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	NRM2023249231
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: LOGOS Operating, LLC	OGRID: 289408
Contact Name: Tamra Sessions	Contact Telephone: 505-324-4145
Contact email: tsessions@logosresourcesllc.com	Incident # *(assigned by OCD)*
Contact mailing address: 2010 Afton Place, Farmington, NM 87401	

Location of Release Source

Latitude 36.35393 Longitude -107.30563
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Jicarilla 35 8	Site Type: Well
Date Release Discovered: 8/4/2020	API# *(if applicable)*: 30-039-22096

Unit Letter	Section	Township	Range	County
I	36	25N	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)

☒ Crude Oil	Volume Released (bbls): 4bbls	Volume Recovered (bbls): 0
☒ Produced Water	Volume Released (bbls): combined with oil	Volume Recovered (bbls): 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:

Rupture disc on separator failed causing produced oil and water to spray covering an area approximately 10' x 20' and a trail of mixed oil/water running approximately 60' off separator pad. LOGOS plans to clean up the stained area and remove soil and brush. Jicarilla requested LOGOS to remove the separator to clean historic staining under and around the separator.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2023249231
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Tamra Sessions Title: Regulatory Specialist

Signature: Tamra Sessions Date: 2/18/21

email: tsessions@logosresourcesllc.com Telephone: 505-324-4145

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NRM2023249231
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2023249231
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Tamra Sessions Title: Regulatory Specialist

Signature: Tamra Sessions Date: 2/18/21

email: tsessions@logosresourcesllc.com Telephone: 505-324-4145

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NRM2023249231
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: Tamra Sessions Title: Regulatory Specialist

Signature: Tamra Sessions Date: 2/18/21

email: tsessions@logosresourcesllc.com Telephone: 505-324-4145

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: 06/01/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

LOGOS RESOURCES II, LLC

February 17, 2021

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

Incident # NRM2023249231
Well Name: Jicarilla 35 8 Located in Section 36, Township 25 North, Range 5 West, Rio Arriba, New Mexico.

RE: Rupture disc on separator failed causing produced oil and water to spray covering an area approximately 10' x 20' and a trail of mixed oil/water running approximately 60' off separator pad. The release estimated at 4bbls of mixed produced oil and water. LOGOS plans to clean up the stained area and remove soil and brush. Jicarilla requested LOGOS to remove the separator to clean historic staining under and around the separator.

Dear Mr. Smith,

On August 4, 2020, operator arrived on location around 11am and found fluid spraying and leaking from separator. Well was shut in. LOGOS picked up oil-soaked soil and raked in oil sponge. Separator was repaired. The surface owner (Jicarilla) was notified on August 5, 2020 of the release.

On August 7, 2020 Keith Manwell (JIC EPO) requested to do further remediation. On August 11 & 12, 2020 LOGOS had Kelley Oilfield Services, remove contaminated soil from the trail and contaminated brush around the separator, an approximate area of 10'x20' and 6-12" deep, and hauled and disposed 15 yards to the Envirotech landfarm.

Keith Manwell was onsite for all remediation and sampling.

On August 19, 2020 Kelley Oilfield Services removed the separator per Keith Manwell's request for LOGOS to clean historic staining. Kelley Services dug and hauled off 12 yards to the Envirotech landfarm. LOGOS collected grab samples on August 24, 2020 from SB1 and SB2, placed into Ziploc bags, mixed, and added into individual laboratory 4-ounce jars, capped head space free and transported on ice to Envirotech for testing, samples did not pass.

On September 28, 2020, LOGOS had Kelley Oilfield Services continue to remove contaminated soil from the trail, an approximate 60'x2' and 2' deep. And from below where the separator had sat, an approximate 6'x9' and 4.5' deep. Kelley's hauled an additional 20 yards to the Envirotech landfarm. LOGOS notified and scheduled a composite grab sample with Keith Manwell (Jicarilla). LOGOS was unaware to notify OCD at the time for confirmation sample per results received on October 5th, due to staff change. Keith Manwell was onsite for all confirmation samplings with Envirotech. Two 5-point

composite samples were collected, as documented in the enclosed Aerial Site map. The one 5-point sample from the trail (Lab #1) passed but the second 5-point sample from the separator (Lab #2) did not pass.

On October 14, 2020 Kelley Oilfield Services dug an additional foot of contaminated soil from the separator area, an approximate 6'x9' and 5.5'deep. Kelley's hauled and disposed 3 more yards to the Envirotech landfarm, for a total of 50 yards. Jicarilla and OCD were notified and scheduled on October 14, 2020 for the 2nd confirmation sample in the separator area. Envirotech then performed the confirmation sampling. One 5-point composite sample was collected, as documented in the enclosed Aerial Site map, and Figure 1 – Site pictures. The sample testing report was received on 10/21/20, the sample passed.

The samples were analyzed for TPH as gasoline diesel, and oil range organics (GRO/DRO/ORO) using EPA Method 8015D; benzene, Toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B and chlorides using EPA Method 300.0.

Final Sample Results

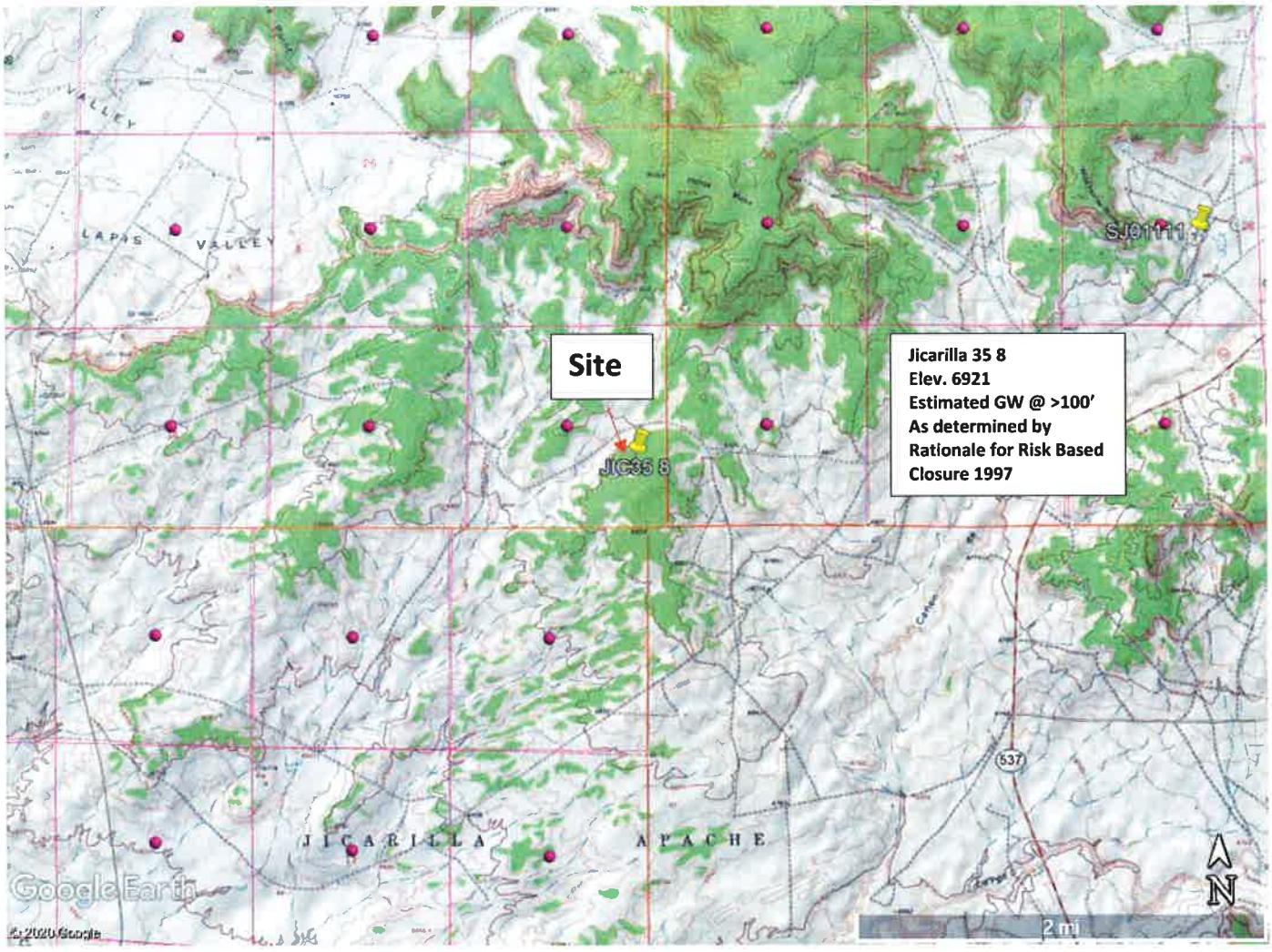
Sample Description	Date	Sample Depth	EPA Method 8015		EPA Method 8021		EPA Method 300.0	
			GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)
19.15.29.13 (D) NMAC			100 mg/kg			10 mg/kg	50 mg/kg	600 mg/kg
19.15.29.12 NMAC			1000 mg/kg					20,000 mg/kg
			2500 mg/kg					
Separator Pad	10/21/20	Remediated	ND	ND	ND	ND	ND	34.8
Trail	10/5/20	Remediated	ND	52.4	ND	ND	ND	ND

The groundwater data is documented in the enclosed TOPO Site Map. The Jicarilla 35 8 has GW @ >100' with an elevation of 6921' according to the 1997 Rationale for Risk Based Closure Hazard Ranking Score of 00.

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

Sincerely,

Tamra Sessions
Regulatory Specialist
Office: 505-324-4145
tsessions@logosresourcesllc.com



LOGOS RESOURCES II, LLC

Well Name: Jicarilla 35 8
API: 30-039-22096
Section: 36 Township: 25N Range: 5W Unit: I
Lat: 36.35393 Long: -107.30563 NAD 83

Scale

2 mi

TOPO Site Map
11/01/2020

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
SJ 01111	SJ	RA	2	1	4	28	25N	04W	297735	4027347*	4913	1225		
SJ 01111 S	SJ	RA	2	1	4	28	25N	04W	297735	4027347*	4913	587		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 293115.7 Northing (Y): 4025673.21 Radius: 5000

***UTM location was derived from PLSS - see Help**

Kenny L. Faust
DEPUTY OIL & GAS INSPECTOR
DEC 2 9 1997
Approved

Meter Number:93316
Location Name:Jicarilla 35 #8
Location:TN-25 RG-05
SC-36 UL-I
6 - Jicarilla
NMOCD Zone:OUTSIDE
Hazard Ranking Score:00

RATIONALE FOR RISK-BASED CLOSURE OF PRODUCTION PITS LOCATED OUTSIDE OF THE VULNERABLE ZONE IN THE SAN JUAN BASIN

This production pit location was ranked according to the criteria in the New Mexico Oil Conservation Division's Unlined Surface Impoundment Closure Guidelines and received a ranking score of zero. The estimated depth to groundwater is greater than 100-feet beneath ground surface (bgs), the pit is not in a well head protection area, and there are no surface water bodies within 1,000 horizontal feet of the pit location.

The primary source, discharge to the pit has been removed. There has been no discharge to the pits for at least 4 years and the pits have been closed for at least one year.

Each pit was backfilled with clean soil and graded in a manner to divert precipitation away from the excavated area. Minimal infiltration of rainfall is expected. Any rainfall that does infiltrate the ground surface must migrate through clean backfill before reaching the residual hydrocarbons.

There is no source material at the ground surface, so direct contact of hydrocarbons with livestock and the populous is not likely.

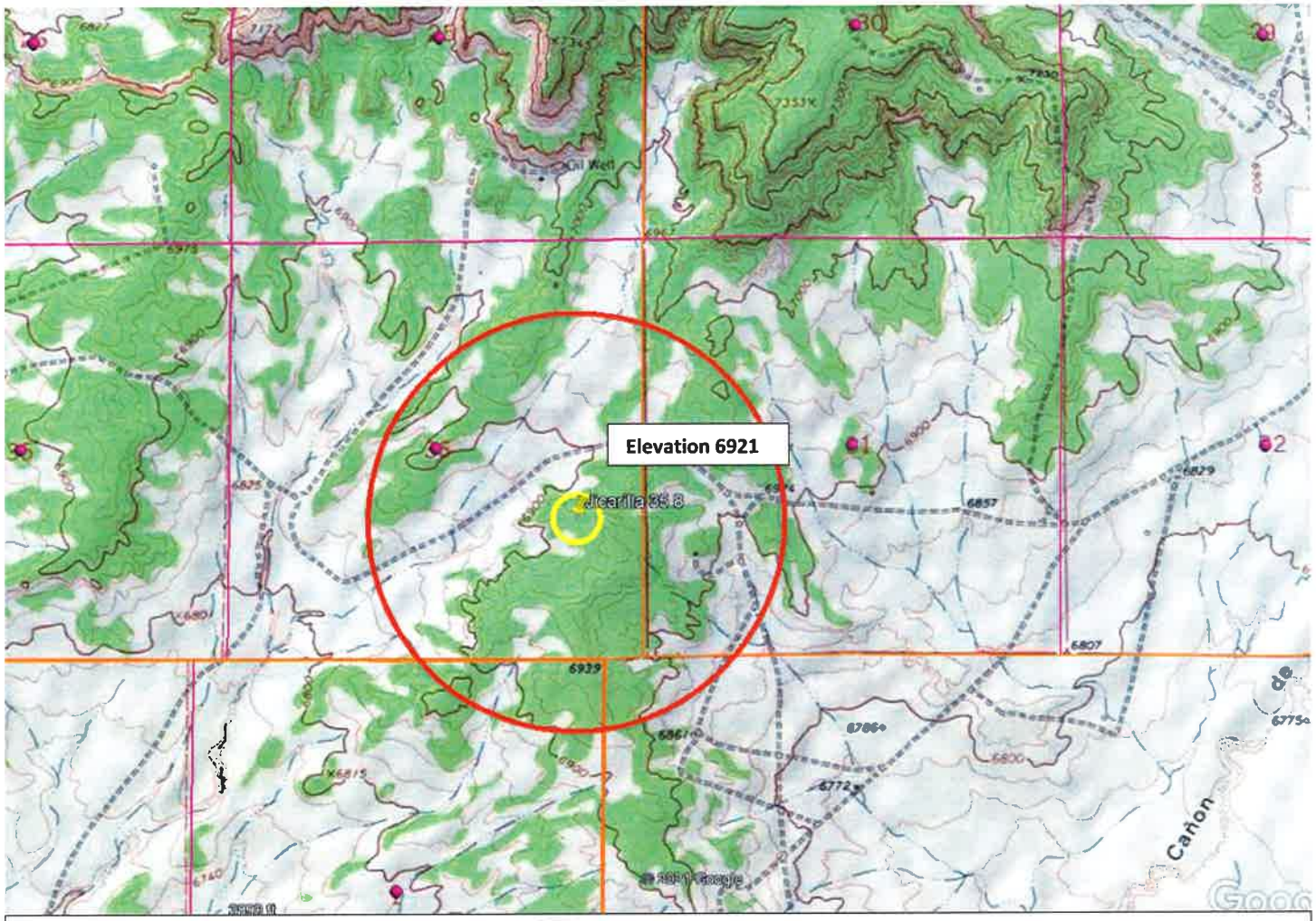
In general, outside of the vulnerable area and alluvial valleys, bedrock material is generally encountered within 20 feet of the ground surface. Bedrock material in the San Juan Basin consists of interbedded sandstones, shales and clays. According to Freeze and Cherry, 1979, the hydraulic conductivity of the bedrock material are as follows:

Sandstone	10^{-9} to 10^{-13} cm/sec
Shale	10^{-12} to 10^{-16} cm/sec
Clay	10^{-12} to 10^{-15} cm/sec

Based on this information, the residual hydrocarbons should not migrate to groundwater.

Natural process (bioremediation) are degrading the residual hydrocarbon to carbon dioxide and water and will continue until the source is gone, therefore minimizing any impact to the environment.

Based on the above information, it is highly unlikely that any source material will impact groundwater or ever find an exposure pathway to affect human health and therefore El Paso Field Services Company (EPFS) requests closure of this pit location.



½ mile radius

300' radius

LOGOS RESOURCES II, LLC

Well Name: Jicarilla 35 8
API: 30-039-22096
Section: 36 Township: 25N Range: 5W Unit: I
Lat: 36.35393 Long: -107.30563 NAD 83

Hydrology Map
11/01/2020

Soil Grab Sampling

LOGOS RESOURCES II, LLC

Well Name: Jicarilla 35 8
API: 30-039-22096
Section: 36 Township: 25N Range: 5W Unit: I
Lat: 36.35393 Long: -107.30563 NAD 83

Aerial Site Map
11/01/2020

Scale
100 ft

Field Notes for Spill Closure

Well Name: Jicarilla 35 8

Date of Arrival: 10/14/2020

Observe Area

Removed contaminated soils [x] Yes [ ] No

What chemical was used to clean-up contaminated area:

NONE

Take Picture: [X] Before [X] After

Entire Spill Containment: [X] Dry [ ] Wet

If wet:
Rain, Moist, etc...

Site Delineation

[X] **Sample 1:**
Composite (Grab Sample) [X] Yes [ ] No

Was (2) five-point sample taken: [X] Yes [ ] No

[ ] **Sample 2:**
Delineation (Hand Auger) [ ] Yes [ ] No

Depths								
	SB - 1	[ ]	1'	[ ]	2'	[ ]	3'	[ ] 4'
	SB - 2	[ ]	1'	[ ]	2'	[ ]	3'	[ ] 4'
	SB - 3	[ ]	1'	[ ]	2'	[ ]	3'	[ ] 4'
	SB - 4	[ ]	1'	[ ]	2'	[ ]	3'	[ ] 4'

Soil

Did soil have odor: [ ] Yes [X] No

If so, what kind of odor:

Was soil discolored: [ ] Yes [X] No

If so, what color:

Was the soil sandy: [ ] Yes [X] No

Tamra Sessions

From: Tamra Sessions
Sent: Thursday, September 24, 2020 12:56 PM
To: cltecube@yahoo.com (Cordell Tecube-EPO); Hobson Sandoval (hsandoval_99 @yahoo.com); Jay Paul McWilliams; Keith Manwell-JIC EPO (kcmanwell@yahoo.com); Kurt Sandoval (kurt.sandoval@bia.gov); Marlena Martinez (marlena.martinez@bia.gov); orsonharrison@jicarillaoga.com; Vicenti, Deedra (deedra.vicenti@bia.gov); Jason Sandoval (jasonsandoval@jicarillaoga.com)
Cc: Bryan Lovato; Billy Schaaphok; Jason Meechan; Marie Florez; Marcia Brueggenjohann
Subject: RE: Jicarilla 35 8_Separator Failure_08.04.20

Keith and Orson per our conversation today, sampling from 8/24/20 came back above reclamation levels. LOGOS will be on location Monday, September 28, 2020, to remove additional soil and will take confirmation samples.

Tamra

From: Tamra Sessions
Sent: Thursday, August 13, 2020 1:12 PM
To: cltecube@yahoo.com (Cordell Tecube-EPO) <cltecube@yahoo.com>; Hobson Sandoval (hsandoval_99@yahoo.com) <hsandoval_99@yahoo.com>; Jay McWilliams <jmcwilliams@logosresourcesllc.com>; Keith Manwell-JIC EPO (kcmanwell@yahoo.com) <kcmanwell@yahoo.com>; Kurt Sandoval (kurt.sandoval@bia.gov) <kurt.sandoval@bia.gov>; Marlena Martinez (marlena.martinez@bia.gov) <marlena.martinez@bia.gov>; orsonharrison@jicarillaoga.com; Vicenti, Deedra (deedra.vicenti@bia.gov) <deedra.vicenti@bia.gov>; Jason Sandoval (jasonsandoval@jicarillaoga.com) <jasonsandoval@jicarillaoga.com>
Cc: Bryan Lovato <blovato@logosresourcesllc.com>; Billy Schaaphok <bschaaphok@logosresourcesllc.com>; Jason Meechan <jmeechan@logosresourcesllc.com>; Marie Florez <mflorez@logosresourcesllc.com>; Marcia Brueggenjohann <MBrueggenjohann@logosresourcesllc.com>
Subject: RE: Jicarilla 35 8_Separator Failure_08.04.20

Orson and Keith, per phone conversation LOGOS has removed oil soaked dirt from the 60' trail leading off from the separator and oil/produced water sprayed brush. This has been hauled to an approved landfarm. LOGOS next will be removing the contaminated soil from the separator area, approximately 10' x 20'. Keith will look for replacement dirt to be spread after sample results come back clean. We will keep you informed on when sampling will occur.

Tamra

From: Tamra Sessions
Sent: Friday, August 07, 2020 11:15 AM
To: cltecube@yahoo.com (Cordell Tecube-EPO) <cltecube@yahoo.com>; Hobson Sandoval (hsandoval_99@yahoo.com) <hsandoval_99@yahoo.com>; Jay McWilliams <jmcwilliams@logosresourcesllc.com>; Keith Manwell-JIC EPO (kcmanwell@yahoo.com) <kcmanwell@yahoo.com>; Kurt Sandoval (kurt.sandoval@bia.gov) <kurt.sandoval@bia.gov>; Marlena Martinez (marlena.martinez@bia.gov) <marlena.martinez@bia.gov>; orsonharrison@jicarillaoga.com; Vicenti, Deedra (deedra.vicenti@bia.gov) <deedra.vicenti@bia.gov>; Jason Sandoval (jasonsandoval@jicarillaoga.com) <jasonsandoval@jicarillaoga.com>
Cc: Bryan Lovato <blovato@logosresourcesllc.com>; Billy Schaaphok <bschaaphok@logosresourcesllc.com>; Jason Meechan <jmeechan@logosresourcesllc.com>; Marie Florez <mflorez@logosresourcesllc.com>
Subject: RE: Jicarilla 35 8_Separator Failure_08.04.20

Orson and Keith, per phone conversation LOGOS will finish cleaning up on this location next week then plan on taking samples. Plan forward will be contingent on the sample results from Envirotech. Will notify prior to sampling.

Followed up with BIA for permission to perform work for this clean up.

Tamra

From: Tamra Sessions
Sent: Wednesday, August 05, 2020 3:48 PM
To: cltecube@yahoo.com (Cordell Tecube-EPO) <cltecube@yahoo.com>; Hobson Sandoval (hsandoval_99@yahoo.com) <hsandoval_99@yahoo.com>; Jared Benally (jaredbenally@jicarillaoga.com) <jaredbenally@jicarillaoga.com>; Jay McWilliams <jmcwilliams@logosresourcesllc.com>; Keith Manwell-JIC EPO (kcmanwell@yahoo.com) <kcmanwell@yahoo.com>; Kurt Sandoval (kurt.sandoval@bia.gov) <kurt.sandoval@bia.gov>; Marlena Martinez (marlena.martinez@bia.gov) <marlena.martinez@bia.gov>; orsonharrison@jicarillaoga.com; Vicenti, Deedra (deedra.vicenti@bia.gov) <deedra.vicenti@bia.gov>
Cc: Bryan Lovato <blovato@logosresourcesllc.com>; Billy Schaaphok <bschaaphok@logosresourcesllc.com>; Jason Meechan <jmeechan@logosresourcesllc.com>; Marie Florez <mflorez@logosresourcesllc.com>
Subject: Jicarilla 35 8_Separator Failure_08.04.20

Well Name: JICARILLA 35 8
Lease #JIC35
API #30-039-22096
UL I, SEC36, T25N, R05W
36.35393,-107.30563 NAD83

Operator arrived on location 8/4/20 around 11am and found fluid spraying and leaking from separator. Rupture disc on separator failed. The area that was affected was 20' around the separator and approximately 60' past the separator. It had made a trail of oil going down off location. Estimated at approximately ½ bbl of oil. Picked up oil soaked soil and raked in oil sponge. Separator was repaired.

Tamra Sessions

From: Tamra Sessions
Sent: Friday, October 09, 2020 1:41 PM
To: Cory Smith (cory.smith@state.nm.us); 'Powell, Brandon, EMNRD'; Keith Manwell-JIC EPO (kcmanwell@yahoo.com); Jason Sandoval (jasonsandoval@jicarillaoga.com); orsonharrison@jicarillaoga.com
Cc: Marie Florez; Bryan Lovato; Jason Meechan
Subject: RE: Jicarilla 35 8 - Notification for final sampling

The samples pulled on 8/24/20, were not the Final as they came back high. Further excavation has taken place.

LOGOS is notifying OCD and Jicarilla two business days prior to conducting final sampling on the following well.

Date: October 14, 2020 (Wednesday)
Time: 11:00am

Incident # NRM2023249231

API: 30-039-22096
Well Name: Jicarilla 35 8
Section:36
Township:25N
Range: 5W
Unit Letter: I

Tamra

From: Tamra Sessions
Sent: Thursday, August 20, 2020 8:45 AM
To: Cory Smith (cory.smith@state.nm.us) <cory.smith@state.nm.us>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>; Keith Manwell-JIC EPO (kcmanwell@yahoo.com) <kcmanwell@yahoo.com>; Jason Sandoval (jasonsandoval@jicarillaoga.com) <jasonsandoval@jicarillaoga.com>; orsonharrison@jicarillaoga.com
Cc: Billy Schaaphok <bschaaphok@logosresourcesllc.com>; Marie Florez <mflorez@logosresourcesllc.com>; Bryan Lovato <blovato@logosresourcesllc.com>
Subject: Jicarilla 35 8 - Notification for final sampling

LOGOS is notifying OCD and Jicarilla two business days prior to conducting final sampling on the following well.

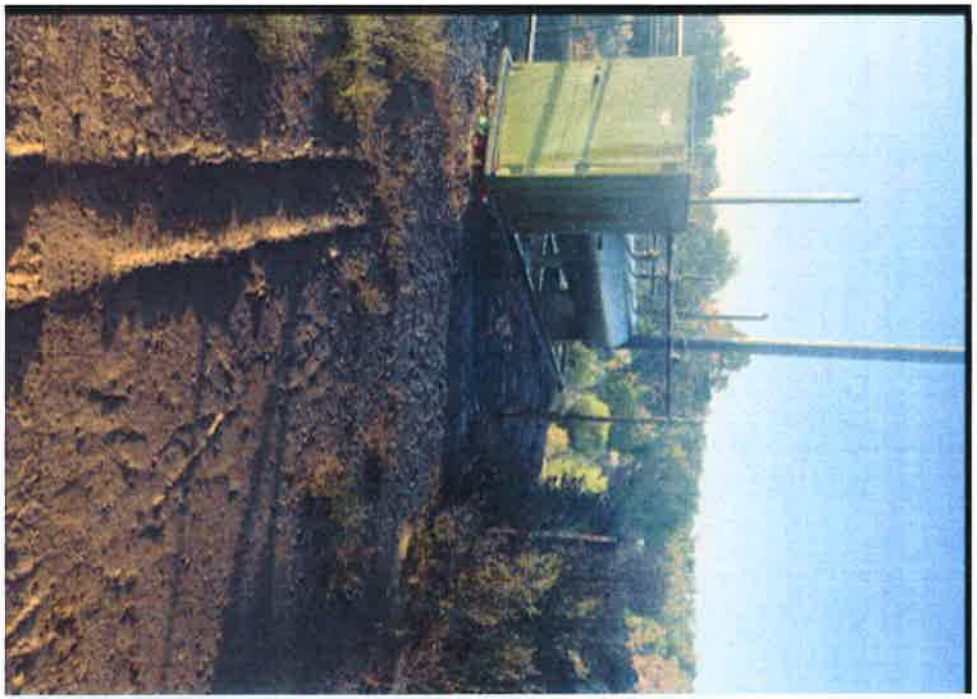
Date: August 24, 2020 (Monday)
Time: 10:00am

Incident # NRM2023249231

API: 30-039-22096
Well Name: Jicarilla 35 8
Section:36
Township:25N
Range: 5W
Unit Letter: I

Tamra Sessions
Regulatory Specialist
Office 505-324-4145
tsessions@logosresourcesllc.com

JICARILLA 35 8 – 08/4/20 SITE AREA SPILL



3

Tamra Sessions
Regulatory Specialist
Office 505-324-4145
tsessions@logosresourcesllc.com

JICARILLA 35 8 – SITE AREA REMEDIATING

JICARILLA 35 8 – SITE AREA BACKFILLED

Report to:

Felipe Aragon

PO Box 18

Flora Vista, NM 87415

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 Operating, LLC

Project Name:	Jicarilla 35-8 Soil Sampling
Work Order:	P009104
Job Number:	12035-0156
Received:	9/28/2020

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
10/5/20

Date Reported: 10/5/20

Felipe Aragon
PO Box 18
Flora Vista, NM 87415

Project Name: Jicarilla 35-8 Soil Sampling
Workorder: P009104
Date Received: 9/28/2020 5:07:00PM

Felipe Aragon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 9/28/2020 5:07:00PM, under the Project Name: Jicarilla 35-8 Soil Sampling.

The analytical test results summarized in this report with the Project Name: Jicarilla 35-8 Soil Sampling 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 reguarding 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
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Lopez
Laboratory Administrator
Office: 505-632-1881
rlopez@envirotech-inc.com

Alexa Michaels
Sample Custody Officer
Office: 505-632-1881
labadmin@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

Logos Operating, LLC	Project Name:	Jicarilla 35-8 Soil Sampling	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/05/20 09:39

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
North end of path	P009104-01A	Soil	09/28/20	09/28/20	Glass Jar, 4 oz.
	P009104-01B	Soil	09/28/20	09/28/20	Glass Jar, 4 oz.
Separator Excavation Base	P009104-02A	Soil	09/28/20	09/28/20	Glass Jar, 4 oz.
	P009104-02B	Soil	09/28/20	09/28/20	Glass Jar, 4 oz.

Sample Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8 Soil Sampling	
PO Box 18	Project Number:	12035-0156	**Reported:**
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/5/2020 9:39:49AM

North end of path

P009104-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RS			Batch: 2040021
Benzene	ND	0.0250	1	10/01/20	10/01/20	
Toluene	ND	0.0250	1	10/01/20	10/01/20	
Ethylbenzene	ND	0.0250	1	10/01/20	10/01/20	
p,m-Xylene	ND	0.0500	1	10/01/20	10/01/20	
o-Xylene	ND	0.0250	1	10/01/20	10/01/20	
Total Xylenes	ND	0.0250	1	10/01/20	10/01/20	
Surrogate: 4-Bromochlorobenzene-PID		*100 %*	*70-130*	*10/01/20*	*10/01/20*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RS			Batch: 2040021
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/01/20	10/01/20	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*85.4 %*	*70-130*	*10/01/20*	*10/01/20*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2040020
Diesel Range Organics (C10-C28)	**52.4**	25.0	1	10/01/20	10/01/20	
Oil Range Organics (C28-C40)	ND	50.0	1	10/01/20	10/01/20	
Surrogate: n-Nonane		*87.7 %*	*50-200*	*10/01/20*	*10/01/20*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: NE			Batch: 2040025
Chloride	ND	20.0	1	10/01/20	10/01/20	

Sample Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8 Soil Sampling	
PO Box 18	Project Number:	12035-0156	**Reported:**
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/5/2020 9:39:49AM

Separator Excavation Base

P009104-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: RS			Batch: 2040021
Benzene	ND	0.0250	1	10/01/20	10/01/20	
Toluene	ND	0.0250	1	10/01/20	10/01/20	
Ethylbenzene	ND	0.0250	1	10/01/20	10/01/20	
p,m-Xylene	ND	0.0500	1	10/01/20	10/01/20	
o-Xylene	ND	0.0250	1	10/01/20	10/01/20	
Total Xylenes	ND	0.0250	1	10/01/20	10/01/20	
Surrogate: 4-Bromochlorobenzene-PID		*97.1 %*	*70-130*	*10/01/20*	*10/01/20*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RS			Batch: 2040021
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/01/20	10/01/20	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*86.3 %*	*70-130*	*10/01/20*	*10/01/20*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: JL			Batch: 2040020
Diesel Range Organics (C10-C28)	**103**	25.0	1	10/01/20	10/01/20	
Oil Range Organics (C28-C40)	**109**	50.0	1	10/01/20	10/01/20	
Surrogate: n-Nonane		*110 %*	*50-200*	*10/01/20*	*10/01/20*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: NE			Batch: 2040025
Chloride	**125**	20.0	1	10/01/20	10/01/20	

QC Summary Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8 Soil Sampling	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/5/2020 9:39:49AM

Volatile Organics by EPA 8021B

Analyst: RS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2040021-BLK1)									Prepared: 10/01/20 Analyzed: 10/01/20
Benzene	ND	0.0250							
Toluene	ND	0.0250							
Ethylbenzene	ND	0.0250							
p,m-Xylene	ND	0.0500							
o-Xylene	ND	0.0250							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*8.00*		*8.00*		*100*	*70-130*			
LCS (2040021-BS1)									Prepared: 10/01/20 Analyzed: 10/01/20
Benzene	5.43	0.0250	5.00		109	70-130			
Toluene	5.51	0.0250	5.00		110	70-130			
Ethylbenzene	5.49	0.0250	5.00		110	70-130			
p,m-Xylene	11.1	0.0500	10.0		111	70-130			
o-Xylene	5.55	0.0250	5.00		111	70-130			
Total Xylenes	16.7	0.0250	15.0		111	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.35*		*8.00*		*104*	*70-130*			
Matrix Spike (2040021-MS1)				**Source: P009104-01**					Prepared: 10/01/20 Analyzed: 10/01/20
Benzene	5.24	0.0250	5.00	ND	105	54-133			
Toluene	5.30	0.0250	5.00	ND	106	61-130			
Ethylbenzene	5.28	0.0250	5.00	ND	106	61-133			
p,m-Xylene	10.7	0.0500	10.0	ND	107	63-131			
o-Xylene	5.35	0.0250	5.00	ND	107	63-131			
Total Xylenes	16.0	0.0250	15.0	ND	107	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.34*		*8.00*		*104*	*70-130*			
Matrix Spike Dup (2040021-MSD1)				**Source: P009104-01**					Prepared: 10/01/20 Analyzed: 10/01/20
Benzene	5.30	0.0250	5.00	ND	106	54-133	1.18	20	
Toluene	5.33	0.0250	5.00	ND	107	61-130	0.491	20	
Ethylbenzene	5.31	0.0250	5.00	ND	106	61-133	0.552	20	
p,m-Xylene	10.7	0.0500	10.0	ND	107	63-131	0.439	20	
o-Xylene	5.37	0.0250	5.00	ND	107	63-131	0.306	20	
Total Xylenes	16.1	0.0250	15.0	ND	107	63-131	0.395	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.28*		*8.00*		*103*	*70-130*			

QC Summary Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8 Soil Sampling	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/5/2020 9:39:49AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2040021-BLK1)									Prepared: 10/01/20 Analyzed: 10/01/20
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.96*		*8.00*		*87.0*	*70-130*			
LCS (2040021-BS2)									Prepared: 10/01/20 Analyzed: 10/01/20
Gasoline Range Organics (C6-C10)	44.7	20.0	50.0		89.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.05*		*8.00*		*88.1*	*70-130*			
Matrix Spike (2040021-MS2)				**Source: P009104-01**					Prepared: 10/01/20 Analyzed: 10/01/20
Gasoline Range Organics (C6-C10)	44.1	20.0	50.0	ND	88.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.05*		*8.00*		*88.1*	*70-130*			
Matrix Spike Dup (2040021-MSD2)				**Source: P009104-01**					Prepared: 10/01/20 Analyzed: 10/01/20
Gasoline Range Organics (C6-C10)	46.4	20.0	50.0	ND	92.8	70-130	5.20	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.98*		*8.00*		*87.3*	*70-130*			

QC Summary Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8 Soil Sampling	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/5/2020 9:39:49AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2040020-BLK1)									Prepared: 10/01/20 Analyzed: 10/01/20
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C40)	ND	50.0							
Surrogate: n-Nonane	*51.3*		*50.0*		*103*	*50-200*			
LCS (2040020-BS1)									Prepared: 10/01/20 Analyzed: 10/01/20
Diesel Range Organics (C10-C28)	435	25.0	500		87.0	38-132			
Surrogate: n-Nonane	*49.5*		*50.0*		*99.0*	*50-200*			
Matrix Spike (2040020-MS1)				**Source: E010002-01**					Prepared: 10/01/20 Analyzed: 10/01/20
Diesel Range Organics (C10-C28)	458	25.0	500	ND	91.7	38-132			
Surrogate: n-Nonane	*37.5*		*50.0*		*75.0*	*50-200*			
Matrix Spike Dup (2040020-MSD1)				**Source: E010002-01**					Prepared: 10/01/20 Analyzed: 10/01/20
Diesel Range Organics (C10-C28)	444	25.0	500	ND	88.9	38-132	3.12	20	
Surrogate: n-Nonane	*35.5*		*50.0*		*70.9*	*50-200*			

QC Summary Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8 Soil Sampling	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/5/2020 9:39:49AM

Anions by EPA 300.0/9056A

Analyst: NE

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2040025-BLK1)									Prepared: 10/01/20 Analyzed: 10/01/20
Chloride	ND	20.0							
LCS (2040025-BS1)									Prepared: 10/01/20 Analyzed: 10/01/20
Chloride	249	20.0	250		99.5	90-110			
Matrix Spike (2040025-MS1)				**Source: P009093-01**					Prepared: 10/01/20 Analyzed: 10/01/20
Chloride	292	20.0	250	50.4	96.6	80-120			
Matrix Spike Dup (2040025-MSD1)				**Source: P009093-01**					Prepared: 10/01/20 Analyzed: 10/01/20
Chloride	290	20.0	250	50.4	95.8	80-120	0.705	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.

Definitions and Notes

Logos Operating, LLC	Project Name:	Jicarilla 35-8 Soil Sampling	
PO Box 18	Project Number:	12035-0156	**Reported:**
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/05/20 09:39

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference

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

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

envirotech Inc.

Project Information | Chain of Custody | Page 1 of 1

Client: Logos Operating	Report Attention	Lab Use Only	TAT	EPA Program
Project: Jicarilla 35-8 Soil Sampling	Report due by:	Lab WO# P009104	Job Number 12035-0156	1D 3D RCRA CWA SDWA
Project Manager: F Aragon	Email:	Analysis and Method		State: NM CO UT AZ
Address:	Address:			
City, State, Zip	City, State, Zip			
Phone:	Phone:			
Email: Gcrabtree Admin Bhall Faragon Tknight Cgreen Igarcia Dcarter				

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/GRO/ORO	8021	CL	Remarks
14:45	9/28/2020	S	2	North end of path	1	X	X	X	2 4 oz jars cool
15:00	9/28/2020	S	2	Separator Excavation Base	2	X	X	X	2 4 oz jars cool

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: [signature]

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	9/28/20	1807	[signature]	9.28	17:07
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: (Y) N
T1 T2 T3
AVG Temp °C 4.0

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech
Analytical Laboratory
5796 US Highway 64 Farmington, NM 87401
Phone: (505) 632-0615 Fax: (505) 632-1865
3912 Spencer Road Suite 115 Durango, CO 81301
Phone: (970) 259-0615 Fax: (970) 259-0820
envirotech-inc.com
laboratory@envirotech-inc.com

Envirotech Analytical Laboratory

Printed: 9/29/2020 12:08:13PM

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 Operating, LLC	Date Received:	09/28/20 17:07	Work Order ID:	P009104
Phone:	(505)215-8215	Date Logged In:	09/29/20 12:04	Logged In By:	Alexa Michaels
Email:		Due Date:	10/05/20 17:00 (5 day TAT)		

Chain of Custody (COC)	Yes	No	
1. Does the sample ID match the COC?	☑	☐	
2. Does the number of samples per sampling site location match the COC	☑	☐	
3. Were samples dropped off by client or carrier?	☑	☐	Carrier: Brittany Hall
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	☑	☐	
5. Were all samples received within holding time?	☑	☐	

Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this discussion.

Comments/Resolution

Sample Turn Around Time (TAT)	Yes	No
6. Did the COC indicate standard TAT, or Expedited TAT?	☐	☑

Standard TAT ☑ 24-hr rush ☐ Immediate ☐ 48-hr rush ☐ 72-hr rush ☐

Sample Cooler	Yes	No	N/A
7. Was the sample cooler received in good condition?	☑	☐	☐
8. Was the sample(s) received in tact, i.e., not broken?	☑	☐	
9. Was the sample cooler received with custody/security seals intact?	☐	☐	☑
10. Were samples received with custody/security seals intact?	☐	☐	☑
11. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C	☑	☐	

Note: Thermal preservation is not required, if samples are received w/I 15 minutes of sampling

12. If no visible ice, record the temperature. Actual sample temperature: 4°C

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

Field Label	Yes	No
18. Were field sample labels filled out with the minimum information:	☑	☐

Sample ID ☑ Date/time collected ☑ Collectors name ☑

Sample Preservation	Yes	No	N/A
19. Does the COC or field labels indicate the samples were preserved?	☐	☐	☑
20. Were VOCs preserved with 1:1 HCl?	☐	☐	☑
21. Are IOC/WET correctly preserved with H2SO4 or other?	☐	☐	☑
22. Is lab filteration required and/or requested for dissolved metals?	☐	☐	☑
23. Are metals preserved with 5N (1:1) HNO3?	☐	☐	☑

Multiphase Sample Matrix	Yes	No	N/A
24. Does the sample have more than one phase, i.e., multiphase?	☐	☐	☑
25. If so, does the COC specify which phase(s) is to be analyzed?	☐	☐	☑

Subcontract Laboratory Information	Yes	No	
26. Was a subcontract laboratory specified by the client and if so who?	☐	☑	Subcontract Lab:

AH — SCO Initials

9/29 — Date

Client Instruction

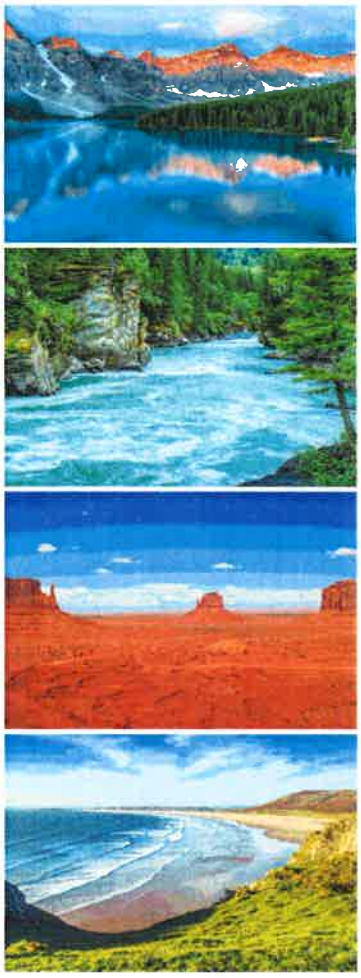
Email to: gcrabtree, admin, bhall, faragon, tknight, cgreen, igarcia, dcarter

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

Date

envirotech Inc.

Report to:
Felipe Aragon
PO Box 18
Flora Vista, NM 87415



5796 U.S. Hwy 64
Farmington, NM 87401

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

NELAP ACCREDITED TNI LABORATORY

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Logos Operating, LLC

Project Name:	Jicarilla 35-8
Work Order:	E010048
Job Number:	12035-0156
Received:	10/14/2020

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
10/20/20

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

Date Reported: 10/20/20

Felipe Aragon
PO Box 18
Flora Vista, NM 87415

Project Name: Jicarilla 35-8
Workorder: E010048
Date Received: 10/14/2020 2:22:00PM

Felipe Aragon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 10/14/2020 2:22:00PM, under the Project Name: Jicarilla 35-8.

The analytical test results summarized in this report with the Project Name: Jicarilla 35-8 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 reguarding 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
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

Raina Lopez
Laboratory Administrator
Office: 505-632-1881
rlopez@envirotech-inc.com

Alexa Michaels
Sample Custody Officer
Office: 505-632-1881
labadmin@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

Logos Operating, LLC	Project Name:	Jicarilla 35-8	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/20/20 10:54

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Base	E010048-01A	Soil	10/14/20	10/14/20	Glass Jar, 4 oz.
	E010048-01B	Soil	10/14/20	10/14/20	Glass Jar, 4 oz.
	E010048-01C	Soil	10/14/20	10/14/20	Glass Jar, 4 oz.

Sample Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8	
PO Box 18	Project Number:	12035-0156	**Reported:**
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/20/2020 10:54:29AM

Base

E010048-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2042009
Benzene	ND	0.0250	1	10/15/20	10/15/20	
Toluene	ND	0.0250	1	10/15/20	10/15/20	
Ethylbenzene	ND	0.0250	1	10/15/20	10/15/20	
p,m-Xylene	ND	0.0500	1	10/15/20	10/15/20	
o-Xylene	ND	0.0250	1	10/15/20	10/15/20	
Total Xylenes	ND	0.0250	1	10/15/20	10/15/20	
Surrogate: 4-Bromochlorobenzene-PID		*97.8 %*	*70-130*	*10/15/20*	*10/15/20*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2042009
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/15/20	10/15/20	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*88.7 %*	*70-130*	*10/15/20*	*10/15/20*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: AY			Batch: 2042010
Diesel Range Organics (C10-C28)	ND	25.0	1	10/15/20	10/15/20	
Oil Range Organics (C28-C35)	ND	50.0	1	10/15/20	10/15/20	
Surrogate: n-Nonane		*118 %*	*50-200*	*10/15/20*	*10/15/20*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: NE			Batch: 2042018
Chloride	**34.8**	20.0	1	10/15/20	10/15/20	

QC Summary Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/20/2020 10:54:29AM

Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2042009-BLK1)									Prepared: 10/14/20 Analyzed: 10/14/20
Benzene	ND	0.0250							
Toluene	ND	0.0250							
Ethylbenzene	ND	0.0250							
p,m-Xylene	ND	0.0500							
o-Xylene	ND	0.0250							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	*7.61*		*8.00*		*95.1*	*70-130*			
LCS (2042009-BS1)									Prepared: 10/14/20 Analyzed: 10/14/20
Benzene	4.78	0.0250	5.00		95.5	70-130			
Toluene	4.90	0.0250	5.00		98.0	70-130			
Ethylbenzene	4.84	0.0250	5.00		96.8	70-130			
p,m-Xylene	9.58	0.0500	10.0		95.8	70-130			
o-Xylene	4.77	0.0250	5.00		95.4	70-130			
Total Xylenes	14.3	0.0250	15.0		95.7	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.98*		*8.00*		*99.7*	*70-130*			
Matrix Spike (2042009-MS1)				**Source: E010044-01**					Prepared: 10/14/20 Analyzed: 10/14/20
Benzene	10.4	0.0500	10.0	ND	104	54-133			
Toluene	10.5	0.0500	10.0	ND	105	61-130			
Ethylbenzene	10.4	0.0500	10.0	ND	104	61-133			
p,m-Xylene	20.6	0.100	20.0	ND	103	63-131			
o-Xylene	10.3	0.0500	10.0	ND	103	63-131			
Total Xylenes	31.0	0.0500	30.0	ND	103	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*16.2*		*16.0*		*101*	*70-130*			
Matrix Spike Dup (2042009-MSD1)				**Source: E010044-01**					Prepared: 10/14/20 Analyzed: 10/14/20
Benzene	9.73	0.0500	10.0	ND	97.3	54-133	6.73	20	
Toluene	9.94	0.0500	10.0	ND	99.4	61-130	5.59	20	
Ethylbenzene	9.89	0.0500	10.0	ND	98.9	61-133	5.44	20	
p,m-Xylene	19.6	0.100	20.0	ND	97.9	63-131	5.28	20	
o-Xylene	9.77	0.0500	10.0	ND	97.7	63-131	5.37	20	
Total Xylenes	29.3	0.0500	30.0	ND	97.8	63-131	5.31	20	
Surrogate: 4-Bromochlorobenzene-PID	*16.3*		*16.0*		*102*	*70-130*			

QC Summary Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/20/2020 10:54:29AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2042009-BLK1)									Prepared: 10/14/20 Analyzed: 10/14/20
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.10*		*8.00*		*88.7*	*70-130*			
LCS (2042009-BS2)									Prepared: 10/14/20 Analyzed: 10/14/20
Gasoline Range Organics (C6-C10)	46.6	20.0	50.0		93.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.27*		*8.00*		*90.9*	*70-130*			
Matrix Spike (2042009-MS2)				**Source: E010044-01**					Prepared: 10/14/20 Analyzed: 10/14/20
Gasoline Range Organics (C6-C10)	100	40.0	100	ND	100	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*14.5*		*16.0*		*90.6*	*70-130*			
Matrix Spike Dup (2042009-MSD2)				**Source: E010044-01**					Prepared: 10/14/20 Analyzed: 10/14/20
Gasoline Range Organics (C6-C10)	99.7	40.0	100	ND	99.7	70-130	0.528	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*14.4*		*16.0*		*89.9*	*70-130*			

envirotech Inc.

QC Summary Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/20/2020 10:54:29AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: AY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2042010-BLK1)									Prepared: 10/14/20 Analyzed: 10/14/20
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C35)	ND	50.0							
Surrogate: n-Nonane	*55.1*		*50.0*		*110*	*50-200*			
LCS (2042010-BS1)									Prepared: 10/14/20 Analyzed: 10/14/20
Diesel Range Organics (C10-C28)	450	25.0	500		90.0	38-132			
Surrogate: n-Nonane	*48.2*		*50.0*		*96.4*	*50-200*			
Matrix Spike (2042010-MS1)				**Source: E010044-01**					Prepared: 10/14/20 Analyzed: 10/14/20
Diesel Range Organics (C10-C28)	468	25.0	500	ND	93.6	38-132			
Surrogate: n-Nonane	*53.6*		*50.0*		*107*	*50-200*			
Matrix Spike Dup (2042010-MSD1)				**Source: E010044-01**					Prepared: 10/14/20 Analyzed: 10/14/20
Diesel Range Organics (C10-C28)	440	25.0	500	ND	87.9	38-132	6.27	20	
Surrogate: n-Nonane	*51.8*		*50.0*		*104*	*50-200*			

QC Summary Data

Logos Operating, LLC	Project Name:	Jicarilla 35-8	**Reported:**
PO Box 18	Project Number:	12035-0156	
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/20/2020 10:54:29AM

Anions by EPA 300.0/9056A

Analyst: NE

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2042018-BLK1)									Prepared: 10/15/20 Analyzed: 10/15/20
Chloride	ND	20.0							
LCS (2042018-BS1)									Prepared: 10/15/20 Analyzed: 10/15/20
Chloride	249	20.0	250		99.6	90-110			
Matrix Spike (2042018-MS1)				**Source: E010047-01**					Prepared: 10/15/20 Analyzed: 10/15/20
Chloride	1480	20.0	250	1190	115	80-120			
Matrix Spike Dup (2042018-MSD1)				**Source: E010047-01**					Prepared: 10/15/20 Analyzed: 10/15/20
Chloride	1460	20.0	250	1190	109	80-120	1.05	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.

Definitions and Notes

Logos Operating, LLC	Project Name:	Jicarilla 35-8	
PO Box 18	Project Number:	12035-0156	**Reported:**
Flora Vista NM, 87415	Project Manager:	Felipe Aragon	10/20/20 10:54

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference

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: Logos Operating	**Report Attention**	Lab Use Only
Project: Jicarilla 35-8	Report due by:	Lab WO# E010048
Project Manager: Felipe Aragon	Attention:	Job Number 12035-0156
Address:	Address:	TAT: 1D 3D
City, State, Zip	City, State, Zip:	EPA Program: RCRA CWA SDWA
Phone:	Phone:	State: NM CO UT AZ
Email: Gcrabtree, FAragon, Cgreen, Bhall, Igarcia, Tk	Email:	

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	8015	8260	8270	8021 BTEX	PH	CL	PCB	Tclp Metals	Tclp VOC	Tclp S.VOC	TDS		Remarks
11:50	10/14/2020	S	3	Base	1	X			X		X							Cool

Page 11 of 12

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Clay Green

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	10/14/20	1220		10/14/20	14:22
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: (Y) N
T1 T2 T3
AVG Temp °C 4.0

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory
5795 US Highway 64 Farmington, NM 87401
24 Hour Emergency Response Phone 800-362-1879
Ph (505) 632-0615 Fx (505) 632-1865
envirotech-inc.com
labadmin@envirotech-inc.com

Envirotech Analytical Laboratory

Printed: 10/14/2020 2:38:13PM

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 Operating, LLC	Date Received:	10/14/20 14:22	Work Order ID:	E010048
Phone:	(505)215-8215	Date Logged In:	10/14/20 14:29	Logged In By:	Alexa Michaels
Email:		Due Date:	10/21/20 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	Carrier: Clay Green
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT?	No	

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 Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling	Yes	
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 filteration 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

Comments/Resolution

email to: gcrabtree, cgreen, bhall, igarcia, tknight

Client Instruction

email to: gcrabtree, cgreen, bhall, igarcia, tknight

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

Date

envirotech Inc.

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 22013

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 22013
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	6/1/2022