1RP-4003
CLOSURE REPORT
Lea Unit #004
Produced Water Spill
Lea County, New Mexico

Latitude: N 32.5895°
Longitude: W -103.5246°

LAI Project No. 17-0175-15

January 30, 2019

Prepared for:
Legacy Reserves Operating, LP
303 West Wall Street, Suite 1300
Midland, Texas 79701

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

Mark J. Larson, P.G.
Certified Professional Geologist #10490

Rachel E. Owen
Staff Geologist

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1.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this closure report on behalf of Legacy Reserves, LP (Legacy) for submittal to the New Mexico Oil Conservation Division (OCD) District 1 for a produced water spill at the Lea Unit #004 (Site) located in Unit H (SE/4, NE/4), Section 11, Township 20 South, Range 34 East in Lea County, New Mexico. The geodetic position is North 32.5895° and West -103.5246°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The spill occurred on November 24, 2015, due to interference from hydraulic fracturing being performed at a nearby well. The blowout preventer rod failed and an unknown volume of produced water was released from the wellbore at the Lea Unit Well #004. The majority of the released fluids were contained to the caliche pad. A small amount of fluid migrated laterally into the pasture west and south of the well pad. An unknown volume of standing fluids was removed from the location with a vacuum truck. The initial C-141 was submitted to OCD District 1 on November 30, 2015, which assigned the remediation permit number 1RP-4003. Appendix A presents the initial C-141.

Trinity Oilfield Services (Trinity) estimated the spill area to be approximately 51,176 square feet or about 1.2 acres. Trinity collected soil samples at five (5) locations (SP1 through SP5) within the spill area from 0, 2, 4 and 6 feet below ground surface (bgs). The samples were analyzed by Cardinal Laboratories for benzene, toluene, ethylbenzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28) and oil range organics (>C28-C35) by EPA SW-846 Methods 8021B and 8015M, respectfully, and chloride by titration method SM4500CL-B.

The laboratory reported benzene and BTEX below the remediation action levels of 10 milligrams per kilogram (mg/kg) and 50 mg/Kg, respectively. TPH exceeded the recommended remediation action level of 1,000 mg/Kg at SP1, 0 to 1 foot (2,833 mg/Kg). Chloride was reported above the delineation limit of 600 mg/Kg in samples SP1, 0 to 1 foot (6,800 mg/Kg), SP2, 0 to 1 foot (3,920 mg/Kg) and SP3, 0 to 1 foot (7,730 mg/Kg). On March 15, 2016, Trinity submitted the sample results to OCD District 1 and requested deferment for remediation until abandonment and closure for 1RP-4003. OCD District denied the closure request on November 30, 2015. Appendix B presents the OCD denial and Trinity report.

On January 8, 2018, LAI, on behalf of Legacy, submitted a delineation plan to OCD District 1 and BLM, as surface and mineral owner. OCD approved the delineation plan on January 19, 2018. The OCD approval was forwarded to Henryetta Price by Shelly Tucker with BLM whom failed to respond to the approval. Appendix C presents OCD and BLM communications.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,660 feet above mean sea level (msl);
- The topography slopes gently towards the southwest;
- The nearest surface water is a playa located approximately 0.4 miles north of the Site;
- The soils are designated as “Kermit soils and dune land, 0 to 12 percent slopes” consisting of 0 to 8 inches of fine sand underlain by 8 to 60 inches of fine sand;

- The surface geology is Eolian and Piedmont deposits from the Holocene to middle Pleistocene, the deposits consist of interlayed eolian sands and piedmont-slope deposits underlain by the Tertiary-age Blackwater Draw and Ogallala formations in descending order;
- Groundwater occurs in the Ogallala formation at approximately 58.14 feet below ground surface (bgs) (1976);
- The nearest fresh water well is located in Unit P (SE/4, SE/4), Section 12, Township 20 South, Range 34 East about 1.12 miles southwest of the Site;

1.3 Remediation Action Levels

The following remediation standards are based on closure criteria for soils impacted by a release as presented in Table 1 of 19.15.29 NMAC:

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 2,500 mg/Kg
- Chloride 10,000 mg/Kg

2.0 DELINEATION

On February 19 and 20, 2018, Larson and Associates (LAI) personnel used direct push technology (DPT) to collect soil samples at five (5) locations on the well pad (DP-1 through DP-5) and at two (2) locations in the pasture north of the well pad (DP-6 and DP-7). The samples were collected at 1 foot intervals to approximately 4 feet bgs and 2 foot intervals to 12 feet bgs depending on subsurface conditions. The soil samples were delivered under chain of custody and preservation to Xenco Laboratories (Xenco) in Midland, Texas. The upper samples (0 to 1 foot) were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX), total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28) and oil range organics (>C28-C35) by EPA SW-846 8021B and 8015M, respectively. All samples were analyzed for chloride by EPA Method 300. Figure 2 presents an aerial map showing the soil sample locations. Appendix D presents laboratory reports.

3.0 CLOSURE

Chloride was delineated to 600 mg/Kg and all sample concentrations are below the closure criteria for benzene, BTEX, TPH and chloride in Table 1 of 19.15.29NMAC, therefore, Legacy requests no further action for 1RP-4003.

Tables

Table 1
1RP-4003
Delineation Soil Sample Analytical Data Summary
Legacy Reserves, LP, Lea Unit #004
Produced Water Spill

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	C6 - C35 (mg/Kg)	Chloride (mg/Kg)
RRAL				**10**	**50**				**2,500**	**10,000**
DP-1	0-1	2/19/2018	In-situ	<.00202	<.00202	<14.9	49.1	<14.9	49.1	3,470
	1-2	2/19/2018	In-situ	-	-	-	-	-	-	152
	2-3	2/19/2018	In-situ	-	-	-	-	-		121
	3-4	2/19/2018	In-situ	-	-	-	-	-	-	248
	4-6	2/19/2018	In-situ	-	-	-	-	-	-	383
	6-8	2/19/2018	In-situ	-	-	-	-	-	-	266
	8-10	2/19/2018	In-situ	-	-	-	-	-	-	354
	10-12	2/19/2018	In-situ	-	-	-	-	-	-	120
DP-2	0-1	2/19/2018	In-situ	<.00201	<.00201	<15.0	<15.0	<15.0	<15.0	576
	1-2	2/19/2018	In-situ	-	-	-	-	-	-	68.1
	2-3	2/19/2018	In-situ	-	-	-	-	-	-	45.2
	3-4	2/19/2018	In-situ	-	-	-	-	-	-	8.4
	4-6	2/19/2018	In-situ	-	-	-	-	-	-	182
	6-8	2/19/2018	In-situ	-	-	-	-	-	-	<5.00
DP-3	0-1	2/19/2018	In-situ	<.00201	<.00201	<15.0	<15.0	<15.0	<15.0	596
	1-2	2/19/2018	In-situ	-	-	-	-	-	-	128
	2-3	2/19/2018	In-situ	-	-	-	-	-	-	48
	3-4	2/19/2018	In-situ	-	-	-	-	-	-	37.8
	4-6	2/19/2018	In-situ	-	-	-	-	-	-	61.5
	6-8	2/19/2018	In-situ	-	-	-	-	-	-	64.4
DP-4	0-1	2/20/2018	In-situ	<.00201	<.00201	<15.0	<15.0	<15.0	<15.0	228
	1-2	2/20/2018	In-situ	-	-	-	-	-	-	26.9
	2-3	2/20/2018	In-situ	-	-	-	-	-	-	78.1
	3-4	2/20/2018	In-situ	-	-	-	-	-	-	36.9
	4-6	2/20/2018	In-situ	-	-	-	-	-	-	81.8
	6-8	2/20/2018	In-situ	-	-	-	-	-	-	23.8
DP-5	0-1	2/20/2018	In-situ	<.00201	<.00201	<15.0	<15.0	<15.0	<15.0	582
	1-2	2/20/2018	In-situ	-	-	-	-	-	-	31.1
	2-3	2/20/2018	In-situ	-	-	-	-	-	-	60.6
	3-4	2/20/2018	In-situ	-	-	-	-	-	-	12.2
	4-6	2/20/2018	In-situ	-	-	-	-	-	-	31.2
	6-8	2/20/2018	In-situ	-	-	-	-	-	-	22.8
DP-6	0-1	2/20/2018	In-situ	<.00199	<.00199	<15.0	<15.0	<15.0	<15.0	<4.99
	1-2	2/20/2018	In-situ	-	-	-	-	-	-	<4.96
	2-3	2/20/2018	In-situ	-	-	-	-	-	-	<4.97
	3-4	2/20/2018	In-situ	-	-	-	-	-	-	<4.97
DP-7	0-1	2/19/2018	In-situ	<.00199	<.00199	<15.0	28.7	<15.0	28.7	284
	1-2	2/19/2018	In-situ	-	-	-	-	-	-	62.5
	2-3	2/19/2018	In-situ	-	-	-	-	-	-	164
	3-4	2/19/2018	In-situ	-	-	-	-	-	-	187
	4-6	2/19/2018	In-situ	-	-	-	-	-	-	97.7
	6-8	2/19/2018	In-situ	-	-	-	-	-	-	39.2

Notes: Laboratory analysis performed by Xenco Laboratories, Midland, Texas by EPA 8021B (BTEX)
Method 8015M (TPH) and 300 (chloride)
Depth in feet below ground surface (bgs)
mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

Figures

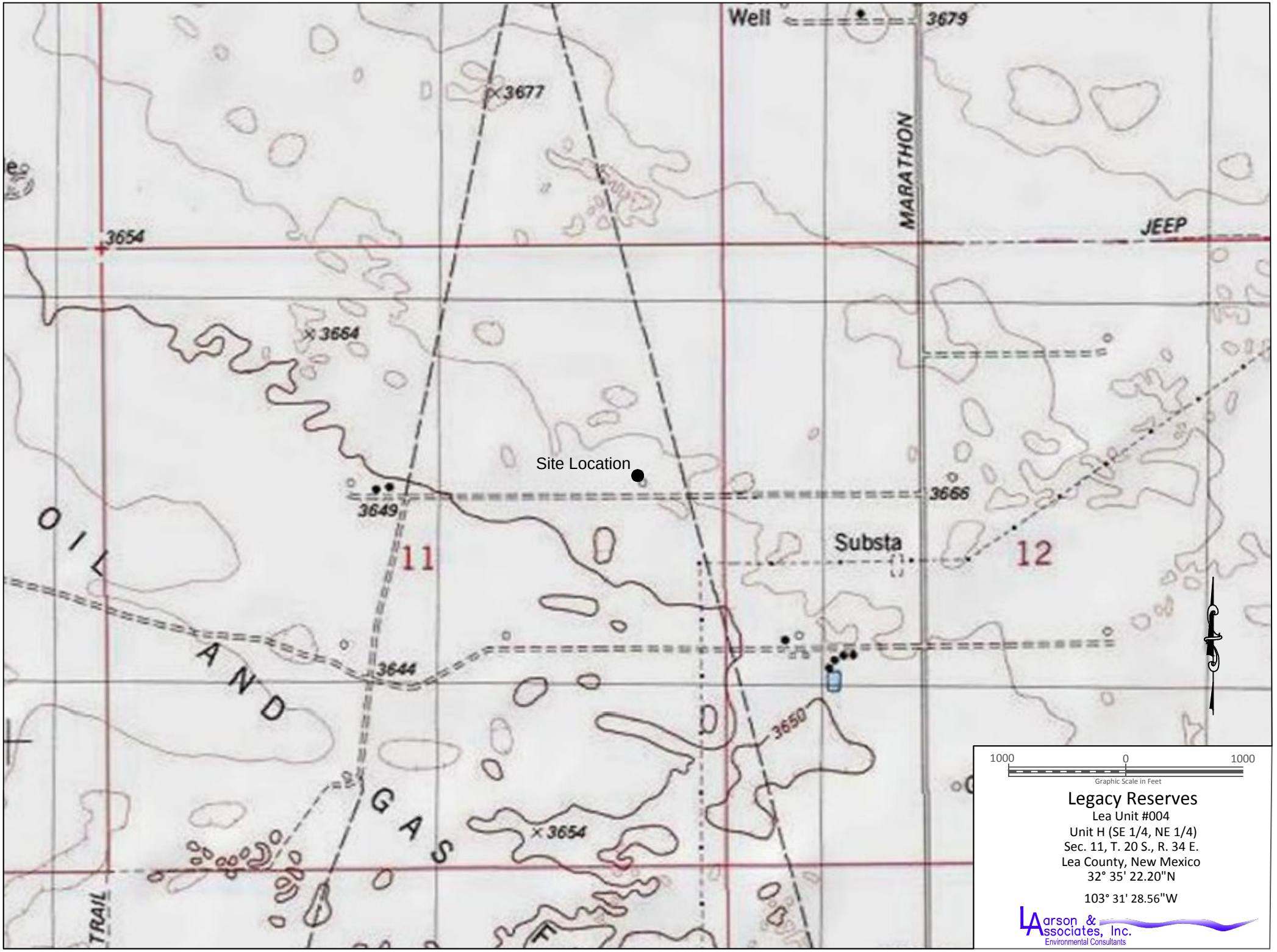


Figure 1 - Topographic Map

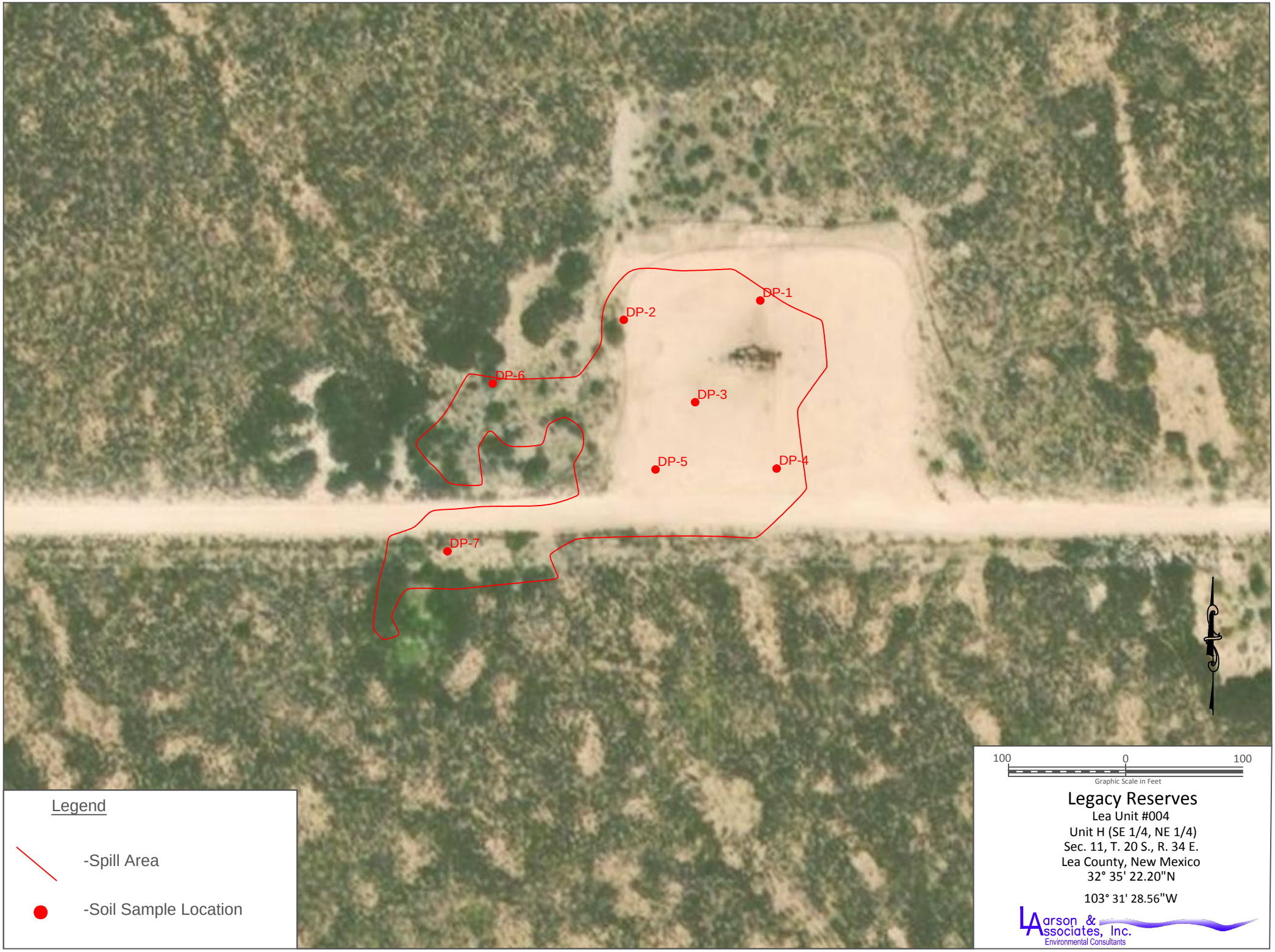


Figure 2 - Aerial Map Showing Soil Sample Locations

Appendix A

Initial C-141

District I
625 N. French Dr., Hobbs, NM 88240
District II
11 S. First St., Artesia, NM 88210
District III
000 Rio Brazos Road, Aztec, NM 87410
District IV
220 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 – Legacy Reserves L.P.	Contact – Brian Cunningham
Address – PO Box 10848 Midland, TX 79702	Telephone No. – 432-234-9450
Facility Name – Lea Unit 004	Facility Type – Pumping Unit

Surface Owner - Fee	Mineral Owner - Federal	API No. – 30-025-02424

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North South Line	Feet from the	East West Line	County
H	11	20S	34E	1980	North	660	East	LEA

Latitude 32.5895 **Longitude** 103.5246

NATURE OF RELEASE

Type of Release – Produced Water	Volume of Release	Volume Recovered
Source of Release – Adjacent Frac – Well Head	Date and Hour of Occurrence 11 24 15 0800	Date and Hour of Discovery Same
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Kellie Jones	
By Whom? - Todd Roberson	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Kellie Jones at 11:00 am, Nov 30, 2015

Describe Cause of Problem and Remedial Action Taken.*

A frac being performed on a adjacent well communicated with the 004. The Rod BOP failed and fluid began to leave the well. The BOP was fixed and all fluid was removed from location with vac trucks.

Describe Area Affected and Cleanup Action Taken.*
The majority of the fluid stayed on location with a small portion leaving location but was quickly contained.

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: Brian Cunningham
Printed Name: Brian Cunningham
Title: Production Foreman
E-mail Address: bcunningham@legacylp.com
Date: 11/30/15 Phone: 432-234-9450
Attach Additional Sheets If Necessary

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 11/30/2015 Expiration Date: 01/30/2016

Conditions of Approval:
Site samples required. Delineate and remediate as per MNOCD guides. Geotag photographs of remediation recommended.

Attached ☐
1RP-4003

nKJ1533439781
pKJ1533439914

Appendix B

Trinity Report and Analyses

TRINITY
OILFIELD SERVICES

P.O. Box 2587• Hobbs, NM 88241• Phone: (575) 397-4961 • todd@trinityoilfieldservices.com

NOT APPROVED

March 15, 2016

Kellie Jones
NMOCD District 1
Environmental Specialist
625 N. French Dr.
Hobbs, NM 88240

RE: Closure Report

Legacy Reserves - Lea Federal Unit 004
UL/H, S11, T20S, R34E
API No. 30-025-02424
1RP-4003

Ms. Jones,

Trinity Oilfield Services is requesting closure of 1RP-4003 on behalf of Legacy Reserves LP. On November 24, 2015 Legacy Reserves LP had an Accidental Release (AR). During a frac of an adjacent well, fluid came out of the 004 well. Most of the fluid was contained on location, however some did leave location. Trinity was retained by Legacy Reserves LP to represent them through the clean up process. We conducted field titrations on site and determined there to be chloride levels on location exceeding the NMOCD standards. We also determined the chloride levels off of location to be below the standard set forth by the NMOCD. Subsequently we pulled samples and submitted them to Cardinal Laboratories for analysis. Sample results are attached. As per the sample results provided this site meets the expectations in terms of contaminate levels off of location. The locations can be found on the sample map. Legacy Reserves LP would like to leave the chlorides on location in place until abandonment. We feel as though the chlorides were present prior to the AR. With all this be taken into consideration, we humbly request closure and thank you for your assistance in this matter.

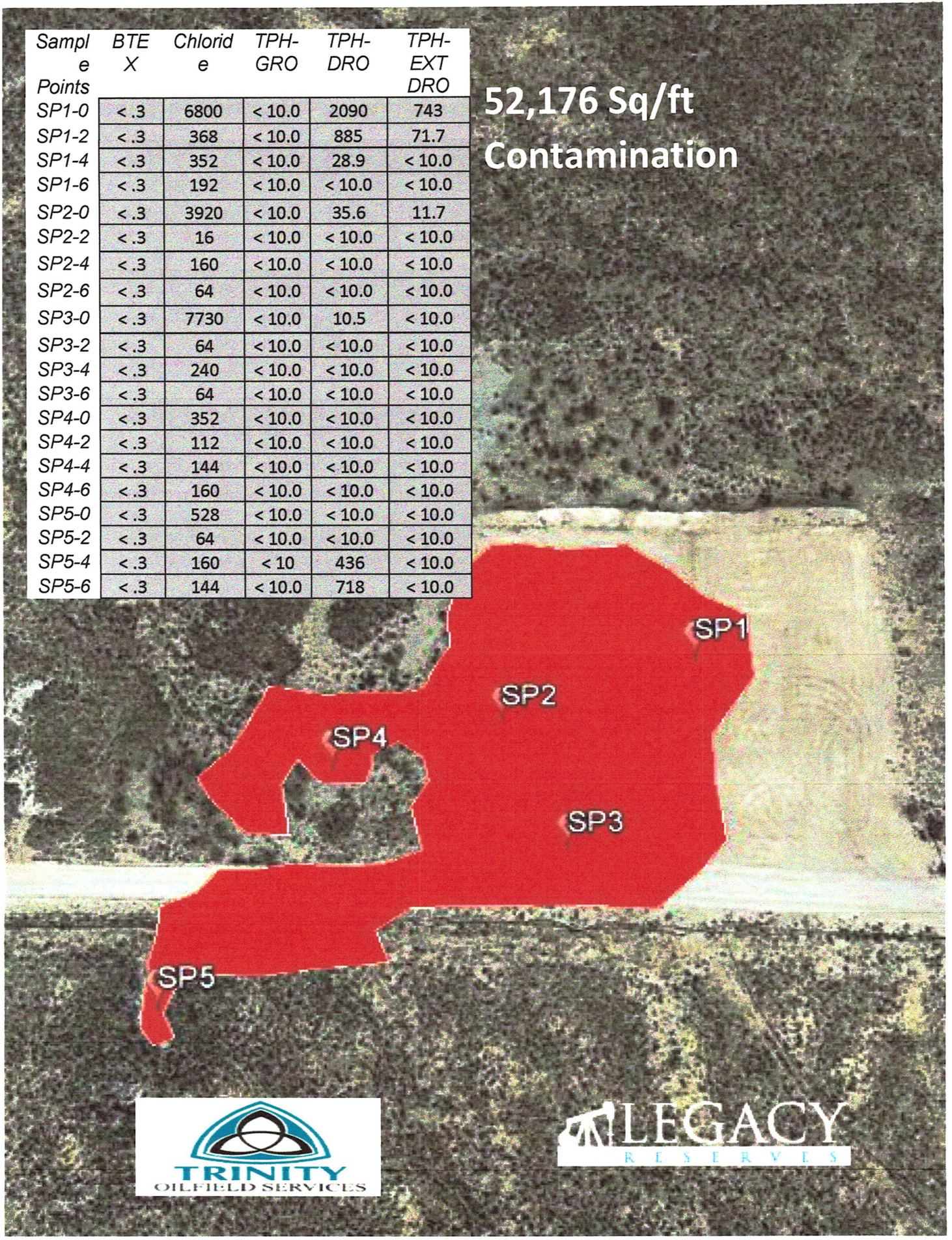
Sincerely,

Todd Roberson

CC: Brian Cunningham - Legacy
Henryetta Price - BLM

Sample Points	BTEX	Chloride	TPH-GRO	TPH-DRO	TPH-EXT DRO
SP1-0	< .3	6800	< 10.0	2090	743
SP1-2	< .3	368	< 10.0	885	71.7
SP1-4	< .3	352	< 10.0	28.9	< 10.0
SP1-6	< .3	192	< 10.0	< 10.0	< 10.0
SP2-0	< .3	3920	< 10.0	35.6	11.7
SP2-2	< .3	16	< 10.0	< 10.0	< 10.0
SP2-4	< .3	160	< 10.0	< 10.0	< 10.0
SP2-6	< .3	64	< 10.0	< 10.0	< 10.0
SP3-0	< .3	7730	< 10.0	10.5	< 10.0
SP3-2	< .3	64	< 10.0	< 10.0	< 10.0
SP3-4	< .3	240	< 10.0	< 10.0	< 10.0
SP3-6	< .3	64	< 10.0	< 10.0	< 10.0
SP4-0	< .3	352	< 10.0	< 10.0	< 10.0
SP4-2	< .3	112	< 10.0	< 10.0	< 10.0
SP4-4	< .3	144	< 10.0	< 10.0	< 10.0
SP4-6	< .3	160	< 10.0	< 10.0	< 10.0
SP5-0	< .3	528	< 10.0	< 10.0	< 10.0
SP5-2	< .3	64	< 10.0	< 10.0	< 10.0
SP5-4	< .3	160	< 10	436	< 10.0
SP5-6	< .3	144	< 10.0	718	< 10.0

52,176 Sq/ft Contamination



TRINITY OILFIELD SERVICES

LEGACY RESERVES

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

January 07, 2016

TODD ROBERSON

TRINITY OILFIELD SERVICES & RENTALS, LLC

P. O. BOX 2587

HOBBS, NM 88241

RE: LEA UNIT #4

Enclosed are the results of analyses for samples received by the laboratory on 01/04/16 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 1 - 0 (H600006-01)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.6 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6800**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	**2090**	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	**743**	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *101 %* *35-147*

Surrogate: 1-Chlorooctadecane *141 %* *28-171*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 1 - 2 (H600006-02)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.5 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	**885**	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	**71.7**	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *93.5 %* *35-147*

Surrogate: 1-Chlorooctadecane *126 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 1 - 4 (H600006-03)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.9 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	**28.9**	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *106 %* *35-147*

Surrogate: 1-Chlorooctadecane *102 %* *28-171*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 1 - 6 (H600006-04)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *109 %* *35-147*

Surrogate: 1-Chlorooctadecane *102 %* *28-171*

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 2 - 0 (H600006-05)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.0 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3920**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	**35.6**	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	**11.7**	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *101 %* *35-147*

Surrogate: 1-Chlorooctadecane *99.2 %* *28-171*

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 2 - 2 (H600006-06)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.1 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *109 %* *35-147*

Surrogate: 1-Chlorooctadecane *104 %* *28-171*

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 2 - 4 (H600006-07)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.4 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *99.6 %* *35-147*

Surrogate: 1-Chlorooctadecane *99.6 %* *28-171*

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 2 - 6 (H600006-08)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.0 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *103 %* *35-147*

Surrogate: 1-Chlorooctadecane *99.4 %* *28-171*

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 3 - 0 (H600006-09)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.4 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7730**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	**10.5**	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *103 %* *35-147*

Surrogate: 1-Chlorooctadecane *95.1 %* *28-171*

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 3 - 2 (H600006-10)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.5 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *100 %* *35-147*

Surrogate: 1-Chlorooctadecane *103 %* *28-171*

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 3 - 4 (H600006-11)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.5 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *107 %* *35-147*

Surrogate: 1-Chlorooctadecane *110 %* *28-171*

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 3 - 6 (H600006-12)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.1 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *102 %* *35-147*

Surrogate: 1-Chlorooctadecane *104 %* *28-171*

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 4 - 0 (H600006-13)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *101 %* *35-147*

Surrogate: 1-Chlorooctadecane *105 %* *28-171*

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Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 4 - 2 (H600006-14)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.1 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *105 %* *35-147*

Surrogate: 1-Chlorooctadecane *106 %* *28-171*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 4 - 4 (H600006-15)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.6 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *105 %* *35-147*

Surrogate: 1-Chlorooctadecane *97.5 %* *28-171*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 4 - 6 (H600006-16)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.1 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/04/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/04/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/04/2016	ND					

Surrogate: 1-Chlorooctane *101 %* *35-147*

Surrogate: 1-Chlorooctadecane *105 %* *28-171*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 5 - 0 (H600006-17)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.1 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/05/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/05/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/05/2016	ND					

Surrogate: 1-Chlorooctane *96.1 %* *35-147*

Surrogate: 1-Chlorooctadecane *92.7 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 5 - 2 (H600006-18)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.2 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/05/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	<10.0	10.0	01/05/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/05/2016	ND					

Surrogate: 1-Chlorooctane *108 %* *35-147*

Surrogate: 1-Chlorooctadecane *109 %* *28-171*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 5 - 4 (H600006-19)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.1 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/05/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	**436**	10.0	01/05/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/05/2016	ND					

Surrogate: 1-Chlorooctane *101 %* *35-147*

Surrogate: 1-Chlorooctadecane *105 %* *28-171*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRINITY OILFIELD SERVICES & RENTALS, LLC
TODD ROBERSON
P. O. BOX 2587
HOBBS NM, 88241
Fax To: NONE

Received:	01/04/2016	Sampling Date:	12/24/2015
Reported:	01/07/2016	Sampling Type:	Soil
Project Name:	LEA UNIT #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 5 - 6 (H600006-20)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/05/2016	ND	2.24	112	2.00	2.52	
Toluene*	<0.050	0.050	01/05/2016	ND	2.30	115	2.00	2.38	
Ethylbenzene*	<0.050	0.050	01/05/2016	ND	2.12	106	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/05/2016	ND	6.75	113	6.00	2.22	
Total BTEX	<0.300	0.300	01/05/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.7 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	01/04/2016	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/05/2016	ND	177	88.3	200	4.23	
DRO >C10-C28	**718**	10.0	01/05/2016	ND	167	83.3	200	4.95	
EXT DRO >C28-C35	<10.0	10.0	01/05/2016	ND					

Surrogate: 1-Chlorooctane *99.9 %* *35-147*

Surrogate: 1-Chlorooctadecane *116 %* *28-171*

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	~~Legacy~~ Trinity Oilfield
Project Manager:	Todd Robinson
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner: Legacy
Project Name:	
Project Location:	Lea Unit #4
Sampler Name:	Tyson Pierce

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	B Tex	TPH	Chlorides
H600006																	
1	SP1-0												12/24	10:30			
2	SP1-2																
3	SP1-4																
4	SP1-6																
5	SP2-0																
6	SP2-2																
7	SP2-4																
8	SP2-6																
9	SP3-0																
10	SP3-2																

Relinquished By:	Date: 12/4/16	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 11:00		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	-2.8°C	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: ~~Legacy~~ Trinity Oilfield	**BILL TO**
Project Manager:	P.O. #:
Address:	Company:
City: State: Zip:	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner: Legacy	City:
Project Name:	State: Zip:
Project Location: Lea Unit #4	Phone #:
Sampler Name: Tyson Pierce	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	TPH	Chlorides
H6000006																	
11	SP3-4												12/24	10:50			
12	SP3-6																
13	SP4-0																
14	SP4-2																
15	SP4-4																
16	SP4-6																
17	SP5-0																
18	SP5-2																
19	SP5-4																
20	SP5-6																

Relinquished By:	Date: 11/4/16	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 11:00		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: -2.8°C

Sample Condition: Cool ☐ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) JH

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

#27

Appendix C

OCD and BLM Communications

From:	Tucker, Shelly
To:	Yu, Olivia, EMNRD
Cc:	Sarah Johnson; bcunningham@legacylp.com; Mark Larson; Henryetta Price
Subject:	Re: 1RP-4003 Lea Unit 004 Delineation Plan, January 8, 2018
Date:	Thursday, February 01, 2018 1:04:35 PM
Attachments:	approved_1RP-4003 Lea Unit 004 Delineation Plan.pdf

I am forwarding this to Henryetta Price. She is the AO for this release.

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.

On Fri, Jan 19, 2018 at 11:36 AM, Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us> wrote:

> Dear Ms. Johnson:
>
> Please note that this release occurred on Federal surface. BLM can confirm.

NMOCD approves of the proposed delineation plan for 1RP-4003. If pertinent, like approval from BLM required.

Thanks,

Olivia Yu

Environmental Specialist

NMOCD, District I

Olivia.yu@state.nm.us

575-393-6161 x113

From: Sarah Johnson [mailto:SJohnson@laenvironmental.com]
Sent: Monday, January 8, 2018 9:03 AM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Cc: bcunningham@legacylp.com; Mark Larson <Mark@laenvironmental.com>
Subject: 1RP-4003 Lea Unit 004 Delineation Plan, January 8, 2018

Dear Ms. Yu,

Larson & Associates, Inc. (LAI), on behalf of Legacy Reserves Operating, LP (Legacy), submits the attached delineation plan (please see link below) for a produced water spill at the Lea Unit 004 (1RP-4003) in Lea County, New Mexico. Your approval of the delineation plan is requested. Please feel free to contact Brian Cunningham with Legacy at (575) 391-1464 or bcunningham@legacy.com, me at (432) 687-0901 (office) or (432) 664-5357 (cell) if you have any questions.

Link: https://files.acrobat.com/a/preview/ddd5186f-cd13-4084-bbda-fabd5449f392

Respectfully,

Sarah Johnson

Staff Geologist

507 N. Marienfeld St., Suite 205

Midland, Texas 79701

Office – 432-687-0901

Cell – 432-664-5357

Fax – 432-687-0456

sjohnson@laenvironmental.com

Appendix D

Laboratory Reports

Certificate of Analysis Summary 577014

Larson and Associates, Inc., Midland, TX

Project Name: Lea Unit 004

Project Id: 17-0175-15
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Tue Feb-20-18 04:48 pm
Report Date: 28-FEB-18
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	577014-001		577014-002		577014-003		577014-004		577014-005		577014-006	
	Field Id:	DP-4 (0-1)		DP-4 (1-2)		DP-4 (2-3)		DP-4 (3-4)		DP-4 (4-6)		DP-4 (6-8)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-20-18 10:36		Feb-20-18 10:37		Feb-20-18 10:38		Feb-20-18 10:39		Feb-20-18 10:40		Feb-20-18 10:41	
BTEX by EPA 8021B	***Extracted:***	Feb-24-18 07:30											
	Analyzed:	Feb-24-18 08:13											
	Units/RL:	mg/kg	RL										
Benzene		<0.00201	0.00201										
Toluene		<0.00201	0.00201										
Ethylbenzene		<0.00201	0.00201										
m,p-Xylenes		<0.00402	0.00402										
o-Xylene		<0.00201	0.00201										
Total Xylenes		<0.00201	0.00201										
Total BTEX		<0.00201	0.00201										
Chloride by EPA 300	***Extracted:***	Feb-26-18 12:00		Feb-26-18 12:00		Feb-26-18 12:00		Feb-26-18 12:00		Feb-26-18 12:00		Feb-26-18 12:00	
	Analyzed:	Feb-26-18 13:39		Feb-26-18 13:55		Feb-26-18 14:01		Feb-26-18 14:21		Feb-26-18 14:26		Feb-26-18 14:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		228	4.97	26.9	4.98	78.1	4.97	36.9	4.95	81.8	4.94	23.8	4.93
TPH By SW8015 Mod	***Extracted:***	Feb-23-18 10:00											
	Analyzed:	Feb-23-18 12:51											
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons		<15.0	15.0										
Diesel Range Organics		<15.0	15.0										
Oil Range Hydrocarbons		<15.0	15.0										
Total TPH		<15.0	15.0										

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 577014

Larson and Associates, Inc., Midland, TX

Project Name: Lea Unit 004

Project Id: 17-0175-15
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Tue Feb-20-18 04:48 pm
Report Date: 28-FEB-18
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	577014-007		577014-008		577014-009		577014-010		577014-011		577014-012	
	Field Id:	DP-5 (0-1)		DP-5 (1-2)		DP-5 (2-3)		DP-5 (3-4)		DP-5 (4-6)		DP-5 (6-8)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-20-18 10:48		Feb-20-18 10:49		Feb-20-18 10:50		Feb-20-18 10:51		Feb-20-18 10:53		Feb-20-18 10:54	
BTEX by EPA 8021B	***Extracted:***	Feb-24-18 07:30											
	Analyzed:	Feb-24-18 08:32											
	Units/RL:	mg/kg	RL										
Benzene		<0.00200	0.00200										
Toluene		<0.00200	0.00200										
Ethylbenzene		<0.00200	0.00200										
m,p-Xylenes		<0.00399	0.00399										
o-Xylene		<0.00200	0.00200										
Total Xylenes		<0.00200	0.00200										
Total BTEX		<0.00200	0.00200										
Chloride by EPA 300	***Extracted:***	Feb-26-18 12:00		Feb-26-18 12:00		Feb-26-18 12:00		Feb-26-18 12:00		Feb-26-18 13:00		Feb-26-18 13:00	
	Analyzed:	Feb-26-18 14:37		Feb-26-18 14:42		Feb-26-18 14:48		Feb-26-18 14:53		Feb-26-18 15:25		Feb-26-18 15:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		582	4.92	31.1	4.98	60.6	4.99	12.2	4.98	31.2	5.00	22.8	5.00
TPH By SW8015 Mod	***Extracted:***	Feb-23-18 10:00											
	Analyzed:	Feb-23-18 14:07											
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons		<15.0	15.0										
Diesel Range Organics		<15.0	15.0										
Oil Range Hydrocarbons		<15.0	15.0										
Total TPH		<15.0	15.0										

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 577014

Larson and Associates, Inc., Midland, TX

Project Name: Lea Unit 004

Project Id: 17-0175-15
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Tue Feb-20-18 04:48 pm
Report Date: 28-FEB-18
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	577014-013		577014-014		577014-015		577014-016		577014-017		577014-018	
	Field Id:	DP-6 (0-1)		DP-6 (1-2)		DP-6 (2-3)		DP-6 (3-4)		DP-1 (0-1)		DP-1 (1-2)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-20-18 11:22		Feb-20-18 11:23		Feb-20-18 11:24		Feb-20-18 11:25		Feb-19-18 11:16		Feb-19-18 11:19	
BTEX by EPA 8021B	***Extracted:***	Feb-24-18 07:30								Feb-24-18 07:30			
	Analyzed:	Feb-24-18 08:52								Feb-24-18 09:11			
	Units/RL:	mg/kg	RL							mg/kg	RL		
Benzene		<0.00199	0.00199							<0.00202	0.00202		
Toluene		<0.00199	0.00199							<0.00202	0.00202		
Ethylbenzene		<0.00199	0.00199							<0.00202	0.00202		
m,p-Xylenes		<0.00398	0.00398							<0.00403	0.00403		
o-Xylene		<0.00199	0.00199							<0.00202	0.00202		
Total Xylenes		<0.00199	0.00199							<0.00202	0.00202		
Total BTEX		<0.00199	0.00199							<0.00202	0.00202		
Chloride by EPA 300	***Extracted:***	Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00	
	Analyzed:	Feb-26-18 15:57		Feb-26-18 16:59		Feb-26-18 17:05		Feb-26-18 17:10		Feb-26-18 17:36		Feb-26-18 17:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.99	4.99	<4.96	4.96	<4.97	4.97	<4.97	4.97	3470	24.9	152	4.94
TPH By SW8015 Mod	***Extracted:***	Feb-23-18 10:00								Feb-23-18 10:00			
	Analyzed:	Feb-23-18 14:33								Feb-23-18 14:59			
	Units/RL:	mg/kg	RL							mg/kg	RL		
Gasoline Range Hydrocarbons		<15.0	15.0							<14.9	14.9		
Diesel Range Organics		<15.0	15.0							49.1	14.9		
Oil Range Hydrocarbons		<15.0	15.0							<14.9	14.9		
Total TPH		<15.0	15.0							49.1	14.9		

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 577014

Larson and Associates, Inc., Midland, TX

Project Name: Lea Unit 004

Project Id: 17-0175-15
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Tue Feb-20-18 04:48 pm
Report Date: 28-FEB-18
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	577014-019		577014-020		577014-021		577014-022		577014-023		577014-024	
	Field Id:	DP-1 (2-3)		DP-1 (3-4)		DP-1 (4-6)		DP-1 (6-8)		DP-1 (8-10)		DP-1 (10-12)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-19-18 11:21		Feb-19-18 11:23		Feb-19-18 11:26		Feb-19-18 11:28		Feb-19-18 11:30		Feb-19-18 11:34	
Chloride by EPA 300	***Extracted:***	Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00	
	Analyzed:	Feb-26-18 17:46		Feb-26-18 17:52		Feb-26-18 17:57		Feb-26-18 18:31		Feb-26-18 18:37		Feb-26-18 18:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		121	4.96	248	4.97	383	4.97	266	4.99	354	4.96	120	5.00

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 577014

Larson and Associates, Inc., Midland, TX

Project Name: Lea Unit 004

Project Id: 17-0175-15
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Tue Feb-20-18 04:48 pm
Report Date: 28-FEB-18
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	577014-025		577014-026		577014-027		577014-028		577014-029		577014-030	
	Field Id:	DP-2 (0-1)		DP-2 (1-2)		DP-2 (2-3)		DP-2 (3-4)		DP-2 (4-6)		DP-2 (6-8)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-19-18 12:37		Feb-19-18 12:39		Feb-19-18 12:41		Feb-19-18 12:43		Feb-19-18 12:44		Feb-19-18 12:46	
BTEX by EPA 8021B	***Extracted:***	Feb-24-18 07:30											
	Analyzed:	Feb-24-18 09:30											
	Units/RL:	mg/kg	RL										
Benzene		<0.00201	0.00201										
Toluene		<0.00201	0.00201										
Ethylbenzene		<0.00201	0.00201										
m,p-Xylenes		<0.00402	0.00402										
o-Xylene		<0.00201	0.00201										
Total Xylenes		<0.00201	0.00201										
Total BTEX		<0.00201	0.00201										
Chloride by EPA 300	***Extracted:***	Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00		Feb-26-18 13:00	
	Analyzed:	Feb-26-18 18:47		Feb-26-18 18:52		Feb-26-18 18:58		Feb-26-18 19:03		Feb-26-18 19:08		Feb-26-18 19:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		576	4.96	68.1	5.00	45.2	5.00	8.40	5.00	182	5.00	<5.00	5.00
TPH By SW8015 Mod	***Extracted:***	Feb-23-18 10:00											
	Analyzed:	Feb-23-18 15:26											
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons		<15.0	15.0										
Diesel Range Organics		<15.0	15.0										
Oil Range Hydrocarbons		<15.0	15.0										
Total TPH		<15.0	15.0										

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 577014

Larson and Associates, Inc., Midland, TX

Project Name: Lea Unit 004

Project Id: 17-0175-15
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Tue Feb-20-18 04:48 pm
Report Date: 28-FEB-18
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	577014-031		577014-032		577014-033		577014-034		577014-035		577014-036	
	Field Id:	DP-3 (0-1)		DP-3 (1-2)		DP-3 (2-3)		DP-3 (3-4)		DP-3 (4-6)		DP-3 (6-8)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-19-18 12:54		Feb-19-18 12:56		Feb-19-18 12:57		Feb-19-18 12:59		Feb-19-18 13:02		Feb-19-18 13:04	
BTEX by EPA 8021B	***Extracted:***	Feb-24-18 07:30											
	Analyzed:	Feb-24-18 09:49											
	Units/RL:	mg/kg	RL										
Benzene		<0.00200	0.00200										
Toluene		<0.00200	0.00200										
Ethylbenzene		<0.00200	0.00200										
m,p-Xylenes		<0.00401	0.00401										
o-Xylene		<0.00200	0.00200										
Total Xylenes		<0.00200	0.00200										
Total BTEX		<0.00200	0.00200										
Chloride by EPA 300	***Extracted:***	Feb-26-18 14:00		Feb-26-18 14:00		Feb-26-18 14:00		Feb-26-18 14:00		Feb-26-18 14:00		Feb-26-18 14:00	
	Analyzed:	Feb-26-18 19:45		Feb-26-18 20:01		Feb-26-18 20:06		Feb-26-18 20:12		Feb-26-18 20:17		Feb-26-18 20:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		596	4.99	128	5.00	48.0	4.99	37.8	4.98	61.5	4.91	64.4	5.00
TPH By SW8015 Mod	***Extracted:***	Feb-23-18 10:00											
	Analyzed:	Feb-23-18 15:53											
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons		<15.0	15.0										
Diesel Range Organics		<15.0	15.0										
Oil Range Hydrocarbons		<15.0	15.0										
Total TPH		<15.0	15.0										

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 577014

Larson and Associates, Inc., Midland, TX

Project Name: Lea Unit 004

Project Id: 17-0175-15
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Tue Feb-20-18 04:48 pm
Report Date: 28-FEB-18
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	577014-037		577014-038		577014-039		577014-040		577014-041		577014-042	
	Field Id:	DP-7 (0-1)		DP-7 (1-2)		DP-7 (2-3)		DP-7 (3-4)		DP-7 (4-6)		DP-7 (6-8)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-19-18 13:48		Feb-19-18 13:49		Feb-19-18 13:50		Feb-19-18 13:51		Feb-19-18 13:53		Feb-19-18 13:55	
BTEX by EPA 8021B	***Extracted:***	Feb-24-18 07:30											
	Analyzed:	Feb-24-18 10:08											
	Units/RL:	mg/kg	RL										
Benzene		<0.00199	0.00199										
Toluene		<0.00199	0.00199										
Ethylbenzene		<0.00199	0.00199										
m,p-Xylenes		<0.00398	0.00398										
o-Xylene		<0.00199	0.00199										
Total Xylenes		<0.00199	0.00199										
Total BTEX		<0.00199	0.00199										
Chloride by EPA 300	***Extracted:***	Feb-26-18 14:00		Feb-26-18 14:00		Feb-26-18 14:00		Feb-26-18 14:00		Feb-26-18 14:00		Feb-26-18 14:00	
	Analyzed:	Feb-26-18 20:38		Feb-26-18 20:44		Feb-26-18 20:49		Feb-26-18 20:54		Feb-26-18 21:15		Feb-26-18 21:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		284	4.98	62.5	5.00	164	5.00	187	4.97	97.7	5.00	39.2	5.02
TPH By SW8015 Mod	***Extracted:***	Feb-23-18 10:00											
	Analyzed:	Feb-23-18 16:19											
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons		<15.0	15.0										
Diesel Range Organics		28.7	15.0										
Oil Range Hydrocarbons		<15.0	15.0										
Total TPH		28.7	15.0										

Brandi Ritcherson
Project Manager

Analytical Report 577014

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Lea Unit 004

17-0175-15

28-FEB-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

28-FEB-18

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: XENCO Report No(s): **577014**
Lea Unit 004
Project Address: NM

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 577014. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 577014 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brandi Ritcherson
Project Manager

Sample Cross Reference 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
DP-4 (0-1)	S	02-20-18 10:36		577014-001
DP-4 (1-2)	S	02-20-18 10:37		577014-002
DP-4 (2-3)	S	02-20-18 10:38		577014-003
DP-4 (3-4)	S	02-20-18 10:39		577014-004
DP-4 (4-6)	S	02-20-18 10:40		577014-005
DP-4 (6-8)	S	02-20-18 10:41		577014-006
DP-5 (0-1)	S	02-20-18 10:48		577014-007
DP-5 (1-2)	S	02-20-18 10:49		577014-008
DP-5 (2-3)	S	02-20-18 10:50		577014-009
DP-5 (3-4)	S	02-20-18 10:51		577014-010
DP-5 (4-6)	S	02-20-18 10:53		577014-011
DP-5 (6-8)	S	02-20-18 10:54		577014-012
DP-6 (0-1)	S	02-20-18 11:22		577014-013
DP-6 (1-2)	S	02-20-18 11:23		577014-014
DP-6 (2-3)	S	02-20-18 11:24		577014-015
DP-6 (3-4)	S	02-20-18 11:25		577014-016
DP-1 (0-1)	S	02-19-18 11:16		577014-017
DP-1 (1-2)	S	02-19-18 11:19		577014-018
DP-1 (2-3)	S	02-19-18 11:21		577014-019
DP-1 (3-4)	S	02-19-18 11:23		577014-020
DP-1 (4-6)	S	02-19-18 11:26		577014-021
DP-1 (6-8)	S	02-19-18 11:28		577014-022
DP-1 (8-10)	S	02-19-18 11:30		577014-023
DP-1 (10-12)	S	02-19-18 11:34		577014-024
DP-2 (0-1)	S	02-19-18 12:37		577014-025
DP-2 (1-2)	S	02-19-18 12:39		577014-026
DP-2 (2-3)	S	02-19-18 12:41		577014-027
DP-2 (3-4)	S	02-19-18 12:43		577014-028
DP-2 (4-6)	S	02-19-18 12:44		577014-029
DP-2 (6-8)	S	02-19-18 12:46		577014-030
DP-3 (0-1)	S	02-19-18 12:54		577014-031
DP-3 (1-2)	S	02-19-18 12:56		577014-032
DP-3 (2-3)	S	02-19-18 12:57		577014-033
DP-3 (3-4)	S	02-19-18 12:59		577014-034
DP-3 (4-6)	S	02-19-18 13:02		577014-035
DP-3 (6-8)	S	02-19-18 13:04		577014-036
DP-7 (0-1)	S	02-19-18 13:48		577014-037
DP-7 (1-2)	S	02-19-18 13:49		577014-038
DP-7 (2-3)	S	02-19-18 13:50		577014-039
DP-7 (3-4)	S	02-19-18 13:51		577014-040
DP-7 (4-6)	S	02-19-18 13:53		577014-041
DP-7 (6-8)	S	02-19-18 13:55		577014-042

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3042105 BTEX by EPA 8021B
Lab Sample ID 577014-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 577014-001, -007, -013, -017, -025, -031, -037.
The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3042239 Chloride by EPA 300
Lab Sample ID 577014-021 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 577014-011, -012, -013, -014, -015, -016, -017, -018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028, -029, -030.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-4 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-001	Date Collected:	02.20.18 10.36		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**228**	4.97	mg/kg	02.26.18 13.39		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.23.18 10.00	Basis:	Wet Weight
Seq Number:	3042060				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	02.23.18 12.51	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	02.23.18 12.51	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	02.23.18 12.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.23.18 12.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	02.23.18 12.51	
o-Terphenyl	84-15-1	96	%	70-135	02.23.18 12.51	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-4 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-001	Date Collected:	02.20.18 10.36		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.24.18 07.30	Basis:	Wet Weight
Seq Number:	3042105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.24.18 08.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.24.18 08.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.24.18 08.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.24.18 08.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.24.18 08.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.24.18 08.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.24.18 08.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	80-120	02.24.18 08.13	
1,4-Difluorobenzene	540-36-3	91	%	80-120	02.24.18 08.13	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-4 (1-2)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-002	Date Collected:	02.20.18 10.37		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.9**	4.98	mg/kg	02.26.18 13.55		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-4 (2-3)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-003	Date Collected:	02.20.18 10.38		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**78.1**	4.97	mg/kg	02.26.18 14.01		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-4 (3-4)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-004	Date Collected:	02.20.18 10.39		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.9**	4.95	mg/kg	02.26.18 14.21		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-4 (4-6)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-005	Date Collected:	02.20.18 10.40		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**81.8**	4.94	mg/kg	02.26.18 14.26		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-4 (6-8)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-006	Date Collected:	02.20.18 10.41		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.8**	4.93	mg/kg	02.26.18 14.32		1

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-5 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-007	Date Collected:	02.20.18 10.48		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**582**	4.92	mg/kg	02.26.18 14.37		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.23.18 10.00	Basis:	Wet Weight
Seq Number:	3042060				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	02.23.18 14.07	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	02.23.18 14.07	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	02.23.18 14.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.23.18 14.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.23.18 14.07	
o-Terphenyl	84-15-1	100	%	70-135	02.23.18 14.07	

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-5 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-007	Date Collected:	02.20.18 10.48		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.24.18 07.30	Basis:	Wet Weight
Seq Number:	3042105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.24.18 08.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.24.18 08.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.24.18 08.32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.24.18 08.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.24.18 08.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.24.18 08.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.24.18 08.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	80-120	02.24.18 08.32	
4-Bromofluorobenzene	460-00-4	98	%	80-120	02.24.18 08.32	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-5 (1-2)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-008	Date Collected:	02.20.18 10.49		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.1**	4.98	mg/kg	02.26.18 14.42		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-5 (2-3)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-009	Date Collected:	02.20.18 10.50		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**60.6**	4.99	mg/kg	02.26.18 14.48		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-5 (3-4)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-010	Date Collected:	02.20.18 10.51		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.2**	4.98	mg/kg	02.26.18 14.53		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-5 (4-6)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-011	Date Collected:	02.20.18 10.53		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.2**	5.00	mg/kg	02.26.18 15.25		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-5 (6-8)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-012	Date Collected:	02.20.18 10.54		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.8**	5.00	mg/kg	02.26.18 15.52		1

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-6 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-013	Date Collected:	02.20.18 11.22		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	02.26.18 15.57	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.23.18 10.00	Basis:	Wet Weight
Seq Number:	3042060				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	02.23.18 14.33	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	02.23.18 14.33	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	02.23.18 14.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.23.18 14.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.23.18 14.33	
o-Terphenyl	84-15-1	91	%	70-135	02.23.18 14.33	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-6 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-013	Date Collected:	02.20.18 11.22		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.24.18 07.30	Basis:	Wet Weight
Seq Number:	3042105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.24.18 08.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.24.18 08.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.24.18 08.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.24.18 08.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.24.18 08.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.24.18 08.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.24.18 08.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	80-120	02.24.18 08.52	
1,4-Difluorobenzene	540-36-3	90	%	80-120	02.24.18 08.52	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-6 (1-2)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-014	Date Collected:	02.20.18 11.23		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	02.26.18 16.59	U	1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-6 (2-3)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-015	Date Collected:	02.20.18 11.24		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	02.26.18 17.05	U	1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-6 (3-4)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-016	Date Collected:	02.20.18 11.25		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	02.26.18 17.10	U	1

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id: **DP-1 (0-1)** Matrix: Soil Date Received:02.20.18 16.48

Lab Sample Id: 577014-017 Date Collected: 02.19.18 11.16

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: OJS % Moisture:

Analyst: OJS Date Prep: 02.26.18 13.00 Basis: Wet Weight

Seq Number: 3042239

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3470**	24.9	mg/kg	02.26.18 17.36		5

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 02.23.18 10.00 Basis: Wet Weight

Seq Number: 3042060

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	02.23.18 14.59	U	1
Diesel Range Organics	C10C28DRO	**49.1**	14.9	mg/kg	02.23.18 14.59		1
Oil Range Hydrocarbons	PHCG2835	<14.9	14.9	mg/kg	02.23.18 14.59	U	1
Total TPH	PHC635	**49.1**	14.9	mg/kg	02.23.18 14.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.23.18 14.59	
o-Terphenyl	84-15-1	105	%	70-135	02.23.18 14.59	

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-1 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-017	Date Collected:	02.19.18 11.16		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.24.18 07.30	Basis:	Wet Weight
Seq Number:	3042105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.24.18 09.11	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.24.18 09.11	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.24.18 09.11	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.24.18 09.11	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.24.18 09.11	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.24.18 09.11	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.24.18 09.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	80-120	02.24.18 09.11	
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.24.18 09.11	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-1 (1-2)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-018	Date Collected:	02.19.18 11.19		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**152**	4.94	mg/kg	02.26.18 17.41		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-1 (2-3)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-019	Date Collected:	02.19.18 11.21		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**121**	4.96	mg/kg	02.26.18 17.46		1

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Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-1 (3-4)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-020	Date Collected:	02.19.18 11.23		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**248**	4.97	mg/kg	02.26.18 17.52		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-1 (4-6)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-021	Date Collected:	02.19.18 11.26		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**383**	4.97	mg/kg	02.26.18 17.57		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-1 (6-8)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-022	Date Collected:	02.19.18 11.28		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**266**	4.99	mg/kg	02.26.18 18.31		1

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Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-1 (8-10)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-023	Date Collected:	02.19.18 11.30		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**354**	4.96	mg/kg	02.26.18 18.37		1

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Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-1 (10-12)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-024	Date Collected:	02.19.18 11.34		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**120**	5.00	mg/kg	02.26.18 18.42		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-2 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-025	Date Collected:	02.19.18 12.37		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**576**	4.96	mg/kg	02.26.18 18.47		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.23.18 10.00	Basis:	Wet Weight
Seq Number:	3042060				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	02.23.18 15.26	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	02.23.18 15.26	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	02.23.18 15.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.23.18 15.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	02.23.18 15.26	
o-Terphenyl	84-15-1	111	%	70-135	02.23.18 15.26	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-2 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-025	Date Collected:	02.19.18 12.37		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.24.18 07.30	Basis:	Wet Weight
Seq Number:	3042105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.24.18 09.30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.24.18 09.30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.24.18 09.30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.24.18 09.30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.24.18 09.30	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.24.18 09.30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.24.18 09.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	85	%	80-120	02.24.18 09.30	
4-Bromofluorobenzene	460-00-4	101	%	80-120	02.24.18 09.30	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-2 (1-2)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-026	Date Collected:	02.19.18 12.39		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**68.1**	5.00	mg/kg	02.26.18 18.52		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-2 (2-3)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-027	Date Collected:	02.19.18 12.41		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**45.2**	5.00	mg/kg	02.26.18 18.58		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-2 (3-4)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-028	Date Collected:	02.19.18 12.43		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.40**	5.00	mg/kg	02.26.18 19.03		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-2 (4-6)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-029	Date Collected:	02.19.18 12.44		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**182**	5.00	mg/kg	02.26.18 19.08		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-2 (6-8)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-030	Date Collected:	02.19.18 12.46		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 13.00	Basis:	Wet Weight
Seq Number:	3042239				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.26.18 19.14	U	1

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-3 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-031	Date Collected:	02.19.18 12.54		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**596**	4.99	mg/kg	02.26.18 19.45		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.23.18 10.00	Basis:	Wet Weight
Seq Number:	3042060				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	02.23.18 15.53	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	02.23.18 15.53	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	02.23.18 15.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.23.18 15.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.23.18 15.53	
o-Terphenyl	84-15-1	94	%	70-135	02.23.18 15.53	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-3 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-031	Date Collected:	02.19.18 12.54		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.24.18 07.30	Basis:	Wet Weight
Seq Number:	3042105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.24.18 09.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.24.18 09.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.24.18 09.49	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.24.18 09.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.24.18 09.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.24.18 09.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.24.18 09.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	83	%	80-120	02.24.18 09.49	
4-Bromofluorobenzene	460-00-4	97	%	80-120	02.24.18 09.49	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-3 (1-2)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-032	Date Collected:	02.19.18 12.56		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**128**	5.00	mg/kg	02.26.18 20.01		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-3 (2-3)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-033	Date Collected:	02.19.18 12.57		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**48.0**	4.99	mg/kg	02.26.18 20.06		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-3 (3-4)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-034	Date Collected:	02.19.18 12.59		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.8**	4.98	mg/kg	02.26.18 20.12		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-3 (4-6)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-035	Date Collected:	02.19.18 13.02		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**61.5**	4.91	mg/kg	02.26.18 20.17		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-3 (6-8)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-036	Date Collected:	02.19.18 13.04		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**64.4**	5.00	mg/kg	02.26.18 20.33		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-7 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-037	Date Collected:	02.19.18 13.48		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**284**	4.98	mg/kg	02.26.18 20.38		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.23.18 10.00	Basis:	Wet Weight
Seq Number:	3042060				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	02.23.18 16.19	U	1
Diesel Range Organics	C10C28DRO	**28.7**	15.0	mg/kg	02.23.18 16.19		1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	02.23.18 16.19	U	1
Total TPH	PHC635	**28.7**	15.0	mg/kg	02.23.18 16.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.23.18 16.19	
o-Terphenyl	84-15-1	102	%	70-135	02.23.18 16.19	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-7 (0-1)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-037	Date Collected:	02.19.18 13.48		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.24.18 07.30	Basis:	Wet Weight
Seq Number:	3042105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.24.18 10.08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.24.18 10.08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.24.18 10.08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.24.18 10.08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.24.18 10.08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.24.18 10.08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.24.18 10.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	80-120	02.24.18 10.08	
4-Bromofluorobenzene	460-00-4	104	%	80-120	02.24.18 10.08	

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-7 (1-2)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-038	Date Collected:	02.19.18 13.49		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.5**	5.00	mg/kg	02.26.18 20.44		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-7 (2-3)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-039	Date Collected:	02.19.18 13.50		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**164**	5.00	mg/kg	02.26.18 20.49		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-7 (3-4)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-040	Date Collected:	02.19.18 13.51		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**187**	4.97	mg/kg	02.26.18 20.54		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-7 (4-6)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-041	Date Collected:	02.19.18 13.53		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**97.7**	5.00	mg/kg	02.26.18 21.15		1

Certificate of Analytical Results 577014

Larson and Associates, Inc., Midland, TX

Lea Unit 004

Sample Id:	**DP-7 (6-8)**	Matrix:	Soil	Date Received:	02.20.18 16.48
Lab Sample Id:	577014-042	Date Collected:	02.19.18 13.55		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 14.00	Basis:	Wet Weight
Seq Number:	3042243				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.2**	5.02	mg/kg	02.26.18 21.21		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

\+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 577014

Larson and Associates, Inc.

Lea Unit 004

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3042140 — Matrix: Solid — Date Prep: 02.26.18
MB Sample Id: 7639780-1-BLK — LCS Sample Id: 7639780-1-BKS — LCSD Sample Id: 7639780-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	264	106	269	108	90-110	2	20	mg/kg	02.26.18 12:15	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3042239 — Matrix: Solid — Date Prep: 02.26.18
MB Sample Id: 7639808-1-BLK — LCS Sample Id: 7639808-1-BKS — LCSD Sample Id: 7639808-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	275	110	274	110	90-110	0	20	mg/kg	02.26.18 15:14	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3042243 — Matrix: Solid — Date Prep: 02.26.18
MB Sample Id: 7639810-1-BLK — LCS Sample Id: 7639810-1-BKS — LCSD Sample Id: 7639810-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	262	105	262	105	90-110	0	20	mg/kg	02.26.18 19:35	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3042140 — Matrix: Soil — Date Prep: 02.26.18
Parent Sample Id: 576907-017 — MS Sample Id: 576907-017 S — MSD Sample Id: 576907-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.96	248	259	104	272	110	90-110	5	20	mg/kg	02.26.18 12:31	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3042140 — Matrix: Soil — Date Prep: 02.26.18
Parent Sample Id: 577014-001 — MS Sample Id: 577014-001 S — MSD Sample Id: 577014-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	228	249	474	99	467	96	90-110	1	20	mg/kg	02.26.18 13:45	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

QC Summary 577014

Larson and Associates, Inc.

Lea Unit 004

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3042239 — Matrix: Soil — Date Prep: 02.26.18
Parent Sample Id: 577014-011 — MS Sample Id: 577014-011 S — MSD Sample Id: 577014-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	31.2	250	305	110	316	114	90-110	4	20	mg/kg	02.26.18 15:30	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3042239 — Matrix: Soil — Date Prep: 02.26.18
Parent Sample Id: 577014-021 — MS Sample Id: 577014-021 S — MSD Sample Id: 577014-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	383	249	615	93	610	91	90-110	1	20	mg/kg	02.26.18 18:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3042243 — Matrix: Soil — Date Prep: 02.26.18
Parent Sample Id: 577014-031 — MS Sample Id: 577014-031 S — MSD Sample Id: 577014-031 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	596	250	835	96	859	105	90-110	3	20	mg/kg	02.26.18 19:51	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3042243 — Matrix: Soil — Date Prep: 02.26.18
Parent Sample Id: 577094-006 — MS Sample Id: 577094-006 S — MSD Sample Id: 577094-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.05	253	268	106	282	111	90-110	5	20	mg/kg	02.26.18 21:05	X

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3042060 — Matrix: Solid — Date Prep: 02.23.18
MB Sample Id: 7639737-1-BLK — LCS Sample Id: 7639737-1-BKS — LCSD Sample Id: 7639737-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<15.0	1000	883	88	894	89	70-135	1	35	mg/kg	02.23.18 11:24	
Diesel Range Organics	<15.0	1000	900	90	911	91	70-135	1	35	mg/kg	02.23.18 11:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		108		109		70-135	%	02.23.18 11:24
o-Terphenyl	111		105		106		70-135	%	02.23.18 11:24

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 577014

Larson and Associates, Inc.

Lea Unit 004

Analytical Method: TPH By SW8015 Mod | Prep Method: TX1005P
Seq Number: 3042060 | Matrix: Soil | Date Prep: 02.23.18
Parent Sample Id: 577014-001 | MS Sample Id: 577014-001 S | MSD Sample Id: 577014-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<15.0	999	880	88	885	89	70-135	1	35	mg/kg	02.23.18 13:16	
Diesel Range Organics	<15.0	999	988	99	984	99	70-135	0	35	mg/kg	02.23.18 13:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		109		70-135	%	02.23.18 13:16
o-Terphenyl	105		105		70-135	%	02.23.18 13:16

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3042105 | Matrix: Solid | Date Prep: 02.24.18
MB Sample Id: 7639771-1-BLK | LCS Sample Id: 7639771-1-BKS | LCSD Sample Id: 7639771-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0805	80	0.0800	80	70-130	1	35	mg/kg	02.24.18 04:59	
Toluene	<0.00202	0.101	0.0860	85	0.0855	86	70-130	1	35	mg/kg	02.24.18 04:59	
Ethylbenzene	<0.00202	0.101	0.0975	97	0.0970	97	71-129	1	35	mg/kg	02.24.18 04:59	
m,p-Xylenes	<0.00403	0.202	0.191	95	0.191	96	70-135	0	35	mg/kg	02.24.18 04:59	
o-Xylene	<0.00202	0.101	0.0979	97	0.0984	98	71-133	1	35	mg/kg	02.24.18 04:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		95		95		80-120	%	02.24.18 04:59
4-Bromofluorobenzene	98		110		115		80-120	%	02.24.18 04:59

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3042105 | Matrix: Soil | Date Prep: 02.24.18
Parent Sample Id: 577014-001 | MS Sample Id: 577014-001 S | MSD Sample Id: 577014-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0690	69	0.0615	62	70-130	11	35	mg/kg	02.24.18 05:38	X
Toluene	<0.00199	0.0996	0.0716	72	0.0662	66	70-130	8	35	mg/kg	02.24.18 05:38	X
Ethylbenzene	<0.00199	0.0996	0.0809	81	0.0724	72	71-129	11	35	mg/kg	02.24.18 05:38	
m,p-Xylenes	<0.00398	0.199	0.161	81	0.144	72	70-135	11	35	mg/kg	02.24.18 05:38	
o-Xylene	<0.00199	0.0996	0.0831	83	0.0748	75	71-133	11	35	mg/kg	02.24.18 05:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		80-120	%	02.24.18 05:38
4-Bromofluorobenzene	111		118		80-120	%	02.24.18 05:38

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

577014

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 2/20/2018 PAGE 1 OF 3

PO #: _____ LAB WORK ORDER #: _____

PROJECT LOCATION OR NAME: Lea Unit 004

LAI PROJECT #: 17-0175-15 COLLECTOR: Drew

TRRP report? ☐ Yes ☐ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☐ | DIESEL - MOD 8015 ☐ ■ ORO | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐ | M300

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX	MTBE	TRPH 418.1	TPH 1005	TPH 1006	GASOLINE MOD 8015	DIESEL - MOD 8015 ■ ORO	VOC 8260	SVOC 8270	PAH 8270	HOLDPAH	8081 PESTICIDES	8151 HERBICIDES	8082 PCBS	TCLP - METALS (RCRA)	TCLP VOC	TCLP - PEST	HERB	Semi-VOC	TOTAL METALS (RCRA)	OTHER LIST	LEAD - TOTAL	D.W. 200.8	TCLP	RCI	TOX	FLASHPOINT	TDS	TSS	% MOISTURE	CYANIDE	pH	HEXAVALENT CHROMIUM	EXPLOSIVES	PECHLORATE	CHLORIDE	ANIONS	ALKALINITY	M300	FIELD NOTES
DP-4 (0-1)		2/20/18	10:36	S	1				X		X		X	X																																				
(1-2)			10:37																																															
(2-3)			10:38																																														
(3-4)			10:39																																														
(4-6)			10:40																																														
(6-8)			10:41																																														
DP-5 (0-1)			10:48								X		X	X																																			
(1-2)			10:49																																														
(2-3)			10:50																																														
(3-4)			10:51																																														
(4-6)			10:53																																														
(6-8)			10:54																																														
DP-6 (0-1)			11:22								X		X	X																																			
(1-2)			11:23																																														
(2-3)			11:24																																														
TOTAL																																																

RELINQUISHED BY:(Signature) Brian Sutherland DATE/TIME 2/20/18 16:48 RECEIVED BY: (Signature) Debbie

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVIN(Temp: -11 IR ID:R-8
CUSTODY CF:(0-6: -0.2°C)
☐ CARRIE (6-23: +0.2°C)
☐ HAND D Corrected Temp: -10.8

XENCO

Final 1.000

Page 65 of 68

577014

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 2/20/2018 PAGE 2 OF 3

PO #: _____ LAB WORK ORDER #: _____

PROJECT LOCATION OR NAME: Lea Unit 004

LAI PROJECT #: 17-0175-15 COLLECTOR: Drew

TRRP report? ☐ Yes ☐ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX X MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 X	DIESEL - MOD 8015 X ORO	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE X ANIONS ☐ ALKALINITY ☐ M300	FIELD NOTES
DP-6 (3-4)		2/20/18	11:25	S	1				X																		X	
DP-1 (0-1)		2/19/18	11:16	S							X		X	X													X	
(1-2)			11:19																									
(2-3)			11:21																									
(3-4)			11:23																									
(4-6)			11:26																									
(6-8)			11:28																									
(8-10)			11:30																									
(10-12)			11:34																									
DP-2 (0-1)			12:37								X		X	X														
(1-2)			12:39																									
(2-3)			12:41																									
(3-4)			12:43																									
(4-6)			12:44																									
(6-8)			12:46																									
TOTAL																												

RELINQUISHED BY:(Signature) Drew Schlafer DATE/TIME 2/20/18 16:48 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

TURN AROUND TIME
NORMAL X
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING
CUSTODY
☐ CARRIE
☐ HAND D
Temp: -11 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: -10.8

Final 1.000

577014

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 2/20/2018 PAGE 3 OF 3

PO #: LAB WORK ORDER #:

PROJECT LOCATION OR NAME: Lea Unit 004

LAI PROJECT #: 17-0175-15 COLLECTOR: Drew

TRRP report? ☐ Yes ☐ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
DP-3 (0-1)		2/19/18	12:54	S	1				X		BTEX X MTBE ☐ TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐ GASOLINE MOD 8015 ☐ DIESEL - MOD 8015 X ORO VOC 8260 ☐ SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ 8082 PCBS ☐ TCLP - METALS (RCRA) ☐ TCLP VOC ☐ TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ TOTAL METALS (RCRA) ☐ OTHER LIST ☐ LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ RCI ☐ TOX ☐ FLASHPOINT ☐ TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ pH ☐ HEXAVALENT CHROMIUM ☐ EXPLOSIVES ☐ PECHLORATE ☐ CHLORIDE X ANIONS ☐ ALKALINITY ☐ M300	
(1-2)			12:56									
(2-3)			12:57									
(3-4)			12:59									
(4-6)			13:02									
(6-8)			13:04									
DP-7 (0-1)			13:48									
(1-2)			13:49									
(2-3)			13:50									
(3-4)			13:51									
(4-6)			13:53									
(6-8)			13:55									
TOTAL												

RELINQUISHED BY:(Signature) Drew Gatlin DATE/TIME 2/20/18 16:48 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

TURN AROUND TIME
NORMAL X
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVIN Temp: -11 IR ID:R-8
CUSTODY CF:(0-6: -0.2°C)
☐ CARRIE (6-23: +0.2°C)
☐ HAND I Corrected Temp: -10.8

Final 1.000

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 02/20/2018 04:48:00 PM

Work Order #: 577014

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-10.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

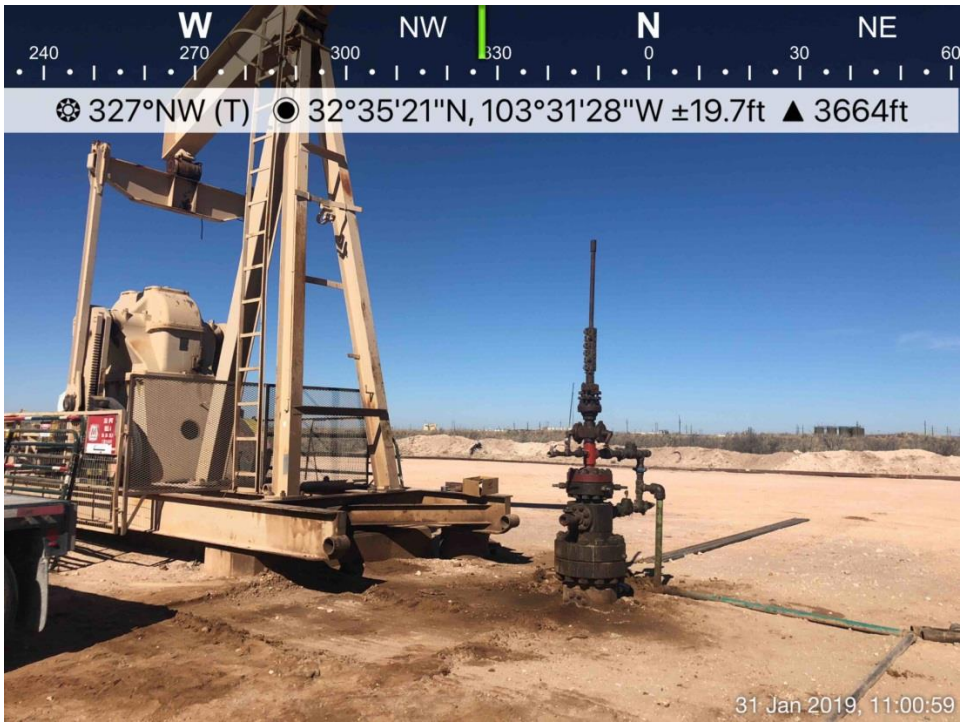
Checklist completed by: Connie Hernandez Date: 02/21/2018

Checklist reviewed by: Holly Taylor Date: 02/22/2018

Appendix E

Photographs

Site Location



Site Viewing Northwest, January 31, 2019

Site Viewing East, January 31, 2019

Site Viewing South, January 31, 2019

Site Viewing West, January 31, 2019

Site Viewing North, January 31, 2019

Appendix F

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 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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Legacy Reserves, L.P.	OGRID 240974
Contact Name Brian Cunningham	Contact Telephone 432-234-9450
Contact email bcunningham@legacylp.com	Incident # *(assigned by OCD)* 1RP-4003
Contact mailing address 303 West Wall Street, Suite 1300	

Location of Release Source

Latitude 32.58950° N Longitude -103.52460° W
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Lea Unit #004	Site Type Well Head
Date Release Discovered 11/24/15	API# *(if applicable)* 30-025-02424

Unit Letter	Section	Township	Range	County
H	11	20S	34E	Lea

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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) unknown	Volume Recovered (bbls) unknown
	Is the concentration of total dissolved solids (TDS) 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

A blowout prevention rod failed during hydraulic fracturing.

State of New Mexico
Oil Conservation Division

Incident ID	
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: Brian Cunningham Title: Production Foreman

Signature: Brian Cunningham Date: 2/01/2019

email: bcunningham@legacylp.com Telephone: 432-234-9450

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
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?	58.14 (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	
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: Brian Cunningham Title: Production Foreman

Signature: Date: 2/01/2019

email: bcunningham@legacylp.com Telephone: 432-234-9450

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
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.***

[x] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[x] 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)

[x] Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

[x] 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: Brian Cunningham Title: Production Foreman

Signature: Date: 2/01/2019

email: bcunningham@legacylp.com Telephone: 432-234-9450

OCD Only

Received by: Vanessa Fields Date: 2/11/2019

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: Date: 2/14/2019

Printed Name: Vanessa Fields Title: Environmental Specialsit