

September 28, 2012

Mr. Mike Bratcher  
NMOCD District 2  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210

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

Subject: **Soil Assessment and Remediation Work Plan**  
LRE Operating, LLC  
Karlsbad Corral Central Battery  
API # 30-015-33324

Dear Mr. Bratcher,

LRE Operating, LLC has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced Karlsbad Corral Central Battery release. The results of our soil assessment and proposed remediation activities consist of the following:

**Incident Date**

September 4, 2012

**Background Information**

The Karlsbad Corral Central Battery is located approximately forty-eight (48) miles southeast of Carlsbad, New Mexico. The legal location for the site is Section 2, Township 25 South and Range 29 East in Eddy County, New Mexico. More Specifically the latitude and longitude for the release are 32.152898 North and -103.953089 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 Tonuco loamy sand with a 0 to 3 percent slopes, eroded. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology, Paleozoic Age sedimentary deposits, is comprised of the Salado formations which include loamy alluvium and eolian sands under lain by petrocalcic soils and hard caliche. The New Mexico State Engineer web site indicates the nearest ground water data to be in S10-T25S-R29E. The ground water in Section 10 is reported to be a depth of 40' below ground surface (bgs). The referenced groundwater data is presented in Appendix I.

The ranking for this site is 20 based on the as following:

Depth to ground water	<50'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

## Incident Description

On September 4, 2012 a broken fitting on the transfer pump caused a release of 92 barrels of produced water inside the berms of the battery. A vacuum truck was immediately called to the location and recovered 70 barrels of produced water. A Hydro Vac was subsequently used to recover the heavily contaminated surface soil.

## Actions Taken

On September 7, 2012 Talon/LPE mobilized personnel to begin the site assessment and soil sampling for the construction of a work plan. Grab soil samples were collected utilizing a hand auger to a depth of 2-feet below ground surface. Soil sample locations are illustrated on the attached site plan.

All soil samples were collected by Talon personnel wearing clean nitrile gloves. The soil samples were placed in 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, and volatile organics (BTEX) using EPA Method 8021B. The chloride samples 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:

September 21, 2012

<u>Sample</u>	<u>Depth</u>	<u>BTEX</u>	<u>TPH</u>	<u>Chlorides</u>
S-1	0'	<0.150	<10	33600
	1'	<0.150	<10	1250
	2'	--	--	1180
S-2	0'	0.538	23200	2320
	1'	5.255	8266	256
	2'	--	--	96
S-3	0'	<0.150	192	33600
	1'	<0.150	13.4	672
	2'	--	--	80

For this site's ranking, New Mexico Oil Conservation District action level criterion for BTEX is 50 mg/kg, Benzene is 10 mg/kg and TPH is 100 mg/kg. The chloride remediation standard is considered to be 1,000 mg/kg.

## Summary

- Ground water in the project vicinity is 40-feet below land surface per the New Mexico State Engineer Database.
- Based on the depth to groundwater, it is unlikely that the impacts identified from this release will pose a threat to groundwater after proposed remediation activities are complete.

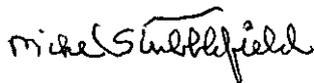
## Proposed Remedial Actions

- The chloride impacted area on location will be excavated to a depth of 1-foot to 2-feet deep. The excavated soil will be transported to a NMOCD approved solid waste disposal facility.
- Confirmation samples will be collected from the bottom and sidewalls of the excavated areas and presented to the NMOCD for permission to complete excavation activities
- Upon NMOCD approval of the confirmation samples, the excavated area will be backfilled to grade using new material transported from a local borrow pit and contoured to match existing location.
- A final report documenting all field activities and lab reports will be provided to the NMOCD Artesia Office including Form C-141.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575.746.8768.

Respectfully submitted,

TALON/LPE



Mike Stubblefield  
Project Manager



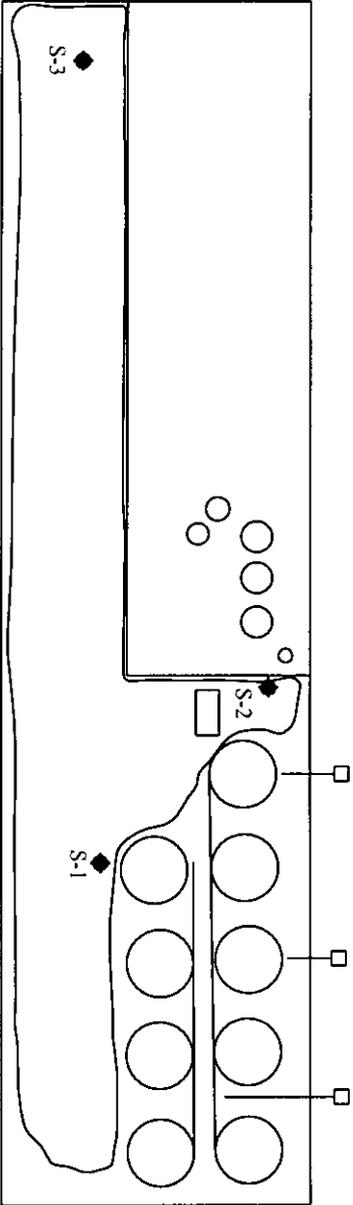
David J. Adkins  
District Manager

**SITE MAP**

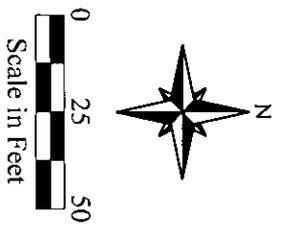


Date: 09/26/2012  
Scale: 1" = 50'  
Drawn By: TJS

Karlsbad Corral Central Battery  
Lime Rock Resources  
Artesia, New Mexico  
Figure 1 - Site Plan



Legend  
◆ - Sample Location



**APPENDIX I**  
**GROUNDWATER DATA**  
**INITIAL C-141**



# 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	Distance	Depth Well	Depth Water	Water Column
<u>C 02459</u>	C	ED	ED	4	4	1	02	25S	29E	598422	3558663*	1010	150		
<u>RA 07162 EXP2</u>		ED	ED	1	3	1	10	25S	29E	596214	3557222*	2892	55	40	15
<u>C 02371</u>	C	ED	ED	2	3	15	25S	29E	596741	3555106*	3584	200	60	140	
<u>C 02680</u>	C	ED	ED	2	3	15	25S	29E	596741	3555106*	3584	200			

Average Depth to Water: **50 feet**

Minimum Depth: **40 feet**

Maximum Depth: **60 feet**

**Record Count: 4**

**UTMNAD83 Radius Search (in meters):**

**Easting (X): 599035**

**Northing (Y): 3557860**

**Radius: 5000**

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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

Form C-141  
Revised August 8, 2011

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

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	LRE Operating, LLC	Contact	Michael Barrett
Address	1111 Bagby Street Suite 4600 Houston, TX 77002	Telephone No.	575-623-8424
Facility Name	Karlsbad Corral Central Battery	Facility Type	Production / Injection
Surface Owner	State	Mineral Owner	State
		API No.	30-015-33324

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	02	25 S	29 E	330'	FSL	1980'	FEL	Eddy

30-015 - 33324

Latitude 32.152898915 Longitude 103.953089064

**NATURE OF RELEASE**

Type of Release	P/W	Volume of Release	92 bbls	Volume Recovered	70 bbls
Source of Release	Broken Nipple on Triplex	Date and Hour of Occurrence	9/4/12 A.M.	Date and Hour of Discovery	9/4/12 @ 11:30 am
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher		
By Whom?	Michael Barrett	Date and Hour	9/5/12 @ 11:00 am		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		

If a Watercourse was Impacted, Describe Fully.\*

N/A

Describe Cause of Problem and Remedial Action Taken.\*

1/2" nipple cracked on triplex pump.  
Used Hydro Vac to pick up heavily contaminated surface soil.  
Work plan will be submitted after soil samples are obtained.

Describe Area Affected and Cleanup Action Taken.\*

Standing fluid was contained inside battery berms.  
All standing fluid was picked up.

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

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist:	
Printed Name: Michael Barrett	Approval Date:	Expiration Date:
Title: Production Supervisor	Conditions of Approval:	
E-mail Address: mbarrett@limerockresources.com	Attached <input type="checkbox"/>	
Date: 09/05/2012 Phone: 575-623-8424		

\* Attach Additional Sheets If Necessary

**APPENDIX II**  
**LABORATORY RESULTS**

September 21, 2012

MIKE STUBBLEFIELD  
TALON LPE  
408 W. TEXAS AVE.  
ARTESIA, NM 88210

RE: KARLSBAD CORRAL CENTRAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 09/14/12 14:50.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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  
Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/14/2012	Sampling Date:	09/07/2012
Reported:	09/21/2012	Sampling Type:	Soil
Project Name:	KARLSBAD CORRAL CENTRAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701307.041.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 2 - T255 - R29E		

**Sample ID: S - 1 0' (H202235-01)**

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	09/20/2012	ND	1.84	92.0	2.00	13.8	
Toluene*	<0.050	0.050	09/20/2012	ND	2.07	103	2.00	11.4	
Ethylbenzene*	<0.050	0.050	09/20/2012	ND	2.04	102	2.00	11.1	
Total Xylenes*	<0.150	0.150	09/20/2012	ND	6.32	105	6.00	9.78	

Surrogate: 4-Bromofluorobenzene (PIL) 99.6% 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	33600	16.0	09/20/2012	ND	400	100	400	3.92	

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	09/19/2012	ND	177	88.4	200	8.27	
DRO >C10-C28	<10.0	10.0	09/19/2012	ND	172	86.1	200	12.5	

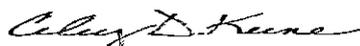
Surrogate: 1-Chlorooctane 77.4% 65.2-140

Surrogate: 1-Chlorooctadecane 74.6% 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/14/2012	Sampling Date:	09/07/2012
Reported:	09/21/2012	Sampling Type:	Soil
Project Name:	KARLSBAD CORRAL CENTRAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701307.041.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 2 - T25S - R29E		

**Sample ID: S - 1 1' (H202235-02)**

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	09/20/2012	ND	1.84	92.0	2.00	13.8		
Toluene*	<0.050	0.050	09/20/2012	ND	2.07	103	2.00	11.4		
Ethylbenzene*	<0.050	0.050	09/20/2012	ND	2.04	102	2.00	11.1		
Total Xylenes*	<0.150	0.150	09/20/2012	ND	6.32	105	6.00	9.78		

Surrogate: 4-Bromofluorobenzene (PIC) 98.5 % 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	1250	16.0	09/20/2012	ND	400	100	400	3.92		

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	09/19/2012	ND	177	88.4	200	8.27		
DRO >C10-C28	<10.0	10.0	09/19/2012	ND	172	86.1	200	12.5		

Surrogate: 1-Chlorooctane 84.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 86.2 % 63.6-154

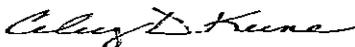
**Sample ID: S - 1 2' (H202235-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1180	16.0	09/20/2012	ND	400	100	400	3.92		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/14/2012	Sampling Date:	09/07/2012
Reported:	09/21/2012	Sampling Type:	Soil
Project Name:	KARLSBAD CORRAL CENTRAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701307.041.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 2 - T25S - R29E		

**Sample ID: S - 2 0' (H202235-04)**

BTEX 8021B		mg/kg		Analyzed By: AP				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	09/20/2012	ND	1.84	92.0	2.00	13.8	
Toluene*	<0.200	0.200	09/20/2012	ND	2.07	103	2.00	11.4	
<b>Ethylbenzene*</b>	<b>0.538</b>	0.200	09/20/2012	ND	2.04	102	2.00	11.1	
Total Xylenes*	<0.600	0.600	09/20/2012	ND	6.32	105	6.00	9.78	

Surrogate: 4-Bromofluorobenzene (PIL) 151 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2320</b>	16.0	09/20/2012	ND	400	100	400	3.92	

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	<200	200	09/19/2012	ND	167	83.7	200	1.70	
<b>DRO &gt;C10-C28</b>	<b>23200</b>	200	09/19/2012	ND	163	81.6	200	1.80	

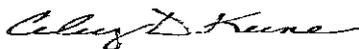
Surrogate: 1-Chlorooctane 99.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 261 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/14/2012	Sampling Date:	09/07/2012
Reported:	09/21/2012	Sampling Type:	Soil
Project Name:	KARLSBAD CORRAL CENTRAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701307.041.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 2 - T25S - R29E		

**Sample ID: S - 2 1' (H202235-05)**

BTEX 8021B		mg/kg		Analyzed By: AP					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.200	0.200	09/20/2012	ND	1.84	92.0	2.00	13.8		
Toluene*	<b>0.285</b>	0.200	09/20/2012	ND	2.07	103	2.00	11.4		
Ethylbenzene*	<b>3.16</b>	0.200	09/20/2012	ND	2.04	102	2.00	11.1		
Total Xylenes*	<b>1.81</b>	0.600	09/20/2012	ND	6.32	105	6.00	9.78		

Surrogate: 4-Bromofluorobenzene (PIE) 271 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<b>256</b>	16.0	09/21/2012	ND	400	100	400	0.00		

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	<b>586</b>	100	09/20/2012	ND	167	83.7	200	1.70		
DRO >C10-C28	<b>7680</b>	100	09/20/2012	ND	163	81.6	200	1.80		

Surrogate: 1-Chlorooctane 117 % 65.2-140

Surrogate: 1-Chlorooctadecane 218 % 63.6-154

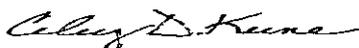
**Sample ID: S - 2 2' (H202235-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<b>96.0</b>	16.0	09/21/2012	ND	400	100	400	0.00		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/14/2012	Sampling Date:	09/07/2012
Reported:	09/21/2012	Sampling Type:	Soil
Project Name:	KARLSBAD CORRAL CENTRAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701307.041.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 2 - T25S - R29E		

**Sample ID: S - 3 0' (H202235-07)**

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	09/20/2012	ND	1.84	92.0	2.00	13.8		
Toluene*	<0.050	0.050	09/20/2012	ND	2.07	103	2.00	11.4		
Ethylbenzene*	<0.050	0.050	09/20/2012	ND	2.04	102	2.00	11.1		
Total Xylenes*	<0.150	0.150	09/20/2012	ND	6.32	105	6.00	9.78		

*Surrogate: 4-Bromofluorobenzene (PIL)*    101 %    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	
<b>Chloride</b>	<b>33600</b>	16.0	09/21/2012	ND	400	100	400	0.00		

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	09/20/2012	ND	167	83.7	200	1.70		
<b>DRO &gt;C10-C28</b>	<b>192</b>	10.0	09/20/2012	ND	163	81.6	200	1.80		

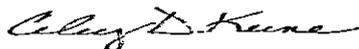
*Surrogate: 1-Chlorooctane*    81.7 %    65.2-140

*Surrogate: 1-Chlorooctadecane*    82.4 %    63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/14/2012	Sampling Date:	09/07/2012
Reported:	09/21/2012	Sampling Type:	Soil
Project Name:	KARLSBAD CORRAL CENTRAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	701307.041.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 2 - T25S - R29E		

**Sample ID: S - 3 1' (H202235-08)**

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	09/20/2012	ND	1.84	92.0	2.00	13.8		
Toluene*	<0.050	0.050	09/20/2012	ND	2.07	103	2.00	11.4		
Ethylbenzene*	<0.050	0.050	09/20/2012	ND	2.04	102	2.00	11.1		
Total Xylenes*	<0.150	0.150	09/20/2012	ND	6.32	105	6.00	9.78		

*Surrogate: 4-Bromofluorobenzene (PIC)*    99.7 %    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	<b>672</b>	16.0	09/21/2012	ND	400	100	400	0.00		

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	09/20/2012	ND	167	83.7	200	1.70		
<b>DRO &gt;C10-C28</b>	<b>13.4</b>	10.0	09/20/2012	ND	163	81.6	200	1.80		

*Surrogate: 1-Chlorooctane*    81.5 %    65.2-140

*Surrogate: 1-Chlorooctadecane*    83.1 %    63.6-154

**Sample ID: S - 3 2' (H202235-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<b>80.0</b>	16.0	09/21/2012	ND	400	100	400	0.00		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

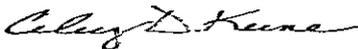
- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interferences.
- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- 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 SM4560CI-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

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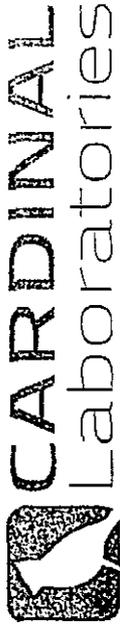
\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

**Company Name:** Talon/LPE **State:** NM **Zip:** 88210

**Project Manager:** Mike Stubbelfield **City:** Artesia

**Address:** 408 West Texas Ave **Phone #:** 575-441-7254 **Fax #:** \_\_\_\_\_

**Project #:** 201307-041-01 **Project Owner:** \_\_\_\_\_

**Project Name:** Karlbad Corral Central Battery

**Project Location:** sec. 2, T25S, R29E

**Sampler Name:** Mike Stubbelfield

**FOR LAB USE ONLY**

Lab I.D.	Sample I.D.	CONTAINERS			MATRIX			PRESERV			DATE	TIME
		#	(GRAB OR COMP)	OTHER:	GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER:	ACID/BASE		
1	5-1 0'										9/9/12	1:20P
2	5-1 1'										9/9/12	1:25P
3	5-1 2'										9/9/12	1:30P
4	5-2 0'										9/9/12	1:40P
5	5-2 1'										9/9/12	1:45P
6	5-2 2'										9/9/12	1:50P
7	5-3 0'										9/9/12	2:00P
8	5-3 1'										9/9/12	2:05P
9	5-3 2'										9/9/12	2:10P

**8015M TPH** **8021G BTEX** **Total chlorides**

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**Relinquished By:** Mike Stubbelfield **Date:** 9-14-12 **Time:** 5:30

**Relinquished By:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Received By:** William Red **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Delivered By:** (Circle One) \_\_\_\_\_ **Checked By:** \_\_\_\_\_

**Sampler - UPS - Bus - Other:** 50 **Sample Condition:** Cool  Intact  In (Lids)

**Phone Result:**  Yes  No **Art'l Phone #:** \_\_\_\_\_

**Fax Result:**  Yes  No **Art'l Fax #:** \_\_\_\_\_

**REMARKS:** \_\_\_\_\_

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326 # 26