AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pJXK1602649950

1RP - 4117

LEGACY RESERVES OPERATING LP

2/12/2016

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Legacy Reserves Operating, LP	Contact: Berry Johnson
Address: PO Box 10848, Midland, TX 79702-7848	Telephone No.: 432-689-5200
Facility Name: Lea Federal Unit #21	Facility Type: Tank Battery

Surface Owner	Mineral Owner: Federal	API No. 30-025-37525

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	12	20S	34E	810'	North	810'	West	Lea

Latitude 32.589 Longitude 103.521

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 160 bbls	Volume Recovered: 100 bbls
Source of Release: Hole in bottom of oil tank	Date and Hour of Occurrence: 10/17/12 at 11:00am	Date and Hour of Discovery 10/17/12 at 11:00am
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Hole in bottom of oil tank. Fluid contained within the firewalls. Widest point of the spill is around 50'X 40', the rest is around 10'X 150'. Recovered 100 bbls.

Describe Area Affected and Cleanup Action Taken.*
All fluid contained within burm area. Contacted Talon Environmental to begin remediation.

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: Berry Johnson	OIL CONSERVATION DIVISION	
Printed Name: Berry Johnson	Approved by Environmental Specialist:	
Title: Operations Superintendent	Approval Date:	Expiration Date:
E-mail Address: bjohnson@legacylp.com	Conditions of Approval:	Attached ☐
Date: 10/22/2012 Phone: 432-689-5200		

* Attach Additional Sheets If Necessary

TALON LPE

AMARILLO
921 North Bivins
Amarillo. Texas 79107
Phone 806.467.0607
Fax 806.467.0622

ARTESIA
408 West Texas Ave.
Artesia, New Mexico 88210
Phone 575.746.8768
Fax 575.746.8905

AUSTIN
911 West Anderson Lane
Suite 202
Austin, Texas 78757
Phone 512.989.3428
Fax 512.989.3487

HOBBS
318 East Taylor Street
Hobbs, New Mexico 88240
Phone 575.393.4261
Fax 575.393.4658

MIDLAND
2901 State Hwy 349
Midland, Texas 79706
Phone 432.522.2133
Fax 432.522.2180

SAN ANTONIO
11 Commercial Place
Schertz, Texas 78154
Phone 210.265.8025
Fax 210.568.2191

TULSA
525 South Main Street
Suite 535
Tulsa, Oklahoma 74103
Phone 918.742.0871
Fax 918.382.0232

ENVIRONMENTAL CONSULTING
ENGINEERING
DRILLING
CONSTRUCTION
SPILL MANAGEMENT
GENERAL CONTRACTING

Toll Free: 866.742.0742
www.talonlpe.com

December 18, 2012

Mr. Geoffrey Leking
NMOCD District 1
1625 N. French Drive
Hobbs, NM 88240

Subject: **Soil Assessment and Remediation Work Plan**
Legacy Reserves Operating, LP
Lea Federal Unit #21
API # 30-025-37525

Dear Mr. Leking,

Legacy Reserves Operating, LP has contracted Talon/LPE (Talon) to perform soil assessment and remediation services for the Lea Federal Central Tank Battery release. Talon's site assessment, soil sampling results and proposed work plan to perform remediation activities consist of the following:

Incident Date

October 17, 2012

Background Information

The Lea Federal Central Tank Battery is located approximately forty-nine (49) miles northeast of Carlsbad, New Mexico. The legal location for the site is Section 12, Township 20 South and Range 34 East in Lea County, New Mexico. More specifically, the latitude and longitude for the release are 32.589 North and -103.521 West.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Wink Fine Sand. The local surface and shallow geology is Quaternary in Age with sedimentary deposits which are comprised of calcareous-loamy alluvium and calcareous-loamy eolian sands, including silty soils under lain by sedimentary rock and hard caliche. Drainage courses in this area are normally dry. The New Mexico State Engineer web site indicates the nearest ground water data to be in S24-T20S-R34E. The ground water in Section 24 is reported to be at depth of 270' below ground surface (bgs). The referenced groundwater data is presented in Appendix I.

The ranking for this site is 0 based on the as following:

Depth to ground water	>100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Incident Description

A hole in the bottom of an oil tank caused a loss of 160 barrels of oil to be released inside the firewalls of the battery. All fluids were contained within the bermed area. A vacuum truck was immediately called to the location and recovered 100 barrels of oil.

Sampling Activities

On October 22, 2012 Talon mobilized personnel to begin soil sampling for the construction of a work plan. Grab soil samples were collected utilizing a hand auger from the surface of the impacted areas.

On December 5, 2012 Talon personnel returned to the site to collect additional soil samples utilizing a backhoe for further vertical delineation. Grab soil samples were collected from a depth of 3-feet to 10-feet deep.

The soil samples were collected by Talon personnel wearing clean nitrile gloves. The samples were placed into a laboratory provided sample containers, iced and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were tested for TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, volatile organics (BTEX) using EPA Method 8021B and chlorides were analyzed per method SM4500Cl-B. The complete laboratory reports are attached as Appendix II.

Analytical Results

Analytical results received from Cardinal Laboratories are summarized below:

November 29, 2012

Sample	Depth	BTEX	Chlorides	TPH (mg/kg)
S-1	0.75'	1322	7000	8830
	1'	356.32	8200	8850

December 13, 2012

Sample	Depth	BTEX	Chlorides	TPH (mg/kg)
S-1	3'	289.87	2480	5380
	4'	0.674	160	394.2
	6'	2.681	496	443
	8'	<0.150	64	40.2
	10'	<0.150	<16	<10

Proposed Remedial Actions

- The impacted soil will be excavated to a depth of approximately 3-feet deep. Care will be taken not to compromise the structural integrity of the storage tanks. The excavated soil will be transported to an NMOCD approved solid waste disposal facility.

- A mixture of Micro Blaze and water will be spray-applied to the open excavation, sidewalls and at the base of the storage tanks.

- The excavated area will be backfilled to grade using new caliche transported from a local borrow pit. The area will be contoured to match the surrounding location.

- A final report documenting all field activities and lab reports will be provided to the NMOCD Hobbs Office including Form C-141.

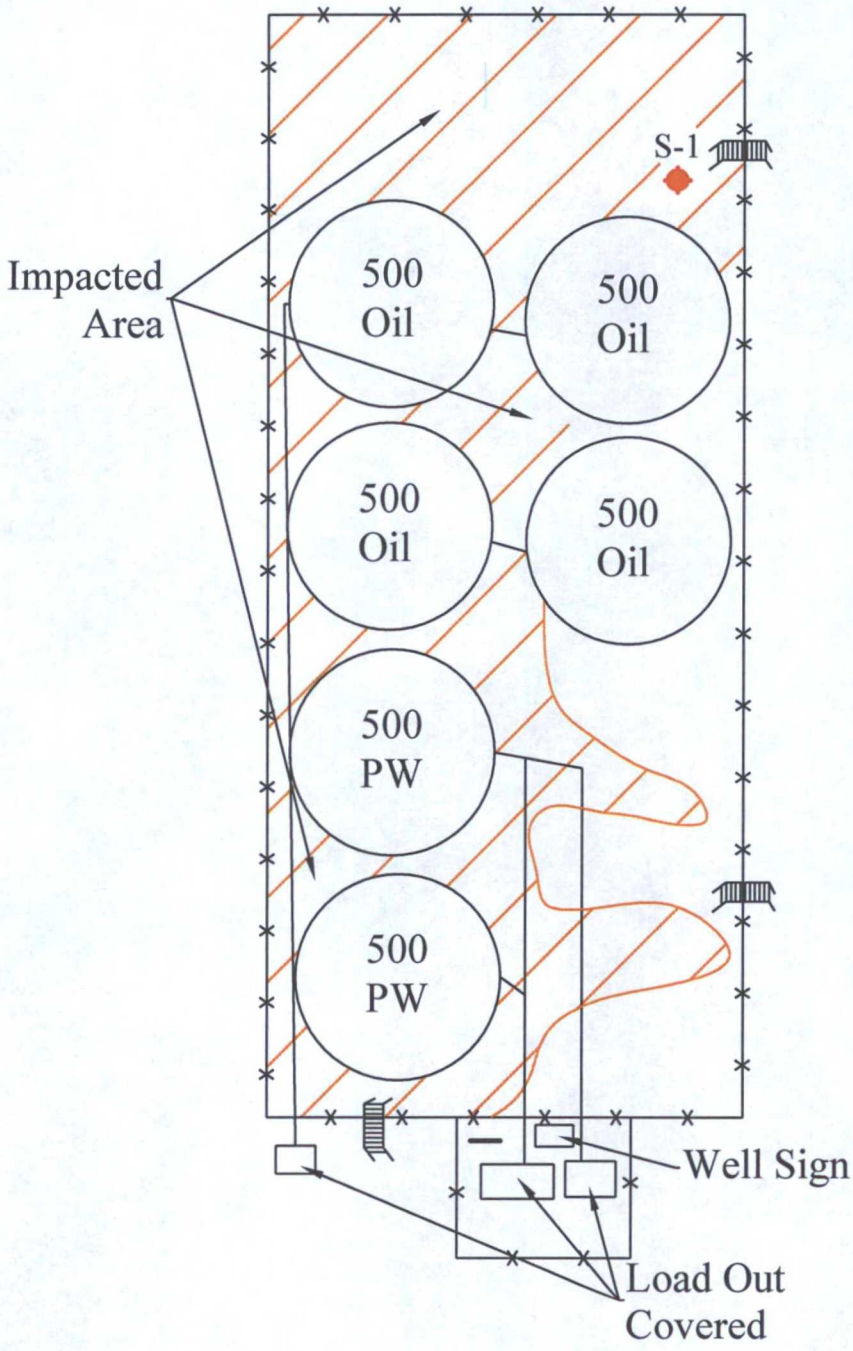
If we can provide additional information or be of further assistance please contact our office at 575.746.8768.

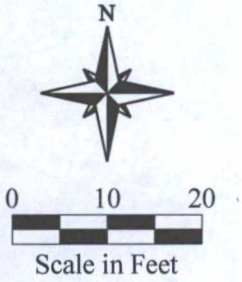
Respectfully submitted,

TALON/LPE

Mike Stubblefield
Project Manager

David J. Adkins
District Manager





Legend

◆ - Sample Location

Date: 12/11/2012	Lea Federal Central Tank Battery - West
Scale: 1" = 20'	Legacy Reserves Operating, LP
Drawn By: TJS	Lea County, New Mexico
	Figure 1 - Site Plan

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

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00665			LE	1	4	24	20S	34E		639740	3603128*	698	270	428
CP 00750			LE	3	4	07	20S	34E		631639	3605834*	320		

Average Depth to Water: **270 feet**

Minimum Depth: **270 feet**

Maximum Depth: **270 feet**

Record Count: 2

PLSS Search:

Township: 20S **Range:** 34E

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

CARDINAL Laboratories

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

October 26, 2012

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: LEA FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/24/12 15:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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:

TALON LPE
DAVID ADKINS
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	10/24/2012	Sampling Date:	10/22/2012
Reported:	10/26/2012	Sampling Type:	Soil
Project Name:	LEA FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701047.062.01	Sample Received By:	Jodi Henson
Project Location:	LEGACY		

Sample ID: S-1 0.75' (H202589-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**22.3**	5.00	10/25/2012	ND	1.76	87.9	2.00	0.815	
Toluene*	**137**	5.00	10/25/2012	ND	1.92	95.9	2.00	1.02	
Ethylbenzene*	**62.3**	5.00	10/25/2012	ND	1.89	94.4	2.00	0.726	
Total Xylenes*	**159**	15.0	10/25/2012	ND	5.72	95.3	6.00	0.867	
Total BTEX	**381**	30.0	10/25/2012	ND					

Surrogate: 4-Bromofluorobenzene (PID *119 %* *89.4-126*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7000**	16.0	10/25/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**3420**	50.0	10/25/2012	ND	195	97.7	200	2.56	
DRO >C10-C28	**5410**	50.0	10/25/2012	ND	216	108	200	9.52	

Surrogate: 1-Chlorooctane *211 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *166 %* *63.6-154*

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:

TALON LPE
DAVID ADKINS
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	10/24/2012	Sampling Date:	10/22/2012
Reported:	10/26/2012	Sampling Type:	Soil
Project Name:	LEA FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701047.062.01	Sample Received By:	Jodi Henson
Project Location:	LEGACY		

Sample ID: S-1 1.0' (H202589-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**4.92**	2.50	10/25/2012	ND	1.76	87.9	2.00	0.815	
Toluene*	**51.8**	5.00	10/25/2012	ND	1.92	95.9	2.00	1.02	
Ethylbenzene*	**30.0**	5.00	10/25/2012	ND	1.89	94.4	2.00	0.726	
Total Xylenes*	**91.6**	15.0	10/25/2012	ND	5.72	95.3	6.00	0.867	
Total BTEX	**178**	30.0	10/25/2012	ND					

Surrogate: 4-Bromofluorobenzene (PID	*117 %*	*89.4-126*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8200**	16.0	10/25/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**2580**	50.0	10/25/2012	ND	195	97.7	200	2.56	
DRO >C10-C28	**6270**	50.0	10/25/2012	ND	216	108	200	9.52	

Surrogate: 1-Chlorooctane	*154 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*182 %*	*63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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

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:	TALON/LPE	BILL TO	
Project Manager:	DAVID ADKINS	P.O. #:	
Address:	408 W. Texas Ave.	Company:	
City:	Artesia State: NM Zip: 88211	Attn:	
Phone #:	Fax #:	Address:	
Project #:	701047.062.01 Project Owner: Legacy	City:	
Project Name:	Lea Federal Tank Battery	State: Zip:	
Project Location:		Phone #:	
Sampler Name:	DAVID ADKINS	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	TPH	BTEX	Chlorides										
H207589																										
1	S-1 0.75'	✓	1			✓					✓		10/22/12	1460	✓	✓	✓										
2	S-1 1.0'	✓	1			✓					✓		10/22	1415	✓	✓	✓										

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 10/24/12 Time: 0900	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 10/24/12 Time: 9:48	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other	5°C	Sample Condition Cool: Yes Intact: Yes / No No	CHECKED BY: (Initials)

REMARKS:

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

CARDINAL Laboratories

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

December 13, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: LEA FEDERAL CENTRAL TANK BATTERY WEST

Enclosed are the results of analyses for samples received by the laboratory on 12/07/12 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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:

TALON LPE
MIKE STUBBLEFIELD
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	12/07/2012	Sampling Date:	12/05/2012
Reported:	12/13/2012	Sampling Type:	Soil
Project Name:	LEA FEDERAL CENTRAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701047.062.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 12 - T20S - R34E		

Sample ID: S - 1 3' (H202949-01)

BTEX 8021B mg/kg **Analyzed By: AP** **S-06**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**1.37**	0.200	12/13/2012	ND	2.05	102	2.00	5.24	
Toluene*	**41.0**	0.200	12/13/2012	ND	2.22	111	2.00	5.18	
Ethylbenzene*	**25.5**	0.200	12/13/2012	ND	2.16	108	2.00	5.33	
Total Xylenes*	**77.0**	0.600	12/13/2012	ND	6.51	109	6.00	5.20	
Total BTEX	**145**	1.20	12/13/2012	ND					

Surrogate: 4-Bromofluorobenzene (PID *338 %* *89.4-126*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2480**	16.0	12/12/2012	ND	448	112	400	3.64	

TPH 8015M mg/kg **Analyzed By: MS** **S-06**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**1510**	50.0	12/10/2012	ND	183	91.4	200	3.20	
DRO >C10-C28	**3870**	50.0	12/10/2012	ND	199	99.3	200	5.48	

Surrogate: 1-Chlorooctane *154 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *147 %* *63.6-154*

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:

TALON LPE
MIKE STUBBLEFIELD
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	12/07/2012	Sampling Date:	12/05/2012
Reported:	12/13/2012	Sampling Type:	Soil
Project Name:	LEA FEDERAL CENTRAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701047.062.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 12 - T20S - R34E		

Sample ID: S - 1 4' (H202949-02)

BTEX 8021B mg/kg Analyzed By: AP S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2012	ND	2.05	102	2.00	5.24	
Toluene*	**0.056**	0.050	12/13/2012	ND	2.22	111	2.00	5.18	
Ethylbenzene*	<0.050	0.050	12/13/2012	ND	2.16	108	2.00	5.33	
Total Xylenes*	**0.281**	0.150	12/13/2012	ND	6.51	109	6.00	5.20	
Total BTEX	**0.337**	0.300	12/13/2012	ND					

Surrogate: 4-Bromofluorobenzene (PIL *127 %* *89.4-126*

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	12/12/2012	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**20.2**	10.0	12/10/2012	ND	183	91.4	200	3.20	
DRO >C10-C28	**374**	10.0	12/10/2012	ND	199	99.3	200	5.48	

Surrogate: 1-Chlorooctane *88.2 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *97.4 %* *63.6-154*

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:

TALON LPE
MIKE STUBBLEFIELD
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	12/07/2012	Sampling Date:	12/05/2012
Reported:	12/13/2012	Sampling Type:	Soil
Project Name:	LEA FEDERAL CENTRAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701047.062.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 12 - T20S - R34E		

Sample ID: S - 1 6' (H202949-03)

BTEX 8021B mg/kg Analyzed By: AP S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2012	ND	2.05	102	2.00	5.24	
Toluene*	**0.063**	0.050	12/12/2012	ND	2.22	111	2.00	5.18	
Ethylbenzene*	**0.238**	0.050	12/12/2012	ND	2.16	108	2.00	5.33	
Total Xylenes*	**1.04**	0.150	12/12/2012	ND	6.51	109	6.00	5.20	
Total BTEX	**1.34**	0.300	12/12/2012	ND					

Surrogate: 4-Bromofluorobenzene (PIL *173 %* *89.4-126*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**496**	16.0	12/12/2012	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**46.0**	10.0	12/10/2012	ND	183	91.4	200	3.20	
DRO >C10-C28	**397**	10.0	12/10/2012	ND	199	99.3	200	5.48	

Surrogate: 1-Chlorooctane *93.2 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *105 %* *63.6-154*

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:

TALON LPE
MIKE STUBBLEFIELD
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	12/07/2012	Sampling Date:	12/05/2012
Reported:	12/13/2012	Sampling Type:	Soil
Project Name:	LEA FEDERAL CENTRAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701047.062.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 12 - T20S - R34E		

Sample ID: S - 1 8' (H202949-04)

BTEX 8021B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2012	ND	2.05	102	2.00	5.24	
Toluene*	<0.050	0.050	12/12/2012	ND	2.22	111	2.00	5.18	
Ethylbenzene*	<0.050	0.050	12/12/2012	ND	2.16	108	2.00	5.33	
Total Xylenes*	<0.150	0.150	12/12/2012	ND	6.51	109	6.00	5.20	
Total BTEX	<0.300	0.300	12/12/2012	ND					

Surrogate: 4-Bromofluorobenzene (PID *118 %* *89.4-126*

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	12/12/2012	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2012	ND	183	91.4	200	3.20	
DRO >C10-C28	**40.2**	10.0	12/10/2012	ND	199	99.3	200	5.48	

Surrogate: 1-Chlorooctane *84.1 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *94.5 %* *63.6-154*

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:

TALON LPE
MIKE STUBBLEFIELD
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	12/07/2012	Sampling Date:	12/05/2012
Reported:	12/13/2012	Sampling Type:	Soil
Project Name:	LEA FEDERAL CENTRAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701047.062.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 12 - T20S - R34E		

Sample ID: S - 1 10' (H202949-05)

BTEX 8021B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/12/2012	ND	2.05	102	2.00	5.24	
Toluene*	<0.050	0.050	12/12/2012	ND	2.22	111	2.00	5.18	
Ethylbenzene*	<0.050	0.050	12/12/2012	ND	2.16	108	2.00	5.33	
Total Xylenes*	<0.150	0.150	12/12/2012	ND	6.51	109	6.00	5.20	
Total BTEX	<0.300	0.300	12/12/2012	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *89.4-126*

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	12/12/2012	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2012	ND	183	91.4	200	3.20	
DRO >C10-C28	<10.0	10.0	12/10/2012	ND	199	99.3	200	5.48	

Surrogate: 1-Chlorooctane *89.7 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *102 %* *63.6-154*

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*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

Celey D. Keene

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:	Talon / LPE	BILL TO	
Project Manager:	David Adkins	P.O. #:	
Address:	408 West Texas Ave.	Company:	Talon / LPE
City:	Artesia State: N.M Zip: 88210	Attn:	
Phone #:	Fax #:	Address:	
Project #:	701042.062.01 Project Owner: Legacy Res.	City:	
Project Name:	LCA Federal Central Tank Battery West	State: Zip:	
Project Location:	Sec. 12 · T20S · R34E	Phone #:	
Sampler Name:	Mac Swerdfeger	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	8015M TPH	8021B BTEX	Total Chlorides									
H207949																									
1	S-1 3'	G				✓					✓		12/5/12	4:38P	✓	✓	✓									
2	S-1 4'	G				✓					✓		12/5/12		✓	✓	✓									
3	S-1 6'	G				✓					✓		12/5/12	4:42P	✓	✓	✓									
4	S-1 8'	G				✓					✓		12/5/12	4:45P	✓	✓	✓									
5	S-1 10'	G				✓					✓		12/5/12	4:53P	✓	✓	✓									

Relinquished By:	Date: 12/7/12	Received By:	Phone Result: ☐ Yes ☐ No	Add'l Phone #:	
Mac Swerdfeger	Time: 1:40	Jodi Henson	Fax Result: ☐ Yes ☐ No	Add'l Fax #:	
Relinquished By:	Date:	Received By:	REMARKS:		
	Time:				
Delivered By: (Circle One)	Sample Condition	CHECKED BY:			
Sampler - UPS - Bus - Other:	Cool ☑ Yes ☐ No	Intact ☑ Yes ☐ No	(Initials)		
5° C					

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

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