcesllc.com>; [Chris Clark](#) <cclark@logosresourcesllc.com>; [Marcia Brueggjenjohann](#) <mbrueggjenjohann@logosresourcesllc.com>; [Etta Trujillo](#) <etrujillo@logosresourcesllc.com>; [Joyner, Ryan N](#) <rjoyner@blm.gov>
Subject: Re: [EXTERNAL] RE: Rosa Unit 267- 36.8663635,-107.374640 - Notification for Final Confirmation sample - Re-schedule for Thursday

Hi, Florez, Logos can proceed with the sampling if BLM representative is not present at the time of the sampling. Please let BLM know if there is a change of date and time of the sampling immediately.

BLM acceptance of this notification to collect final samples does not relieve Logos of any other requirements imposed by other regulatory agencies.

Please let me know if you have any questions.

Thank you.

Abiodun Adeloye (Emmanuel), NRS

Bureau of Land Management

Farmington Field Office

6251 College Blvd., Suite A

Farmington, NM 87402

Office Phone: 505-564-7665

Cell Phone: 505-635-0984

From: Marie Florez <mflorez@logosresourcesllc.com>

Sent: Tuesday, November 9, 2021 7:26 AM

To: mike.bratcher@state.nm.us <mike.bratcher@state.nm.us>; Adeleye, Abiodun A <aadeleye@blm.gov>; Demarco, Jaime L <jdemarco@blm.gov>; Smith Cory EMNRD <Cory.Smith@state.nm.us>

Cc: Robert Bixler <rbixler@logosresourcesllc.com>; Robert Jordan <rjordan@logosresourcesllc.com>; David Dryer <ddryer@logosresourcesllc.com>; Chris Clark <cclark@logosresourcesllc.com>; Marcia Brueggenjohann <mbrueggenjohann@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Joyner, Ryan N <rjoyner@blm.gov>

Subject: [EXTERNAL] RE: Rosa Unit 267- 36.8663635,-107.374640 - Notification for Final Confirmation sample - Re-schedule for Thursday

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

LOGOS is notifying OCD (2) business day prior to conducting final sampling on the following well.

Date: November 11, 2021 (Thursday)

Time: 10:30am

Incident # nCS1921756251

Surface: Federal

API: 30-039-25012

Well Name: Rosa Unit 267

Section: 28

Township:31N

Range: 5W

Unit Letter: M

Footage: 1115 FSL 1200 FWL

Lat 36.8663635

Long -107.374640

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mflorez@logosresourcesllc.com



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To: mike.bratcher@state.nm.us; A Adeloye Abiodun <aadeloye@blm.gov>; L Demarco Jaime <ldemarco@blm.gov>; Smith Cory EMNRD <Cory.Smith@state.nm.us>

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Time: 10:30am

Incident # nCS1921756251

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API: 30-039-25012

Well Name: Rosa Unit 267

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LOGOS Resources, LLC
505-419-8420

Marie Florez

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Sent: Tuesday, November 9, 2021 7:27 AM
To: mike.bratcher@state.nm.us; A Adeloye Abiodun; L Demarco Jaime; Smith Cory EMNRD
Cc: Robert Bixler; Robert Jordan; David Dryer; Chris Clark; Marcia Brueggjenjohann; Etta Trujillo; Joyner Ryan
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Cc: Robert Bixler <rbixler@logosresourcesllc.com>; Robert Jordan <rjordan@logosresourcesllc.com>; David Dryer <ddryer@logosresourcesllc.com>; Chris Clark <cclark@logosresourcesllc.com>; Marcia Brueggjenjohann <mbrueggjenjohann@logosresourcesllc.com>; Etta Trujillo <etrujillo@logosresourcesllc.com>; Joyner Ryan <rjoyner@blm.gov>
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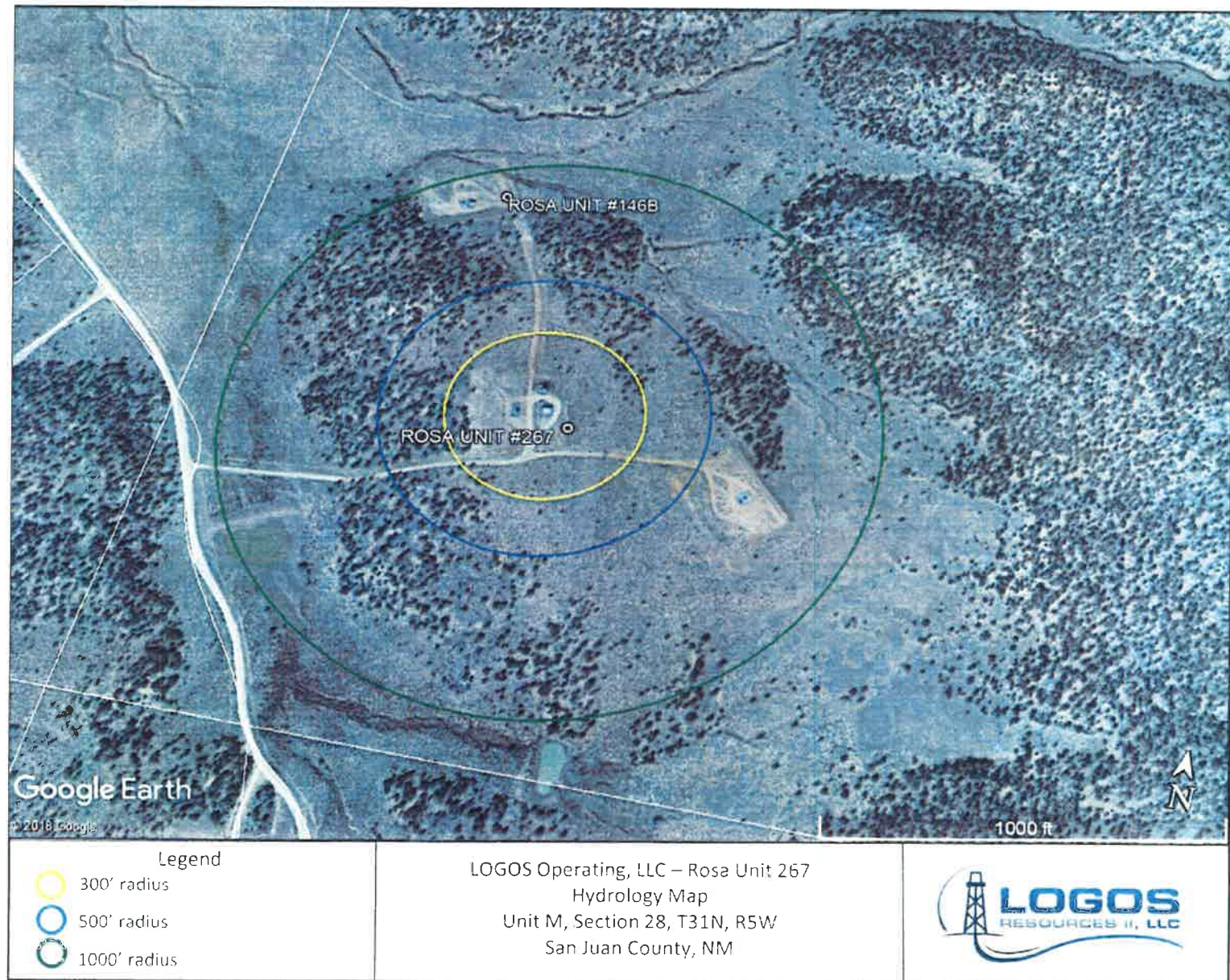
Footage: 1115 FSL 1200 FWL

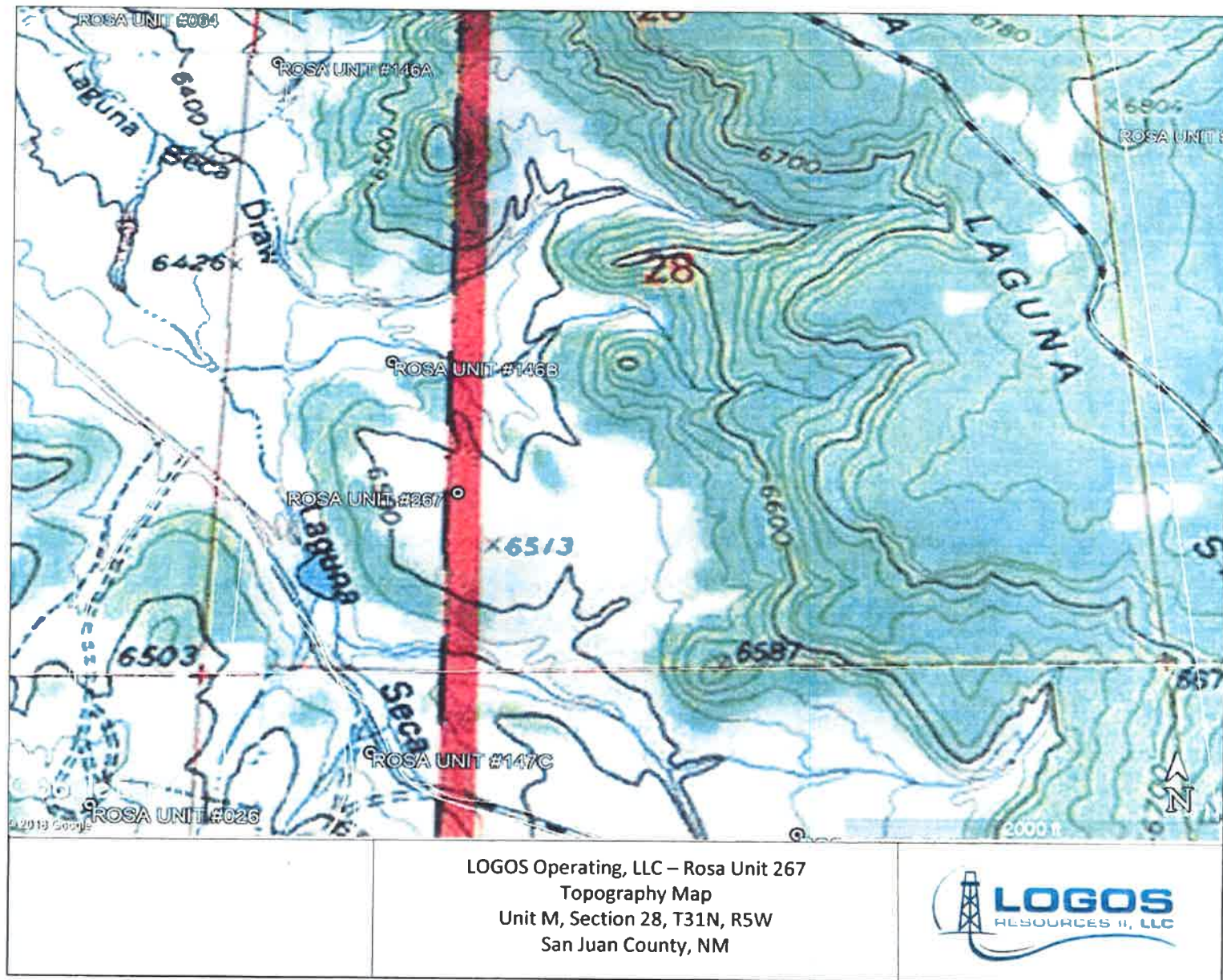
Lat 36.8663635

Long -107.374640

Thanks,

Marie E. Florez
LOGOS Resources, LLC
505-419-8420





6664

30-039-25012

E

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

22934

Operator Mesa Verde Oil Location: Unit 70 Sec. 28 Twp 31 Rng 5Name of Well/Wells or Pipeline Serviced Lease # 267Elevation 6813 Completion Date 9-19-91 Total Depth 412 Land Type FCasing Strings, Sizes, Types & Depths 10" sch 40 5' 71C

If Casing Strings are cemented, show amounts & types used

12 sacks of cement

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

NODepths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. 240' fresh

RECEIVED

FEB 24 1992

Depths gas encountered: NO OIL CON. DIV.Ground bed depth with type & amount of coke breeze used: DIST. 3412' Arbury, 67' water

Depths anodes placed:

Depths vent pipes placed: 350'Vent pipe perforations: 1" vent, perforated bottom 230' fromRemarks: 2nd anode

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

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



Analytical Report

Report Summary

Client: Logos Operating, LLC

Samples Received: 10/8/2019

Job Number: 12035-0114

Work Order: P910031

Project Name/Location: Rosa 267

Report Reviewed By:

A handwritten signature in blue ink, appearing to read 'Walter Hinchman', is written over a horizontal line.

Date: 10/11/19

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc. 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

24 Hour Emergency Response Phone (800) 362-1879

envirotech-inc.com

Labadmin@envirotech-inc.com



Logos Operating, LLC	Project Name:	Rosa 267	Reported: 10/11/19 16:32
PO Box 18	Project Number:	12035-0114	
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Rosa 267-SS1	P910031-01A	Soil	10/08/19	10/08/19	Glass Jar, 4 oz.
	P910031-01B	Soil	10/08/19	10/08/19	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

24 Hour Emergency Response Phone (800) 362-1879

envirotech-inc.com

Labadmin@envirotech-inc.com



Logos Operating, LLC	Project Name:	Rosa 267	
PO Box 18	Project Number:	12035-0114	Reported:
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:32

**Rosa 267-SS1
P910031-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		91.7 %		50-150	1941027	10/09/19	10/10/19	EPA 8021B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	291	25.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
Oil Range Organics (C28-C40)	754	50.0	mg/kg	1	1941026	10/09/19	10/09/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		116 %		50-200	1941026	10/09/19	10/09/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1941027	10/09/19	10/10/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		88.5 %		50-150	1941027	10/09/19	10/10/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	699	40.0	mg/kg	2	1941028	10/09/19	10/09/19	EPA 300.0/9056A	
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Logos Operating, LLC	Project Name:	Rosa 267	Reported: 10/11/19 16:32
PO Box 18	Project Number:	12035-0114	
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1941027 - Purge and Trap EPA 5030A

Blank (1941027-BLK1)

Prepared: 10/09/19 | Analyzed: 10/11/19 0

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 4-Bromochlorobenzene-PID	7.57		"	8.00		94.6	50-150			

LCS (1941027-BS1)

Prepared: 10/09/19 | Analyzed: 10/11/19 0

Benzene	5.17	0.0250	mg/kg	5.00		103	70-130			
Toluene	5.15	0.0250	"	5.00		103	70-130			
Ethylbenzene	5.13	0.0250	"	5.00		103	70-130			
p,m-Xylene	10.3	0.0500	"	10.0		103	70-130			
o-Xylene	5.16	0.0250	"	5.00		103	70-130			
Total Xylenes	15.4	0.0250	"	15.0		103	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.57		"	8.00		94.6	50-150			

Matrix Spike (1941027-MS1)

Source: P910027-01

Prepared: 10/09/19 | Analyzed: 10/11/19 0

Benzene	4.91	0.0250	mg/kg	5.00	ND	98.2	54.3-133			
Toluene	4.89	0.0250	"	5.00	ND	97.8	61.4-130			
Ethylbenzene	4.87	0.0250	"	5.00	ND	97.5	61.4-133			
p,m-Xylene	9.77	0.0500	"	10.0	ND	97.7	63.3-131			
o-Xylene	4.88	0.0250	"	5.00	ND	97.6	63.3-131			
Total Xylenes	14.6	0.0250	"	15.0	ND	97.6	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	7.16		"	8.00		89.6	50-150			

Matrix Spike Dup (1941027-MSD1)

Source: P910027-01

Prepared: 10/09/19 | Analyzed: 10/11/19 1

Benzene	5.02	0.0250	mg/kg	5.00	ND	100	54.3-133	2.16	20	
Toluene	4.99	0.0250	"	5.00	ND	99.8	61.4-130	1.94	20	
Ethylbenzene	4.96	0.0250	"	5.00	ND	99.1	61.4-133	1.65	20	
p,m-Xylene	9.89	0.0500	"	10.0	ND	98.9	63.3-131	1.27	20	
o-Xylene	4.99	0.0250	"	5.00	ND	99.7	63.3-131	2.18	20	
Total Xylenes	14.9	0.0250	"	15.0	ND	99.2	63.3-131	1.58	20	
Surrogate: 4-Bromochlorobenzene-PID	7.61		"	8.00		95.1	50-150			

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/11/19 16:32

Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1941026 - DRO Extraction EPA 3570

Blank (1941026-BLK1)

Prepared: 10/09/19 0 Analyzed: 10/09/19 1

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	58.4		"	50.0		117	50-200			

LCS (1941026-BS1)

Prepared: 10/09/19 0 Analyzed: 10/09/19 1

Diesel Range Organics (C10-C28)	537	25.0	mg/kg	500		107	38-132			
Surrogate: n-Nonane	60.1		"	50.0		120	50-200			

Matrix Spike (1941026-MS1)

Source: P910028-01

Prepared: 10/09/19 0 Analyzed: 10/09/19 1

Diesel Range Organics (C10-C28)	767	25.0	mg/kg	500	220	109	38-132			
Surrogate: n-Nonane	58.8		"	50.0		118	50-200			

Matrix Spike Dup (1941026-MSD1)

Source: P910028-01

Prepared: 10/09/19 0 Analyzed: 10/09/19 1

Diesel Range Organics (C10-C28)	777	25.0	mg/kg	500	220	112	38-132	1.33	20	
Surrogate: n-Nonane	58.6		"	50.0		117	50-200			

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/11/19 16:32

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1941027 - Purge and Trap EPA 5030A

Blank (1941027-BLK1)

Prepared: 10/09/19 | Analyzed: 10/11/19 0

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.07		#	8.00		88.4	50-150			

LCS (1941027-BS2)

Prepared: 10/09/19 | Analyzed: 10/11/19 1

Gasoline Range Organics (C6-C10)	43.9	20.0	mg/kg	50.0		87.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.06		#	8.00		88.3	50-150			

Matrix Spike (1941027-MS2)

Source: P910027-01

Prepared: 10/09/19 | Analyzed: 10/11/19 1

Gasoline Range Organics (C6-C10)	46.5	20.0	mg/kg	50.0	ND	93.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.07		#	8.00		88.4	50-150			

Matrix Spike Dup (1941027-MSD2)

Source: P910027-01

Prepared: 10/09/19 | Analyzed: 10/11/19 1

Gasoline Range Organics (C6-C10)	46.2	20.0	mg/kg	50.0	ND	92.3	70-130	0.734	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.02		#	8.00		87.8	50-150			

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/11/19 16:32

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1941028 - Anion Extraction EPA 300.0/9056A

Blank (1941028-BLK1)

Chloride ND 20.0 mg/kg

Prepared & Analyzed: 10/09/19 1

LCS (1941028-BS1)

Chloride 256 20.0 mg/kg

Prepared & Analyzed: 10/09/19 1

Matrix Spike (1941028-MS1)

Source: P910027-01

Chloride 295 20.0 mg/kg

Prepared & Analyzed: 10/09/19 1

Matrix Spike Dup (1941028-MSD1)

Source: P910027-01

Chloride 293 20.0 mg/kg

Prepared & Analyzed: 10/09/19 1

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.

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Logos Operating, LLC	Project Name:	Rosa 267	
PO Box 18	Project Number:	12035-0114	Reported:
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/11/19 16:32

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.

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Page 1 of 1


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Analytical Report

Report Summary

Client: Logos Operating, LLC

Samples Received: 10/24/2019

Job Number: 12035-0114

Work Order: P910164

Project Name/Location: Rosa 267-Delin

Report Reviewed By:

A handwritten signature in blue ink, appearing to read 'Walter Hinchman', is written over a horizontal line.

Date: 10/31/19

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc. attests the data reported has not been altered in any way.
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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.

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Logos Operating, LLC	Project Name:	Rosa 267-Delin	Reported: 10/31/19 15:04
PO Box 18	Project Number:	12035-0114	
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Rosa 267 SD1	P910164-01A	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.
	P910164-01B	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.
Rosa 267 SD2	P910164-02A	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.
	P910164-02B	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.
Rosa 267 SD3	P910164-03A	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.
	P910164-03B	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.
Rosa 267 SD4	P910164-04A	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.
	P910164-04B	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.
Rosa 267 SD5	P910164-05A	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.
	P910164-05B	Soil	10/24/19	10/24/19	Glass Jar, 4 oz.

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267-Delin
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/31/19 15:04

Rosa 267 SD1
P910164-01 (Solid)

Reporting

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		104 %		50-150	1944004	10/29/19	10/30/19	EPA 8021B	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Surrogate: n-Nonane		99.7 %		50-200	1944008	10/29/19	10/30/19	EPA 8015D	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		85.0 %		50-150	1944004	10/29/19	10/30/19	EPA 8015D	
Anions by 300.0/9056A									
Chloride	101	40.0	mg/kg	2	1944025	10/30/19	10/31/19	EPA 300.0/9056A	

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267-Delin
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/31/19 15:04

Rosa 267 SD2
P910164-02 (Solid)

Reporting

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		106 %		50-150	1944004	10/29/19	10/30/19	EPA 8021B	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Surrogate: n-Nonane		101 %		50-200	1944008	10/29/19	10/30/19	EPA 8015D	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		84.8 %		50-150	1944004	10/29/19	10/30/19	EPA 8015D	
Anions by 300.0/9056A									
Chloride	179	40.0	mg/kg	2	1944025	10/30/19	10/31/19	EPA 300.0/9056A	

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267-Delin
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/31/19 15:04

Rosa 267 SD3
P910164-03 (Solid)

Reporting

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		104 %		50-150	1944004	10/29/19	10/30/19	EPA 8021B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Surrogate: n-Nonane		101 %		50-200	1944008	10/29/19	10/30/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		85.1 %		50-150	1944004	10/29/19	10/30/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	199	40.0	mg/kg	2	1944025	10/30/19	10/31/19	EPA 300.0/9056A	
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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267-Delin
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/31/19 15:04

Rosa 267 SD4
P910164-04 (Solid)

Reporting

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		105 %		50-150	1944004	10/29/19	10/30/19	EPA 8021B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Surrogate: n-Nonane		101 %		50-200	1944008	10/29/19	10/30/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		85.3 %		50-150	1944004	10/29/19	10/30/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	331	40.0	mg/kg	2	1944025	10/30/19	10/31/19	EPA 300.0/9056A	
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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267-Delin
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/31/19 15:04

Rosa 267 SD5
P910164-05 (Solid)

Reporting

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		102 %		50-150	1944004	10/29/19	10/30/19	EPA 8021B	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1944008	10/29/19	10/30/19	EPA 8015D	
Surrogate: n-Nonane		100 %		50-200	1944008	10/29/19	10/30/19	EPA 8015D	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1944004	10/29/19	10/30/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		84.9 %		50-150	1944004	10/29/19	10/30/19	EPA 8015D	
Anions by 300.0/9056A									
Chloride	ND	40.0	mg/kg	2	1944025	10/30/19	10/31/19	EPA 300.0/9056A	

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267-Delin
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/31/19 15:04

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1944004 - Purge and Trap EPA 5030A

Blank (1944004-BLK1)

Prepared: 10/29/19 0 Analyzed: 10/31/19 0

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 4-Bromochlorobenzene-PID	8.52		"	8.00		107	50-150			

LCS (1944004-BS1)

Prepared: 10/29/19 0 Analyzed: 10/31/19 0

Benzene	3.98	0.0250	mg/kg	5.00		79.5	70-130			
Toluene	4.59	0.0250	"	5.00		91.7	70-130			
Ethylbenzene	4.72	0.0250	"	5.00		94.3	70-130			
p,m-Xylene	9.39	0.0500	"	10.0		93.9	70-130			
o-Xylene	4.74	0.0250	"	5.00		94.9	70-130			
Total Xylenes	14.1	0.0250	"	15.0		94.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	8.52		"	8.00		107	50-150			

Matrix Spike (1944004-MS1)

Source: P910164-01

Prepared: 10/29/19 0 Analyzed: 10/31/19 0

Benzene	4.02	0.0250	mg/kg	5.00	ND	80.3	54.3-133			
Toluene	4.65	0.0250	"	5.00	ND	93.1	61.4-130			
Ethylbenzene	4.81	0.0250	"	5.00	ND	96.2	61.4-133			
p,m-Xylene	9.57	0.0500	"	10.0	ND	95.7	63.3-131			
o-Xylene	4.83	0.0250	"	5.00	ND	96.5	63.3-131			
Total Xylenes	14.4	0.0250	"	15.0	ND	96.0	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	8.62		"	8.00		108	50-150			

Matrix Spike Dup (1944004-MSD1)

Source: P910164-01

Prepared: 10/29/19 0 Analyzed: 10/31/19 0

Benzene	3.86	0.0250	mg/kg	5.00	ND	77.2	54.3-133	3.96	20	
Toluene	4.47	0.0250	"	5.00	ND	89.4	61.4-130	4.00	20	
Ethylbenzene	4.62	0.0250	"	5.00	ND	92.5	61.4-133	3.90	20	
p,m-Xylene	9.18	0.0500	"	10.0	ND	91.8	63.3-131	4.12	20	
o-Xylene	4.62	0.0250	"	5.00	ND	92.5	63.3-131	4.28	20	
Total Xylenes	13.8	0.0250	"	15.0	ND	92.0	63.3-131	4.17	20	
Surrogate: 4-Bromochlorobenzene-PID	8.70		"	8.00		109	50-150			

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267-Delin
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/31/19 15:04

Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1944008 - DRO Extraction EPA 3570

Blank (1944008-BLK1)

Prepared: 10/29/19 | Analyzed: 10/30/19 0

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

ND	25.0	mg/kg							
ND	50.0	"							
47.5		"	50.0		95.0		50-200		

Surrogate: n-Nonane

LCS (1944008-BS1)

Prepared: 10/29/19 | Analyzed: 10/30/19 0

Diesel Range Organics (C10-C28)
Surrogate: n-Nonane

496	25.0	mg/kg	500		99.3		38-132		
50.8		"	50.0		102		50-200		

Matrix Spike (1944008-MS1)

Source: P910167-01

Prepared: 10/29/19 | Analyzed: 10/30/19 1

Diesel Range Organics (C10-C28)
Surrogate: n-Nonane

511	25.0	mg/kg	500	ND	102		38-132		
49.4		"	50.0		98.8		50-200		

Matrix Spike Dup (1944008-MSD1)

Source: P910167-01

Prepared: 10/29/19 | Analyzed: 10/30/19 1

Diesel Range Organics (C10-C28)
Surrogate: n-Nonane

525	25.0	mg/kg	500	ND	105		38-132	2.61	20
48.7		"	50.0		97.3		50-200		

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Page 9 of 13



Logos Operating, LLC	Project Name:	Rosa 267-Delin	Reported: 10/31/19 15:04
PO Box 18	Project Number:	12035-0114	
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1944004 - Purge and Trap EPA 5030A

Blank (1944004-BLK1)

Prepared: 10/29/19 0 Analyzed: 10/31/19 0

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.86		"	8.00		85.8	50-150			

LCS (1944004-BS2)

Prepared: 10/29/19 0 Analyzed: 10/31/19 0

Gasoline Range Organics (C6-C10)	47.4	20.0	mg/kg	50.0		94.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.10		"	8.00		88.8	50-150			

Matrix Spike (1944004-MS2)

Source: P910164-01

Prepared: 10/29/19 0 Analyzed: 10/31/19 0

Gasoline Range Organics (C6-C10)	46.9	20.0	mg/kg	50.0	ND	93.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.91		"	8.00		86.4	50-150			

Matrix Spike Dup (1944004-MSD2)

Source: P910164-01

Prepared: 10/29/19 0 Analyzed: 10/31/19 0

Gasoline Range Organics (C6-C10)	45.9	20.0	mg/kg	50.0	ND	91.8	70-130	2.22	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.95		"	8.00		86.9	50-150			

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Logos Operating, LLC
PO Box 18
Flora Vista NM, 87415

Project Name: Rosa 267-Delin
Project Number: 12035-0114
Project Manager: Larissa Farrell

Reported:
10/31/19 15:04

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1944025 - Anion Extraction EPA 300.0/9056A										
Blank (1944025-BLK1)				Prepared: 10/30/19 Analyzed: 10/31/19 0						
Chloride	ND	20.0	mg/kg							
LCS (1944025-BS1)				Prepared: 10/30/19 Analyzed: 10/31/19 0						
Chloride	254	20.0	mg/kg	250		102	90-110			
Matrix Spike (1944025-MS1)				Prepared: 10/30/19 Analyzed: 10/31/19 0						
Chloride	303	20.0	mg/kg	250	46.8	102	80-120			
Matrix Spike Dup (1944025-MSD1)				Prepared: 10/30/19 Analyzed: 10/31/19 0						
Chloride	300	20.0	mg/kg	250	46.8	101	80-120	0.700	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 may differ slightly.

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Logos Operating, LLC	Project Name:	Rosa 267-Delin	
PO Box 18	Project Number:	12035-0114	Reported:
Flora Vista NM, 87415	Project Manager:	Larissa Farrell	10/31/19 15:04

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.

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Report to:
Robert Jordan



5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



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Practical Solutions for a Better Tomorrow

Analytical Report

Logos Resources

Project Name: Rosa Unit 267

Work Order: E111098

Job Number: 12035-0114

Received: 11/11/2021

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
11/19/21

Envirotech Inc. certifies the test results meet all requirements of TNi unless noted 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 NM00979 for data reported.
Envirotech Inc. holds the Texas TNi certification T104704557 for data reported.
Envirotech Inc. holds the NM SDWA certification for data reported. (Lab #NM00979)

Date Reported: 11/19/21

Robert Jordan
2010 Afton Place
Farmington, NM 87401



Project Name: Rosa Unit 267
Workorder: E111098
Date Received: 11/11/2021 1:25:00PM

Robert Jordan,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 11/11/2021 1:25:00PM, under the Project Name: Rosa Unit 267.

The analytical test results summarized in this report with the Project Name: Rosa Unit 267 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

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Sample Summary

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Rosa Unit 267 Project Number: 12035-0114 Project Manager: Robert Jordan	Reported: 11/19/21 11:53
---	---	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SB1 Grab Sample Wall	E111098-01A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.
SB1 Grab Sample Base	E111098-02A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.
SB2 @1'	E111098-03A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.
SB2 @3'	E111098-04A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.
SB3@1'	E111098-05A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.
SB3@3'	E111098-06A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.
SB4@1'	E111098-07A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.
SB4@3'	E111098-08A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.
SB5@1'	E111098-09A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.
SB5@3'	E111098-10A	Soil	11/11/21	11/11/21	Glass Jar, 4 oz.



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SB1 Grab Sample Wall

E111098-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
Surrogate: 4-Bromochlorobenzene-PID	93.8 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	107 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	ND	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	ND	50.0	1	11/15/21	11/15/21	
Surrogate: n-Nonane	108 %	50-200		11/15/21	11/15/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146044
Chloride	62.7	20.0	1	11/12/21	11/13/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SBI Grab Sample Base

E111098-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
Surrogate: 4-Bromochlorobenzene-PID	93.0 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	106 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	ND	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	ND	50.0	1	11/15/21	11/15/21	
Surrogate: n-Nonane	95.0 %	50-200		11/15/21	11/15/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146044
Chloride	78.8	20.0	1	11/12/21	11/13/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SB2 @1'

E111098-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B		mg/kg	mg/kg	Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		93.3 %	70-130	11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO		mg/kg	mg/kg	Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		106 %	70-130	11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO		mg/kg	mg/kg	Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	ND	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	ND	50.0	1	11/15/21	11/15/21	
<i>Surrogate: n-Nonane</i>		98.1 %	50-200	11/15/21	11/15/21	
Anions by EPA 300.0/9056A		mg/kg	mg/kg	Analyst: IY		Batch: 2146044
Chloride	178	20.0	1	11/12/21	11/13/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SB2 @3'

E111098-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
Surrogate: 4-Bromochlorobenzene-PID	93.4 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	105 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	ND	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	ND	50.0	1	11/15/21	11/15/21	
Surrogate: n-Nonane	99.2 %	50-200		11/15/21	11/15/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146044
Chloride	136	20.0	1	11/12/21	11/13/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SB3@1'

E111098-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
Surrogate: 4-Bromochlorobenzene-PID	92.8 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	ND	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	ND	50.0	1	11/15/21	11/15/21	
Surrogate: n-Nonane	106 %	50-200		11/15/21	11/15/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146044
Chloride	138	20.0	1	11/12/21	11/13/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SB3@3'

E111098-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
Surrogate: 4-Bromochlorobenzene-PID	92.5 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	107 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	ND	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	ND	50.0	1	11/15/21	11/15/21	
Surrogate: n-Nonane	101 %	50-200		11/15/21	11/15/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146044
Chloride	121	20.0	1	11/12/21	11/13/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SB4@1'

E111098-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
Surrogate: 4-Bromochlorobenzene-PID	93.0 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	105 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	108	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	274	50.0	1	11/15/21	11/15/21	
Surrogate: n-Nonane	103 %	50-200		11/15/21	11/15/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146044
Chloride	90.1	20.0	1	11/12/21	11/13/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SB4@3'

E111098-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
Surrogate: 4-Bromochlorobenzene-PID	92.1 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	106 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	29.7	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	72.0	50.0	1	11/15/21	11/15/21	
Surrogate: n-Nonane	120 %	50-200		11/15/21	11/15/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146044
Chloride	86.4	20.0	1	11/12/21	11/13/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SB5@1'

E111098-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
Surrogate: 4-Bromochlorobenzene-PID	92.1 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	ND	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	ND	50.0	1	11/15/21	11/15/21	
Surrogate: n-Nonane	120 %	50-200		11/15/21	11/15/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146044
Chloride	2400	40.0	2	11/12/21	11/13/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
11/19/2021 11:53:34AM

SB5@3'

E111098-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Benzene	ND	0.0250	1	11/12/21	11/19/21	
Ethylbenzene	ND	0.0250	1	11/12/21	11/19/21	
Toluene	ND	0.0250	1	11/12/21	11/19/21	
o-Xylene	ND	0.0250	1	11/12/21	11/19/21	
p,m-Xylene	ND	0.0500	1	11/12/21	11/19/21	
Total Xylenes	ND	0.0250	1	11/12/21	11/19/21	
Surrogate: 4-Bromochlorobenzene-PID	94.6 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146049
Gasoline Range Organics (C6-C10)	ND	20.0	1	11/12/21	11/19/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		11/12/21	11/19/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: JL		Batch: 2146053
Diesel Range Organics (C10-C28)	ND	25.0	1	11/15/21	11/15/21	
Oil Range Organics (C28-C36)	ND	50.0	1	11/15/21	11/15/21	
Surrogate: n-Nonane	125 %	50-200		11/15/21	11/15/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2146044
Chloride	108	20.0	1	11/12/21	11/13/21	



QC Summary Data

Logos Resources	Project Name:	Rosa Unit 267	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Robert Jordan	11/19/2021 11:53:34AM

Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2146049-BLK1)

Prepared: 11/12/21 Analyzed: 11/19/21

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.56		8.00		94.5	70-130			

LCS (2146049-BS1)

Prepared: 11/12/21 Analyzed: 11/19/21

Benzene	4.76	0.0250	5.00		95.2	70-130			
Ethylbenzene	4.76	0.0250	5.00		95.2	70-130			
Toluene	4.97	0.0250	5.00		99.5	70-130			
o-Xylene	4.70	0.0250	5.00		93.9	70-130			
p,m-Xylene	9.63	0.0500	10.0		96.3	70-130			
Total Xylenes	14.3	0.0250	15.0		95.5	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.61		8.00		95.1	70-130			

LCS Dup (2146049-BSD1)

Prepared: 11/12/21 Analyzed: 11/19/21

Benzene	4.72	0.0250	5.00		94.4	70-130	0.821	20	
Ethylbenzene	4.70	0.0250	5.00		94.0	70-130	1.31	20	
Toluene	4.92	0.0250	5.00		98.5	70-130	1.05	20	
o-Xylene	4.67	0.0250	5.00		93.3	70-130	0.627	20	
p,m-Xylene	9.51	0.0500	10.0		95.1	70-130	1.27	20	
Total Xylenes	14.2	0.0250	15.0		94.5	70-130	1.06	20	
Surrogate: 4-Bromochlorobenzene-PID	7.62		8.00		95.2	70-130			



QC Summary Data

Logos Resources	Project Name:	Rosa Unit 267	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Robert Jordan	11/19/2021 11:53:34AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rcc %	Rcc Limits %	RPD %	RPD Limit %	Notes
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Blank (2146049-BLK1)

Prepared: 11/12/21 Analyzed: 11/19/21

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.53		8.00		107	70-130			

LCS (2146049-BS2)

Prepared: 11/12/21 Analyzed: 11/19/21

Gasoline Range Organics (C6-C10)	47.9	20.0	50.0		95.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.57		8.00		107	70-130			

LCS Dup (2146049-BSD2)

Prepared: 11/12/21 Analyzed: 11/19/21

Gasoline Range Organics (C6-C10)	47.0	20.0	50.0		93.9	70-130	2.01	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.45		8.00		106	70-130			



QC Summary Data

Logos Resources	Project Name:	Rosa Unit 267	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Robert Jordan	11/19/2021 11:53:34AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rcc %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2146053-BLK1)

Prepared: 11/15/21 Analyzed: 11/15/21

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	59.8		50.0		120	50-200			

LCS (2146053-BS1)

Prepared: 11/15/21 Analyzed: 11/15/21

Diesel Range Organics (C10-C28)	541	25.0	500		108	38-132			
Surrogate: n-Nonane	58.8		50.0		118	50-200			

Matrix Spike (2146053-MS1)

Source: E111109-03

Prepared: 11/15/21 Analyzed: 11/15/21

Diesel Range Organics (C10-C28)	563	25.0	500	ND	113	38-132			
Surrogate: n-Nonane	60.4		50.0		121	50-200			

Matrix Spike Dup (2146053-MSD1)

Source: E111109-03

Prepared: 11/15/21 Analyzed: 11/15/21

Diesel Range Organics (C10-C28)	567	25.0	500	ND	113	38-132	0.636	20	
Surrogate: n-Nonane	60.8		50.0		122	50-200			



QC Summary Data

Logos Resources	Project Name:	Rosa Unit 267	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Robert Jordan	11/19/2021 11:53:34AM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2146044-BLK1)

Prepared: 11/12/21 Analyzed: 11/12/21

Chloride ND 20.0

LCS (2146044-BS1)

Prepared: 11/12/21 Analyzed: 11/13/21

Chloride 268 20.0 250 107 90-110

Matrix Spike (2146044-MS1)

Source: E111095-01

Prepared: 11/12/21 Analyzed: 11/13/21

Chloride 1550 40.0 250 2010 NR 80-120 M5

Matrix Spike Dup (2146044-MSD1)

Source: E111095-01

Prepared: 11/12/21 Analyzed: 11/13/21

Chloride 1650 40.0 250 2010 NR 80-120 6.28 20 M5

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.



Definitions and Notes

Logos Resources	Project Name:	Rosa Unit 267	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Robert Jordan	11/19/21 11:53

- M5 The analysis of the MS sample required a dilution such that the spike recovery calculation does not provide useful information. The accociated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Project Information

Chain of Custody

Page 1 of 1

Client: <u>Logos Resources</u> Project: <u>Recess unit 267</u> Project Manager: <u>Robert Jordan</u> Address: <u>2010 Afton Place</u> City, State, Zip: <u>Farmington NM 87401</u> Phone: <u>505-320-1355</u> Email: <u>rjordan@logosresources.com</u> Report due by:				Bill To Attention: <u>Robert Jordan</u> Address: <u>2010 Afton Place</u> City, State, Zip: <u>Farmington NM 87401</u> Phone: <u>505-320-1355</u> Email: <u>mfarr2@logosresources.com</u> <u>Etrujillo@logosresources.com</u>				Lab Use Only Lab WO# <u>E111098</u> Job Number <u>12035-0114</u>				TAT 1D <input type="checkbox"/> 2D <input type="checkbox"/> 3D <input type="checkbox"/> Standard <input type="checkbox"/>				EPA Program CWA <input type="checkbox"/> SDWA <input type="checkbox"/>				
Analysis and Method										RCRA <input type="checkbox"/>		State NM <input checked="" type="checkbox"/> CO <input type="checkbox"/> UT <input type="checkbox"/> AZ <input type="checkbox"/> TX <input type="checkbox"/>								
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0									Remarks
11:12	11/11	S	1-402	SB1 grab sample wall	1	x	x	x			x									
11:14	11/11	S	1-402	SB1 grab sample base	2	x	x	x			x									
10:56	11/11	S	1-402	SB 2 @ 1'	3	x	x	x			x									
11:06	11/11	S	1-402	SB 2 @ 3'	4	x	x	x			x									
10:48	11/11	S	1-402	SB 3 @ 1'	5	x	x	x			x									
11:00	11/11	S	1-402	SB 3 @ 3'	6	x	x	x			x									
10:40	11/11	S	1-402	SB 4 @ 1'	7	x	x	x			x									
10:50	11/11	S	1-402	SB 4 @ 3'	8	x	x	x			x									
10:31	11/11	S	1-402	SB 5 @ 1'	9	x	x	x			x									
10:34	11/11	S	1-402	SB 5 @ 3'	10	x	x	x			x									
Additional Instructions:																				
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.											Sampled by: <u>Michael Farr</u> Relinquished by: (Signature) <u>Michael Farr</u> Date <u>11/11</u> Time <u>1:25</u> Relinquished by: (Signature) _____ Date _____ Time _____ Relinquished by: (Signature) _____ Date _____ Time _____									
Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.											Lab Use Only Received on ice: <u>Y</u> / N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>									
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other											Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA									
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																				


envirotech

Envirotech Analytical Laboratory

Printed: 11/12/2021 11:11:27

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client: Logos Resources	Date Received: 11/11/21 13:25	Work Order ID: E111098
Phone: (505) 320-1395	Date Logged In: 11/12/21 11:01	Logged In By: Irene Yazzie
Email: rjordan@logosresourcesllc.com	Due Date: 11/18/21 17:00 (5 day TAT)	

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
 2. Does the number of samples per sampling site location match the COC? Yes
 3. Were samples dropped off by client or carrier? Yes
 4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
 5. Were all samples received within holding time? Yes
- Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: Marie Florez

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? No
 8. If yes, was cooler received in good condition? NA
 9. Was the sample(s) received intact, i.e., not broken? Yes
 10. Were custody/security seals present? No
 11. If yes, were custody/security seals intact? NA
 12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes
- Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling
13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Comments/Resolution

Signature of client authorizing changes to the COC or sample disposition

Date



envirotech Inc.

Report to:
Robert Jordan



5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Logos Resources

Project Name: Rosa Unit 267

Work Order: E112049

Job Number: 12035-0114

Received: 12/9/2021

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
12/12/21

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted 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 NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.
Envirotech Inc. holds the NM SDWA certification for data reported. (Lab #NM00979)

Date Reported: 12/12/21

Robert Jordan
2010 Afton Place
Farmington, NM 87401



Project Name: Rosa Unit 267
Workorder: E112049
Date Received: 12/9/2021 2:26:00PM

Robert Jordan,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 12/9/2021 2:26:00PM, under the Project Name: Rosa Unit 267.

The analytical test results summarized in this report with the Project Name: Rosa Unit 267 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
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Cell: 775-287-1762
whinchman@envirotech-inc.com

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Sample Summary

Logos Resources	Project Name:	Rosa Unit 267	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Robert Jordan	12/12/21 10:11

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SB-4 base	E112049-01A	Soil	12/09/21	12/09/21	Glass Jar, 4 oz.
SB-4 wall	E112049-02A	Soil	12/09/21	12/09/21	Glass Jar, 4 oz.
SB-5 base	E112049-03A	Soil	12/09/21	12/09/21	Glass Jar, 4 oz.
SB-5 wall	E112049-04A	Soil	12/09/21	12/09/21	Glass Jar, 4 oz.
SB-6 base	E112049-05A	Soil	12/09/21	12/09/21	Glass Jar, 4 oz.



Sample Data

Logos Resources	Project Name:	Rosa Unit 267	Reported: 12/12/2021 10:11:42AM
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Robert Jordan	

SB-4 base

E112049-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Benzene	ND	0.0250	1	12/10/21	12/10/21	
Ethylbenzene	ND	0.0250	1	12/10/21	12/10/21	
Toluene	ND	0.0250	1	12/10/21	12/10/21	
o-Xylene	ND	0.0250	1	12/10/21	12/10/21	
p,m-Xylene	ND	0.0500	1	12/10/21	12/10/21	
Total Xylenes	ND	0.0250	1	12/10/21	12/10/21	
Surrogate: 4-Bromochlorobenzene-PID	94.7 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/21	12/10/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	93.5 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150038
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/21	12/10/21	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/21	12/10/21	
Surrogate: n-Nonane	119 %	50-200		12/10/21	12/10/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2150037
Chloride	51.0	20.0	1	12/10/21	12/10/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
12/12/2021 10:11:42AM

SB-4 wall

E112049-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Benzene	ND	0.0250	1	12/10/21	12/10/21	
Ethylbenzene	ND	0.0250	1	12/10/21	12/10/21	
Toluene	ND	0.0250	1	12/10/21	12/10/21	
o-Xylene	ND	0.0250	1	12/10/21	12/10/21	
p,m-Xylene	ND	0.0500	1	12/10/21	12/10/21	
Total Xylenes	ND	0.0250	1	12/10/21	12/10/21	
Surrogate: 4-Bromochlorobenzene-PID	95.8 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/21	12/10/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	97.8 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150038
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/21	12/10/21	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/21	12/10/21	
Surrogate: n-Nonane	103 %	50-200		12/10/21	12/10/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2150037
Chloride	104	20.0	1	12/10/21	12/10/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
12/12/2021 10:11:42AM

SB-5 base

E112049-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Benzene	ND	0.0250	1	12/10/21	12/10/21	
Ethylbenzene	ND	0.0250	1	12/10/21	12/10/21	
Toluene	ND	0.0250	1	12/10/21	12/10/21	
o-Xylene	ND	0.0250	1	12/10/21	12/10/21	
p,m-Xylene	ND	0.0500	1	12/10/21	12/10/21	
Total Xylenes	ND	0.0250	1	12/10/21	12/10/21	
Surrogate: 4-Bromochlorobenzene-PID	97.3 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/21	12/10/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	96.9 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150038
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/21	12/10/21	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/21	12/10/21	
Surrogate: n-Nonane	114 %	50-200		12/10/21	12/10/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2150037
Chloride	208	20.0	1	12/10/21	12/10/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
12/12/2021 10:11:42AM

SB-5 wall

E112049-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Benzene	ND	0.0250	1	12/10/21	12/10/21	
Ethylbenzene	ND	0.0250	1	12/10/21	12/10/21	
Toluene	ND	0.0250	1	12/10/21	12/10/21	
o-Xylene	ND	0.0250	1	12/10/21	12/10/21	
p,m-Xylene	ND	0.0500	1	12/10/21	12/10/21	
Total Xylenes	ND	0.0250	1	12/10/21	12/10/21	
Surrogate: 4-Bromochlorobenzene-PID	96.9 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/21	12/10/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	102 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150038
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/21	12/10/21	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/21	12/10/21	
Surrogate: n-Nonane	117 %	50-200		12/10/21	12/10/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2150037
Chloride	293	20.0	1	12/10/21	12/10/21	



Sample Data

Logos Resources
2010 Afton Place
Farmington NM, 87401

Project Name: Rosa Unit 267
Project Number: 12035-0114
Project Manager: Robert Jordan

Reported:
12/12/2021 10:11:42AM

SB-6 base

E112049-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Benzene	ND	0.0250	1	12/10/21	12/10/21	
Ethylbenzene	ND	0.0250	1	12/10/21	12/10/21	
Toluene	ND	0.0250	1	12/10/21	12/10/21	
o-Xylene	ND	0.0250	1	12/10/21	12/10/21	
p,m-Xylene	ND	0.0500	1	12/10/21	12/10/21	
Total Xylenes	ND	0.0250	1	12/10/21	12/10/21	
Surrogate: 4-Bromochlorobenzene-PID	95.4 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150036
Gasoline Range Organics (C6-C10)	ND	20.0	1	12/10/21	12/10/21	
Surrogate: 1-Chloro-4-fluorobenzene-FID	101 %	70-130		12/10/21	12/10/21	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2150038
Diesel Range Organics (C10-C28)	ND	25.0	1	12/10/21	12/10/21	
Oil Range Organics (C28-C36)	ND	50.0	1	12/10/21	12/10/21	
Surrogate: n-Nonane	123 %	50-200		12/10/21	12/10/21	
Anions by EPA 300.0/9056A						
	mg/kg	mg/kg		Analyst: IY		Batch: 2150037
Chloride	49.6	20.0	1	12/10/21	12/10/21	



QC Summary Data

Logos Resources	Project Name:	Rosa Unit 267	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Robert Jordan	12/12/2021 10:11:42AM

Volatile Organics by EPA 8021B

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2150036-BLK1)

Prepared: 12/10/21 Analyzed: 12/10/21

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.64		8.00		95.5	70-130			

LCS (2150036-BS1)

Prepared: 12/10/21 Analyzed: 12/10/21

Benzene	4.92	0.0250	5.00		98.3	70-130			
Ethylbenzene	4.87	0.0250	5.00		97.3	70-130			
Toluene	5.01	0.0250	5.00		100	70-130			
o-Xylene	4.97	0.0250	5.00		99.3	70-130			
p,m-Xylene	9.89	0.0500	10.0		98.9	70-130			
Total Xylenes	14.9	0.0250	15.0		99.1	70-130			
Surrogate: 4-Bromochlorobenzene-PID	8.02		8.00		100	70-130			

LCS Dup (2150036-BSD1)

Prepared: 12/10/21 Analyzed: 12/10/21

Benzene	4.82	0.0250	5.00		96.5	70-130	1.93	20	
Ethylbenzene	4.79	0.0250	5.00		95.9	70-130	1.51	20	
Toluene	4.93	0.0250	5.00		98.6	70-130	1.59	20	
o-Xylene	4.90	0.0250	5.00		98.0	70-130	1.35	20	
p,m-Xylene	9.75	0.0500	10.0		97.5	70-130	1.41	20	
Total Xylenes	14.7	0.0250	15.0		97.7	70-130	1.39	20	
Surrogate: 4-Bromochlorobenzene-PID	8.28		8.00		104	70-130			



QC Summary Data

Logos Resources	Project Name:	Rosa Unit 267	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Robert Jordan	12/12/2021 10:11:42AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rcc %	Rcc Limits %	RPD %	RPD Limit %	Notes
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Blank (2150036-BLK1)

Prepared: 12/10/21 Analyzed: 12/10/21

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.71		8.00		96.4	70-130			

LCS (2150036-BS2)

Prepared: 12/10/21 Analyzed: 12/10/21

Gasoline Range Organics (C6-C10)	54.5	20.0	50.0		109	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.95		8.00		99.3	70-130			

LCS Dup (2150036-BSD2)

Prepared: 12/10/21 Analyzed: 12/10/21

Gasoline Range Organics (C6-C10)	56.8	20.0	50.0		114	70-130	4.00	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.82		8.00		97.8	70-130			



QC Summary Data

Logos Resources	Project Name:	Rosa Unit 267	Reported:
2010 Afton Place	Project Number:	12035-0114	
Farmington NM, 87401	Project Manager:	Robert Jordan	12/12/2021 10:11:42AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: RKS

Analytic	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2150038-BLK1)

Prepared: 12/10/21 Analyzed: 12/10/21

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	61.0		50.0		122	50-200			

LCS (2150038-BS1)

Prepared: 12/10/21 Analyzed: 12/10/21

Diesel Range Organics (C10-C28)	572	25.0	500		114	38-132			
Surrogate: n-Nonane	59.6		50.0		119	50-200			

Matrix Spike (2150038-MS1)

Source: E112049-04

Prepared: 12/10/21 Analyzed: 12/10/21

Diesel Range Organics (C10-C28)	594	25.0	500	ND	119	38-132			
Surrogate: n-Nonane	60.4		50.0		121	50-200			

Matrix Spike Dup (2150038-MSD1)

Source: E112049-04

Prepared: 12/10/21 Analyzed: 12/10/21

Diesel Range Organics (C10-C28)	572	25.0	500	ND	114	38-132	3.82	20	
Surrogate: n-Nonane	58.8		50.0		118	50-200			



QC Summary Data

Logos Resources 2010 Afton Place Farmington NM, 87401	Project Name: Rosa Unit 267 Project Number: 12035-0114 Project Manager: Robert Jordan	Reported: 12/12/2021 10:11:42AM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2150037-BLK1)

Prepared: 12/10/21 Analyzed: 12/10/21

Chloride	ND	20.0
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LCS (2150037-BS1)

Prepared: 12/10/21 Analyzed: 12/10/21

Chloride	252	20.0	250	101	90-110
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Matrix Spike (2150037-MS1)

Source: E112049-02

Prepared: 12/10/21 Analyzed: 12/10/21

Chloride	345	20.0	250	104	96.3	80-120
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Matrix Spike Dup (2150037-MSD1)

Source: E112049-02

Prepared: 12/10/21 Analyzed: 12/10/21

Chloride	346	20.0	250	104	96.7	80-120	0.259	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.



Definitions and Notes

Logos Resources	Project Name:	Rosa Unit 267	
2010 Afton Place	Project Number:	12035-0114	Reported:
Farmington NM, 87401	Project Manager:	Robert Jordan	12/12/21 10:11

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Project Information

Chain of Custody

Page 1 of 1[illegible]

5795 US Highway 64, Farmington, N.H. 07701
24-Hour Emergency Response Phone (603) 362-1379

P (505) 532-2851 **F** (505) 532-1655

enviro-tech-inc.com
labadmin@enviro-tech-inc.com

Envirotech Analytical Laboratory

Printed: 12/11/2021 3:03:02PM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Logos Resources	Date Received:	12/09/21 14:26	Work Order ID:	E112049
Phone:	(505) 320-1395	Date Logged In:	12/09/21 15:51	Logged In By:	Jessica Liesse
Email:	rjordan@logosresourcesllc.com	Due Date:	12/10/21 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
 2. Does the number of samples per sampling site location match the COC? Yes
 3. Were samples dropped off by client or carrier? Yes
 4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
 5. Were all samples received within holding time? Yes
- Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: Marie FlorezComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
 8. If yes, was cooler received in good condition? Yes
 9. Was the sample(s) received intact, i.e., not broken? Yes
 10. Were custody/security seals present? No
 11. If yes, were custody/security seals intact? NA
 12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes
- Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling
13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: n/a

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

LOGOS OPERATING, LLC.

ROSA UNIT #267 FTC

NMSF-078769

API NO. 30-039-25012

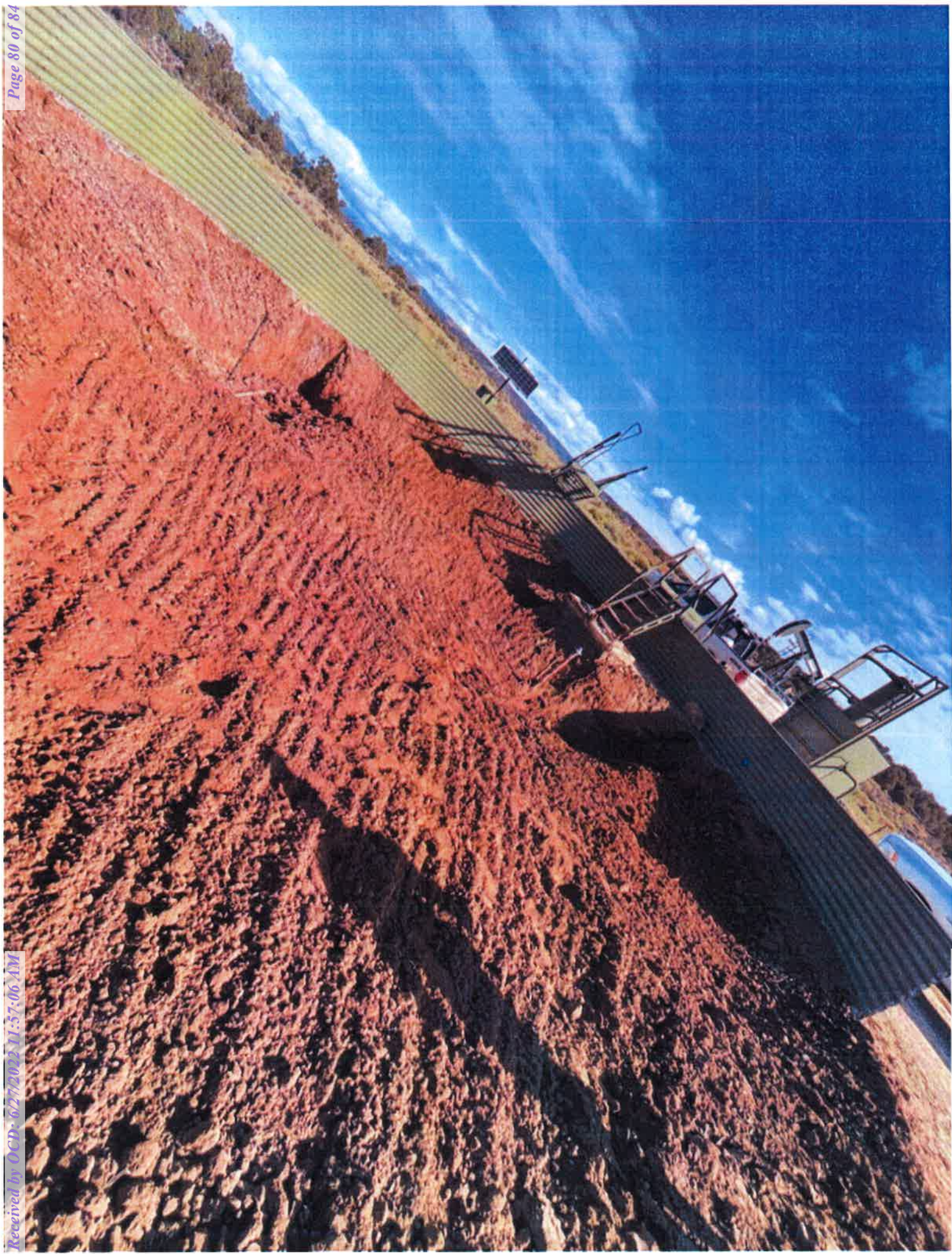
1115' FSL & 1200' FWL

SEC.28 T31N R05W NMPM

RIO ARRIBA COUNTY, NM

LAT: 36.86646 LONG: 107.37241

EMERGENCY CONTACT # 1-866-598-6220









District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
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
District IV
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 120661

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 120661
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	7/1/2022