

APPROVED

By Olivia Yu at 11:04 am, Mar 26, 2018

NMOCD grants closure
to 1RP-4770.

1RP-4770
CONFIRMATION REPORT
Mexico P. Federal #1
Gas Release
Lea County, New Mexico

Latitude: 32.0305786
Longitude: -103.3745575

LAI Project No. 18-0108-01

February 5, 2018

Prepared for:
Lilis Energy
300 E. Sonterra Blvd., Suite 1220
San Antonio, Texas 78258

Prepared by:
Larson & Associates, Inc.
507 North Marienfeld Street, Suite 205
Midland, Texas 79701



Mark J. Larson, P.G.
Texas Professional Geologist #4469



Sarah R. Johnson
Staff Geologist

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1.0 INTRODUCTION

Larson & Associates Inc. (LAI) has prepared this report on behalf of Lilis Energy (Lilis) for assessment and remediation of a natural gas release at the Mexico P. Federal #1 (Site) located in Unit F (SE/4, NW/4), Section 21, Township 26 South, Range 37 East in Lea County, New Mexico. The samples were requested by the New Mexico Oil Conservation Division (OCD) District 1 in Hobbs, New Mexico and the Bureau of Land Management (BLM). The geodetic position is north 32.0305786° and west -103.3745575°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The release occurred on July 5, 2017, due to failure of the lubricator pack, allowing for an unknown amount of natural gas and liquids to be released. No liquid was recovered. The release coated the southwest corner of the well pad and lease road with a mist of condensate and disturbed the vegetation in the vicinity. Immediate notice was given to BLM (verbal notification with K. Vasenden). The initial C-141 was submitted on July 14, 2017 and assigned remediation permit number 1RP-4770. Appendix A presents the initial C-141. Appendix B presents communication with the OCD and BLM regarding the collection of soil samples.

1.2 Physical Setting

The physical Setting is as follows:

- The surface elevation is approximately 3,155 feet above mean sea level (msl);
- The topography slopes gently towards the northeast;
- There are no surface water features within 1,000 feet of the Site;
- The soils are designated as “Pyote soils and dune land, 0 to 3 percent slope”, consisting of 0 to 30 inches of fine sand, underlain by 30 to 60 inches of fine sandy loam;
- The surface geology is Eolian and Piedmont deposits (Holocene to middle Pleistocene)–interlayered eolian sands and piedmont-slope deposits;
- Groundwater occurs in the Ogallala formation at approximately 250 feet below ground surface (bgs) (2015);
- According to the New Mexico Office of the State Engineer (OSE) website the nearest freshwater well is located in Unit N (SE/4, SW/4), Section 24, Township 26 South, Range 35 East, about 3.10 miles southeast of the Site.

1.3 Recommended Remediation Action Levels

Recommended Remediation Action Levels (RRAL) were calculated for benzene, BTEX and TPH based on the following criteria established by the OCD in “*Guidelines for Remediation of Leaks, Spills and Releases*, pp. 6-7, August 13, 1993”:

Criteria	Result	Score
Depth-to-Groundwater	>100 Feet	0
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0

The following RRAL apply for ranking score: 0

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 5,000 mg/Kg

Depth to groundwater greater than 100 feet bgs requires vertical delineation of chloride to 600 milligrams per kilogram (mg/Kg) and maintained for an additional 5 feet further in depth.

2.0 DELINEATION

On January 11, 2018 LAI personnel collected discrete soil samples at two (2) locations within the spill area. The soil samples were collected with a stainless steel hand auger to a depth of 6 inches bgs. The samples were delivered under chain of custody and preservation to Permian Basin Environmental Lab (PBEL) in Midland, Texas. The samples were analyzed for benzene, toluene, ethylbenzene and xylene (BTEX), total petroleum hydrocarbons (TPH) and chloride by EPA SW-846 Method 8021B, 8015M and 300, respectively. All samples reported below the RRAL for BTEX and TPH and below the delineation limit (600 mg/Kg) for chloride.

3.0 CONCLUSION

Lilis requests no further action at this time.

Figures





Figure 2 - Aerial Map

Tables

Table 1
1RP-4770
Soil Sample Analytical Data Summary
Lilis Energy, Mexico P. Federal #1
Lea County, New Mexico

Sample	Collection Date	Depth (Feet)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C10 (mg/Kg)	>C10 - C28 (mg/Kg)	>C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RRAL:								1,000	*600
S-1	1/11/2018	0 - 6"	<0.00101	<0.00707	<25.3	<25.3	<25.3	<25.3	6.42
S-2	1/11/2018	0 - 6"	<0.00102	<0.00714	<25.5	<25.5	<25.5	<25.5	<1.02

Notes: Laboratory analysis performed by Permian Basin Environmental Lab, Midland, Texas, by SW-846

Method 8021B (BTEX), Method

8015M (GRO, DRO and ORO) and Method 300 (chloride).

Depth in feet below ground surface (bgs)

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

--: No data available (no sample in sampler)

*: OCD delineation limit

Appendix A
Initial & Final C-141

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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

HOBBS OCD

JUL 24 2017

RECEIVED

Form C-141
Revised April 3, 2017

Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Impetro Operating, LLC	Contact	George M. Placke, PE – Operations Manager
Address	300 E. Sonterra Blvd., Suite 1220 San Antonio, TX 78258	Telephone No.	210-999-5400
Facility Name	Mexico P Federal #1	Facility Type	Production Well Site
Surface Owner	BLM	Mineral Owner	BLM
		API No.	30-025-22405

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	21	26S	35E	1980	N	1980	W	Lea

Latitude 32.0305786 Longitude -103.3745575 NAD83

NATURE OF RELEASE

Type of Release	Gas/Gas condensate to atmosphere	Volume of Release	N/A	Volume Recovered	Negligible
Source of Release	Well	Date and Hour of Occurrence	7/5/17 19:45	Date and Hour of Discovery	7/5/17 19:45
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	K. Vasenden with the BLM		
By Whom?	George Placke	Date and Hour	7/5/17 20:45		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		

If a Watercourse was Impacted, Describe Fully.*

N/A

RECEIVED

By Olivia Yu at 8:54 am, Jul 27, 2017

Describe Cause of Problem and Remedial Action Taken.*

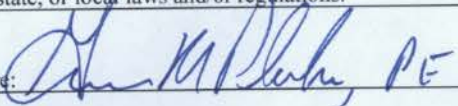
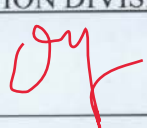
Lubricator pack off failed during wireline operations. Well was Shut-In after finishing out of the well with wireline.

Describe Area Affected and Cleanup Action Taken.*

Well site and road were covered with mist of condensate. Rain puddles with film of condensate were vacuumed clean. Area off well site that was affected by mist is starting to show browning of mesquite bush leaves. Will monitor to watch for recovery.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: George M. Placke, PE	Approval Date: 7/27/2017	Expiration Date:
Title: Operations Manager	Conditions of Approval:	Attached <input type="checkbox"/>
E-mail Address: GPlacke@lilisenergy.com	Confirmatory laboratory analyses of discrete soil samples (0-6" bgs) from the impacted area off well site.	
Date: 7/14/17 Phone: 210-999-5400 ext. 36		

* Attach Additional Sheets If Necessary

1RP-4770

nOY1720837272

pOY1720837541

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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Lilis Energy	Contact: Alex Travelstead
Address 300 E Sonterra Blvd., Suite 1220 San Antonio, TX	Telephone No. 940-613-2485
Facility Name Mexico P. Federal #1	Facility Type Production Well Site
Surface Owner: BLM	Mineral Owner: BLM
API No. 30-025-22405	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	21	26S	35E	1980	North	1980	West	Lea

Latitude 32.0305786° Longitude -103.3745575°

NATURE OF RELEASE

Type of Release Gas/ Gas Condensate to atmosphere	Volume of Release: N/A	Volume Recovered Negligible
Source of Release Well	Date and Hour of Occurrence 7/5/17 19:45	Date and Hour of Discovery 7/5/17
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? K. Vasenden with BLM	
By Whom? George Placke	Date and Hour 7/5/17 20:45	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

APPROVED

By Olivia Yu at 11:05 am, Mar 26, 2018

Describe Cause of Problem and Remedial Action Taken.*

The release occurred due to a failure of the lubricator pack, allowing an unknown amount of natural gas and liquids to be released.

Describe Area Affected and Cleanup Action Taken.*

The release coated the southwest corner of the well pad and lease road with a mist condensate and disturbed the vegetation in the vicinity. Discrete soil samples were collected in two (2) locations within the spill area to a depth of 0 to 6 inches below ground surface (bgs). The samples were analyzed for BTEX, TPH and chloride and reported concentrations below the OCD recommended action levels of 10 mg/Kg (benzene), 50 mg/Kg (BTEX) and 5,000 mg/Kg (TPH). Chloride was below the OCD delineation limit of 600 mg/Kg.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Alex Travelstead</i>	OIL CONSERVATION DIVISION	
Printed Name: George M. Placke, PE Alex Travelstead	Approved by Environmental Specialist: <i>oy</i>	
Title: Operations Manager Production Engineer	Approval Date: 3/26/2018	Expiration Date: xx/xx/xxxx
E-mail Address: gplacke@lilisenergy.com natravelstead@lilisenergy.com	Conditions of Approval:	
Date: 2-19-18	Phone: 210-999-5400 ext. 36	Attached <input type="checkbox"/>

1RP-4770

Appendix B
Laboratory Reports

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, TX 79710

Project: Lilis Mexico P Federal
Project Number: 18-0108-01
Location: New Mexico
Lab Order Number: 8A12001



NELAP/TCEQ # T104704516-16-7

Report Date: 01/18/18

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lilis Mexico P Federal
Project Number: 18-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1 0-6"	8A12001-01	Soil	01/11/18 11:50	01-11-2018 16:18
S-2 0-6"	8A12001-02	Soil	01/11/18 11:55	01-11-2018 16:18

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lilis Mexico P Federal
Project Number: 18-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-1 0-6"
8A12001-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00101	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B
Toluene	ND	0.00202	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B
Ethylbenzene	ND	0.00101	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B
Xylene (o)	ND	0.00101	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B
Surrogate: 4-Bromofluorobenzene		115 %	75-125		P8A1203	01/12/18	01/12/18	EPA 8021B
Surrogate: 1,4-Difluorobenzene		81.7 %	75-125		P8A1203	01/12/18	01/12/18	EPA 8021B

General Chemistry Parameters by EPA / Standard Methods

Chloride	6.42	1.01	mg/kg dry	1	P8A1705	01/17/18	01/18/18	EPA 300.0
% Moisture	1.0	0.1	%	1	P8A1506	01/15/18	01/15/18	ASTM D2216

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.3	mg/kg dry	1	P8A1503	01/12/18	01/13/18	TPH 8015M
>C12-C28	ND	25.3	mg/kg dry	1	P8A1503	01/12/18	01/13/18	TPH 8015M
>C28-C35	ND	25.3	mg/kg dry	1	P8A1503	01/12/18	01/13/18	TPH 8015M
Surrogate: 1-Chlorooctane		114 %	70-130		P8A1503	01/12/18	01/13/18	TPH 8015M
Surrogate: o-Terphenyl		127 %	70-130		P8A1503	01/12/18	01/13/18	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	01/12/18	01/13/18	calc

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lilis Mexico P Federal
Project Number: 18-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

S-2 0-6"

8A12001-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

Organics by GC

Benzene	ND	0.00102	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B	
Toluene	ND	0.00204	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P8A1203	01/12/18	01/12/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		107 %	75-125		P8A1203	01/12/18	01/12/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		87.3 %	75-125		P8A1203	01/12/18	01/12/18	EPA 8021B	

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.02	mg/kg dry	1	P8A1705	01/17/18	01/18/18	EPA 300.0	
% Moisture	2.0	0.1	%	1	P8A1506	01/15/18	01/15/18	ASTM D2216	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.5	mg/kg dry	1	P8A1503	01/12/18	01/13/18	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P8A1503	01/12/18	01/13/18	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P8A1503	01/12/18	01/13/18	TPH 8015M	
Surrogate: 1-Chlorooctane		124 %	70-130		P8A1503	01/12/18	01/13/18	TPH 8015M	
Surrogate: o-Terphenyl		142 %	70-130		P8A1503	01/12/18	01/13/18	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	01/12/18	01/13/18	calc	

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lilis Mexico P Federal
Project Number: 18-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P8A1203 - * DEFAULT PREP *****

Blank (P8A1203-BLK1)

Prepared & Analyzed: 01/12/18

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	0.0694		"	0.0600		116	75-125			
Surrogate: 1,4-Difluorobenzene	0.0561		"	0.0600		93.5	75-125			

LCS (P8A1203-BS1)

Prepared & Analyzed: 01/12/18

Benzene	0.106	0.00100	mg/kg wet	0.100		106	70-130			
Toluene	0.111	0.00200	"	0.100		111	70-130			
Ethylbenzene	0.111	0.00100	"	0.100		111	70-130			
Xylene (p/m)	0.210	0.00200	"				70-130			
Xylene (o)	0.114	0.00100	"				70-130			
Surrogate: 1,4-Difluorobenzene	0.0588		"	0.0600		98.0	75-125			
Surrogate: 4-Bromofluorobenzene	0.0644		"	0.0600		107	75-125			

LCS Dup (P8A1203-BSD1)

Prepared & Analyzed: 01/12/18

Benzene	0.0986	0.00100	mg/kg wet	0.100		98.6	70-130	7.12	20	
Toluene	0.105	0.00200	"	0.100		105	70-130	5.45	20	
Ethylbenzene	0.109	0.00100	"	0.100		109	70-130	1.96	20	
Xylene (p/m)	0.196	0.00200	"				70-130		20	
Xylene (o)	0.110	0.00100	"				70-130		20	
Surrogate: 4-Bromofluorobenzene	0.0635		"	0.0600		106	75-125			
Surrogate: 1,4-Difluorobenzene	0.0638		"	0.0600		106	75-125			

Calibration Blank (P8A1203-CCB1)

Prepared & Analyzed: 01/12/18

Benzene	0.580		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.0586		"	0.0600		97.6	75-125			
Surrogate: 1,4-Difluorobenzene	0.0556		"	0.0600		92.6	75-125			

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lilis Mexico P Federal
Project Number: 18-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P8A1203 - * DEFAULT PREP *****

Calibration Blank (P8A1203-CCB2)

Prepared & Analyzed: 01/12/18

Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	0.0659		"	0.0600		110	75-125			
Surrogate: 1,4-Difluorobenzene	0.0561		"	0.0600		93.6	75-125			

Calibration Check (P8A1203-CCV1)

Prepared & Analyzed: 01/12/18

Benzene	0.107	0.00100	mg/kg wet	0.100		107	80-120			
Toluene	0.118	0.00200	"	0.100		118	80-120			
Ethylbenzene	0.105	0.00100	"	0.100		105	80-120			
Xylene (p/m)	0.232	0.00200	"	0.200		116	80-120			
Xylene (o)	0.119	0.00100	"	0.100		119	80-120			
Surrogate: 4-Bromofluorobenzene	0.0687		"	0.0600		114	75-125			
Surrogate: 1,4-Difluorobenzene	0.0532		"	0.0600		88.6	75-125			

Calibration Check (P8A1203-CCV2)

Prepared & Analyzed: 01/12/18

Benzene	0.103	0.00100	mg/kg wet	0.100		103	80-120			
Toluene	0.107	0.00200	"	0.100		107	80-120			
Ethylbenzene	0.108	0.00100	"	0.100		108	80-120			
Xylene (p/m)	0.222	0.00200	"	0.200		111	80-120			
Xylene (o)	0.120	0.00100	"	0.100		120	80-120			
Surrogate: 1,4-Difluorobenzene	0.0648		"	0.0600		108	75-125			
Surrogate: 4-Bromofluorobenzene	0.0744		"	0.0600		124	75-125			

Calibration Check (P8A1203-CCV3)

Prepared: 01/12/18 Analyzed: 01/13/18

Benzene	0.110	0.00100	mg/kg wet	0.100		110	80-120			
Toluene	0.113	0.00200	"	0.100		113	80-120			
Ethylbenzene	0.117	0.00100	"	0.100		117	80-120			
Xylene (p/m)	0.239	0.00200	"	0.200		120	80-120			
Xylene (o)	0.119	0.00100	"	0.100		119	80-120			
Surrogate: 4-Bromofluorobenzene	0.0736		"	0.0600		123	75-125			
Surrogate: 1,4-Difluorobenzene	0.0624		"	0.0600		104	75-125			

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lilis Mexico P Federal
Project Number: 18-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

Organics by GC - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P8A1203 - * DEFAULT PREP *****

Matrix Spike (P8A1203-MS1)

Source: 8A11002-11

Prepared: 01/12/18 Analyzed: 01/13/18

Benzene	0.0969	0.00115	mg/kg dry	0.115	ND	84.3	80-120			
Toluene	0.0882	0.00230	"	0.115	ND	76.7	80-120			QM-07
Ethylbenzene	0.0860	0.00115	"	0.115	ND	74.9	80-120			QM-07
Xylene (p/m)	0.144	0.00230	"		ND		80-120			
Xylene (o)	0.0703	0.00115	"		ND		80-120			
Surrogate: 1,4-Difluorobenzene	0.0814		"	0.0690		118	75-125			
Surrogate: 4-Bromofluorobenzene	0.0867		"	0.0690		126	75-125			S-GC

Matrix Spike Dup (P8A1203-MSD1)

Source: 8A11002-11

Prepared: 01/12/18 Analyzed: 01/13/18

Benzene	0.0960	0.00115	mg/kg dry	0.115	ND	83.5	80-120	0.930	20	
Toluene	0.0877	0.00230	"	0.115	ND	76.3	80-120	0.484	20	QM-07
Ethylbenzene	0.0902	0.00115	"	0.115	ND	78.5	80-120	4.73	20	QM-07
Xylene (p/m)	0.152	0.00230	"		ND		80-120		20	
Xylene (o)	0.0686	0.00115	"		ND		80-120		20	
Surrogate: 4-Bromofluorobenzene	0.0869		"	0.0690		126	75-125			S-GC
Surrogate: 1,4-Difluorobenzene	0.0831		"	0.0690		120	75-125			

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lilis Mexico P Federal
Project Number: 18-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P8A1506 - * DEFAULT PREP *****

Blank (P8A1506-BLK1)				Prepared & Analyzed: 01/15/18						
% Moisture	ND	0.1	%							
Duplicate (P8A1506-DUP1)				Source: 8A11002-08 Prepared & Analyzed: 01/15/18						
% Moisture	7.0	0.1	%		9.0			25.0	20	
Duplicate (P8A1506-DUP2)				Source: 8A12005-14 Prepared & Analyzed: 01/15/18						
% Moisture	11.0	0.1	%		11.0			0.00	20	
Duplicate (P8A1506-DUP3)				Source: 8A12007-01 Prepared & Analyzed: 01/15/18						
% Moisture	8.0	0.1	%		4.0			66.7	20	
Duplicate (P8A1506-DUP4)				Source: 8A15004-01 Prepared & Analyzed: 01/15/18						
% Moisture	14.0	0.1	%		14.0			0.00	20	

Batch P8A1705 - * DEFAULT PREP *****

Blank (P8A1705-BLK1)				Prepared: 01/17/18 Analyzed: 01/18/18						
Chloride	ND	1.00	mg/kg wet							
LCS (P8A1705-BS1)				Prepared: 01/17/18 Analyzed: 01/18/18						
Chloride	424	1.00	mg/kg wet	400		106	80-120			
LCS Dup (P8A1705-BSD1)				Prepared: 01/17/18 Analyzed: 01/18/18						
Chloride	421	1.00	mg/kg wet	400		105	80-120	0.786	20	
Duplicate (P8A1705-DUP1)				Source: 8A17002-11 Prepared: 01/17/18 Analyzed: 01/18/18						
Chloride	9.16	1.04	mg/kg dry		11.7			24.6	20	

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General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P8A1705 - * DEFAULT PREP *****

Duplicate (P8A1705-DUP2)

Source: 8A12002-06

Prepared: 01/17/18 Analyzed: 01/18/18

Chloride	4800	59.5	mg/kg dry		4720			1.63	20	
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Matrix Spike (P8A1705-MS1)

Source: 8A17002-11

Prepared: 01/17/18 Analyzed: 01/18/18

Chloride	1100	1.04	mg/kg dry	1040	11.7	105	80-120			
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Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P8A1503 - TX 1005

Blank (P8A1503-BLK1)

Prepared: 01/12/18 Analyzed: 01/13/18

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	159		"	150		106	70-130			
Surrogate: o-Terphenyl	87.7		"	75.0		117	70-130			

LCS (P8A1503-BS1)

Prepared: 01/12/18 Analyzed: 01/13/18

C6-C12	943	25.0	mg/kg wet	1000		94.3	75-125			
>C12-C28	1090	25.0	"	1000		109	75-125			
Surrogate: 1-Chlorooctane	185		"	150		123	70-130			
Surrogate: o-Terphenyl	81.0		"	75.0		108	70-130			

LCS Dup (P8A1503-BSD1)

Prepared: 01/12/18 Analyzed: 01/13/18

C6-C12	959	25.0	mg/kg wet	1000		95.9	75-125	1.73	20	
>C12-C28	1200	25.0	"	1000		120	75-125	9.61	20	
Surrogate: 1-Chlorooctane	184		"	150		123	70-130			
Surrogate: o-Terphenyl	85.4		"	75.0		114	70-130			

Duplicate (P8A1503-DUP1)

Source: 8A12004-03

Prepared: 01/12/18 Analyzed: 01/13/18

C6-C12	31.3	26.9	mg/kg dry		22.2			33.9	20	
>C12-C28	5090	26.9	"		5320			4.39	20	
Surrogate: 1-Chlorooctane	173		"	161		108	70-130			
Surrogate: o-Terphenyl	94.1		"	80.6		117	70-130			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

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Page 10 of 12

Larson & Associates, Inc.
P.O. Box 50685
Midland TX, 79710

Project: Lilis Mexico P Federal
Project Number: 18-0108-01
Project Manager: Mark Larson

Fax: (432) 687-0456

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

1/18/2018

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
10014 S. County Road 1213
Midland, Texas 79706

Phone: 432-686-7235

Project Manager:

Company Name

Company Address:

City/State/Zip:

Telephone No:

Sampler Signature:

Project Name:

Project #:

Project Loc:

PO #:

Report Format:

☐ Standard

☐ TRRP

☐ NPDES

Analyze For:

TOLP:

TOTAL:

TOTAL:

LAB # (lab use only)

FIELD CODE

Beginning Depth

Ending Depth

Date Sampled

Time Sampled

Field Filtered

Total #. of Containers

Ice

HNO₃

HCl

H₂SO₄

NaOH

Na₂S₂O₃

None

Other (Specify)

DW=Drinking Water SL=Sludge

GW = Groundwater S=Sol/Solid

NP=Non-Potable Specify Other

TPH: TX 1005 TX 1006

Anions (Cl, SO₄, Alkalinity)

BTEX 8021B/5030 or BTEX 8260

RUSH TAT (Pre-Schedule) 24, 48, 72 hrs

Standard TAT

Special Instructions:

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Laboratory Comments:

Sample Containers (1-2)?

VOCs Free of Headspace?

Labels on Containers?

Custody seals on containers?

Quaternary seals on containers?

Sample Hand Delivered?

by Sampler/Client Rep.?

by Courier?

Temperature Upon Receipt

Adjusted

UPS

DHL

FEDEX

Other

None

None

None

None

None

None

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Appendix C

OCD and BLM Communications

From: [Alex Travelstead](#)
To: [Sarah Johnson](#)
Subject: Fwd: release at Mexico P Federal #1
Date: Tuesday, January 09, 2018 4:51:10 PM

Begin forwarded message:

From: George Placke <GPlacke@lilisenergy.com>
Subject: FW: release at Mexico P Federal #1
Date: January 9, 2018 at 2:39:17 PM CST
To: alex travelstead <nattravelstead@gmail.com>

Alex,

Check with SPL and see if they can do a soil analysis as directed by Feds at the beginning of this thread. This is for the area around the New Mexico P.

George M. Placke, P.E.
Production Operations Manager
Lilis Energy
300 E. Sonterra Blvd.
Suite 1220
San Antonio, Texas 78258
Cell (210) 865-1239
Office (210) 999-5400 Ext 36
Fax (210) 999-5401

From: Tucker, Shelly [<mailto:stucker@blm.gov>]
Sent: Friday, December 22, 2017 12:31 PM
To: George Placke <GPlacke@lilisenergy.com>
Cc: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Subject: Re: release at Mexico P Federal #1

I am clearing up some old files and was checking to see if samples were ever pulled as directed by the NMOCD?

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker
Environmental Protection Specialist
O&G Spill/Release Coordinator

Bureau of Land Management

620 E. Greene St
Carlsbad, NM 88220

575.234.5905 - Direct
575.361.0084 - Cellular
575.234.6235 - Emergency Spill Number

stucker@blm.gov

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

Confidentiality Warning: This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

On Thu, Jul 27, 2017 at 5:21 PM, George Placke <GPlacke@lilisenergy.com> wrote:

Olivia Yu,

We have received your guidance and proceed as directed.

Thank You for your assistance.

George M Placke

Sent from my iPhone

> On Jul 27, 2017, at 11:40 AM, Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us> wrote:

>

> Dear Mr. Placke:

>

> The 1RP for this incident is

> 4770

>

> 7/27/2017

>

> A
>
> Impetro Operating
>
> Mexico P Federal
>
> 30-025-22405
>
> 26S-35E-21F
>
> 7/5/2017
>
>
> While the volume is under reportable limits set forth by NMAC 19.15.29, due to impact of vegetation off location, remedial actions are requested. Please collect 1-2 representative discrete soil samples (0-6" depth) and submit to an accredited laboratory for analyses of BTEX (Method 8260 or 8021), TPH (Method 8015 extended), and chlorides (Method 300). In a concise report, provide laboratory analyses and relevant information regarding appropriate remedial measures for the affected vegetation.
>
> Thanks,
>
> Olivia Yu
> Environmental Specialist
> NMOCD, District I
> Olivia.yu@state.nm.us<mailto:Olivia.yu@state.nm.us>
> 575-393-6161 x113
>
> OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.
>
> <1RP4770.pdf>

Appendix D

Photographs



Site Location



Site Prior to Remediation Viewing Southwest, January 11, 2018



Site Prior to Remediation Viewing South, January 11, 2018



Site Prior to Remediation Viewing North, January 11, 2018



Site Prior to Remediation Viewing North, January 11, 2018



Site Prior to Remediation Viewing South, January 11, 2018



Site Prior to Remediation Viewing East, January 11, 2018