



December 12, 2014

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

Subject: **Remedial Activities and Closure Report**  
 Lime Rock Resources II-A, L.P.  
**Atoka San Andres Unit No. 161**  
 30-015-32203 2RP-23**81**

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

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

OKLAHOMA CITY  
 7700 North Hudson Avenue  
 Suite 10  
 Oklahoma City, Oklahoma 73116  
 Phone 405.486.7030  
 Fax 806.467.0622

SAN ANTONIO  
 13111 Lookout Way  
 San Antonio, Texas 78233  
 Phone 210.265.8025  
 Fax 210.568.2191

Dear Mr. Bratcher,

Lime Rock Resources II-A L.P. (Lime Rock) contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced Atoka San Andres Unit No. 161. The incident description, soil sampling results, remediation activities and closure request are submitted herein.

**Incident Date**

July 9, 2014

**Background Information**

The Atoka San Andres Unit No. 161 release is located approximately ten (10) miles southeast of Artesia, New Mexico. The legal location for the site is Section 14, Township 18S, Range 26E in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.750359 North and -104.351519 West. A site plan is presented in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Reagan loam with 0 to 1 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of alluvial fans and eolian deposits which include alluvium and loamy soils underlain by hard caliches. Drainage courses in this area are normally dry. We encountered ground water in the vicinity at 50-feet below ground surface (bgs).

The ranking for this site is **10** Based on the following:

ENVIRONMENTAL CONSULTING	Depth to ground water	50' - 100'
ENGINEERING	Wellhead Protection Area	>1000'
DRILLING	Distance to surface water body	>1000'
CONSTRUCTION		
SPILL MANAGEMENT		
GENERAL CONTRACTING		

Toll Free: 866.742.0742  
 www.talonlpe.com

## Incident Description

On July 9, 2014 a 3-inch buried fiber glass flow line collar failed causing a release of 4 barrels of produced water and 6 barrels of oil. The line was isolated and was repaired. A vacuum truck was immediately called to the location and recovered 1 barrel of produced water and 1 barrel of oil. The initial C-141 is presented in Appendix II.

## Site Assessment and Delineation Activities

### July 10, 2014

- Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected utilizing a hand auger to a depth of 3-feet below ground surface and a backhoe was used to take the 8-foot deep sample.

### June 24, 2014

- Talon personnel returned to the site to obtain deeper vertical delineation samples with a drill rig to a depth of 50-feet below ground surface, where ground water was encountered.

### August 28, 2014

- Talon personnel, Mike Barrett (Lime Rock), Mike Bratcher and Heather Patterson with the NMOCD met on site to discuss further actions. Per NMOCD stipulations another boring was requested.

### September 4, 2014

- Talon personnel returned to the site to drill another boring between the impacted area and the fresh water well to determine the horizontal and vertical extent of contamination. A drill rig with split spoon capabilities was utilized to grab soil samples to a depth of 35-feet below ground surface.

*\*All soil samples were collected by Talon personnel wearing clean nitrile gloves. The soil samples were placed in laboratory provided sample containers 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 total Chloride concentration using Method SM4500CL-B. The complete laboratory reports are attached.*

**Laboratory Results**

See Appendix III for complete report of laboratory results.

July 18, 2014

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	3'	0.482	3120	59.3	2360
S-2	3'	44.1	5520	1130	11100
S-3	3'	430	7360	5580	23900
S-4	2.5'	811	4880	13100	54500
S-5	3'	451	22000	4740	19400
S-6	8'	1130	13300	5960	9420

July 30, 2014

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
B-1	10'	251	12500	813	3210
B-1	15'	455	8000	2970	4280
B-1	20'	24	3760	243	2620
B-1	25'	47.3	8660	146	1190
B-1	30'	15.8	1420	130	1460
B-1	40'	<0.300	800	<10	247
B-1	50'	<0.300	160	<10	<10

September 12, 2014

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
B-2	5'	<0.300	144	<10	<10
B-2	10'	<0.300	176	<10	<10
B-2	15'	<0.300	64	<10	<10
B-2	20'	<0.300	256	<10	<10
B-2	25'	<0.300	112	<10	<10
B-2	30'	<0.300	16	<10	10
B-2	35'	0.356	32	<10	<10

Based upon the site ranking of **10**, NMOCD Recommended Remedial Action Levels (RRAL's) are 50 mg/kg for BTEX, 10 mg for Benzene, and 1,000 mg/kg for TPH.

### Remedial Actions

- The impacted area including between the pipelines was excavated to a depth of 15-feet bgs and backfilled to a depth of 4.5-feet bgs as directed by the NMOCD.
- A 20-mil reinforced liner was installed in the excavation under the pipelines.
- After installation of the liner the excavation was backfilled to grade with locally obtained topsoil.
- All of the impacted soil was hauled to an NMOCD approved solid waste disposal facility.

### Closure

On behalf of Lime Rock Resources, we respectfully request that no further actions be required and that closure with regard to this release be granted.

If we can provide additional information or be of further assistance, please contact our office at (575)-746-8768.

Respectfully submitted,  
TALON/LPE



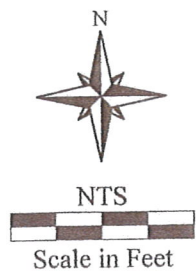
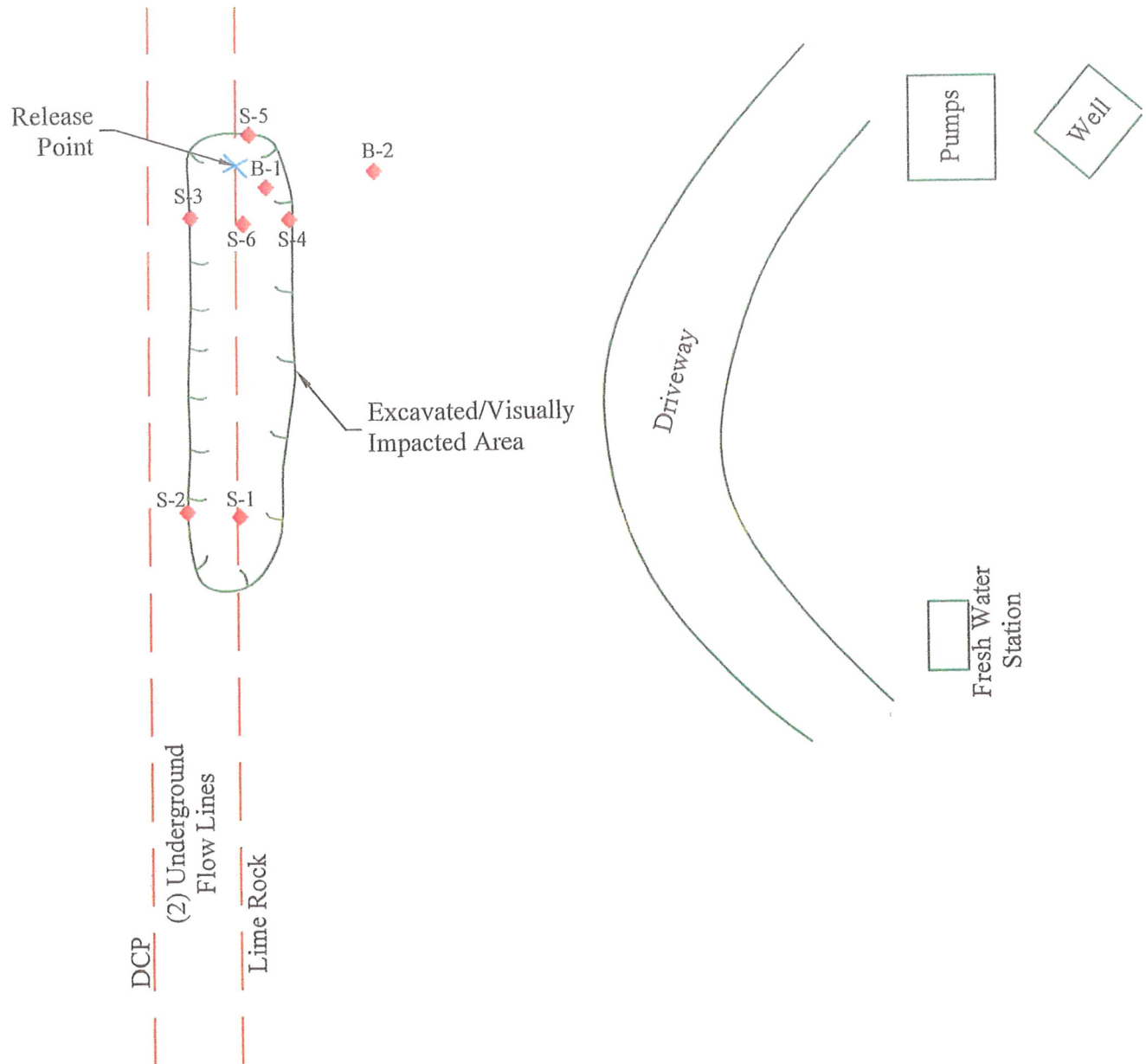
Sheldon Hitchcock  
Project Manager



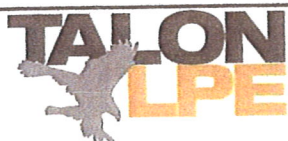
David J. Adkins  
District Manager



## SITE PLAN



**Legend**  
 ♦ - Sample Location



Date: 09/25/2014

Scale: NTS

Drawn By: TJS

Atoka San Andres Unit #161  
 Lime Rock Resources  
 Eddy County, New Mexico  
 Figure 1 - Site Plan

**GROUNDWATER DATA  
INITIAL C-141  
&  
FINIAL 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 Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">RA 11926 POD6</a>			ED	4	1	1	18	17S	27E	563316	3633803	593	20	12	8
<a href="#">RA 11926 POD5</a>			ED	2	3	4	12	17S	26E	562468	3634384	701	25	15	10

Average Depth to Water: 13 feet

Minimum Depth: 12 feet

Maximum Depth: 15 feet

**Record Count: 2**

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

**Easting (X):** 562727

**Northing (Y):** 3633733

**Radius:** 1000

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.

7/10/14 11:42 AM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company : <b>LIME ROCK RESOURCES II-A, LP</b>	Contact : <b>Mike Barrett</b>
Address : <b>1111 Bagby Street Suite 4600, Houston, TX 77002</b>	Telephone No. : <b>575-623-8424</b>
Facility Name : <b>ASAU #161</b>	Facility Type: <b>Pipeline</b>
Surface Owner : <b>Private</b>	Mineral Owner: <b>Fee</b>
Lease No. : <b>API #30-015-25792</b>	

#### LOCATION OF RELEASE


Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<b>G</b>	<b>14</b>	<b>18S</b>	<b>26E</b>	<b>1750'</b>	<b>FNL</b>	<b>2310'</b>	<b>FEL</b>	<b>Eddy</b>

Latitude 32.750359 N Longitude -104.35151 W

#### NATURE OF RELEASE

Type of Release : <b>Produced Fluids</b>	Volume of Release : <b>4 bbls PW &amp; 6 bbls Oil</b>	Volume Recovered: <b>1 bbls PW &amp; 1 bbls Oil</b>
Source of Release : <b>Buried 3" FG flow line collar failure</b>	Date and Hour of Occurrence: <b>7/9/14</b>	Date and Hour of Discovery: <b>7/9/14 @1:00 pm</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>OCD/Mike Bratcher</b>	
By Whom? <b>Kimberly M. Wilson with Talon/LPE</b>	Date and Hour : <b>7/10/14 @ 11:52 am</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* <b>A 3" buried fiber glass flow line collar failed causing a release of 4 barrels of produced water and 6 barrels of oil. The line was isolated and was repaired. A vac truck was immediately called to the location and recovered 1 barrels of produced water and 1 barrels of oil. Talon/LPE was contacted for initial site assessment and to generate a work plan.</b>		
Describe Area Affected and Cleanup Action Taken.* <b>The area affected was along the pipeline measuring approximately 15' long by 8-10' wide in the farmers field.</b>		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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 District Supervisor:	
Printed Name: <b>Michael Barrett</b>		
Title: <b>Production Supervisor</b>	Approval Date:	Expiration Date:
E-mail Address: <b>mbarrett@limerockresources.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>7/10/2014</b> Phone: <b>575-623-8424</b>		

\* Attach Additional Sheets If Necessary

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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  
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1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company : LIME ROCK RESOURCES II-A, LP	Contact : Mike Barrett
Address : 1111 Bagby Street Suite 4600, Houston, TX 77002	Telephone No. : 575-623-8424
Facility Name : ASAU #161	Facility Type: Pipeline
Surface Owner : Private	Mineral Owner: Fee
Lease No. : API #30-015-25792	

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	14	18S	26E	1750'	FNL	2310'	FEL	Eddy

Latitude 32.750359 N Longitude -104.35151 W

### NATURE OF RELEASE


Type of Release : Produced Fluids	Volume of Release : 4 bbls PW & 6 bbls Oil	Volume Recovered: 1 bbls PW & 1 bbls Oil
Source of Release : Buried 3" FG flow line collar failure	Date and Hour of Occurrence: 7/9/14	Date and Hour of Discovery: 7/9/14 @1:00 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? OCD/Mike Bratcher	
By Whom? Kimberly M. Wilson with Talon/LPE	Date and Hour : 7/10/14 @ 11:52 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A 3" buried fiber glass flow line collar failed causing a release of 4 barrels of produced water and 6 barrels of oil. The line was isolated and was repaired. A vac truck was immediately called to the location and recovered 1 barrels of produced water and 1 barrels of oil. Talon/LPE was contacted for initial site assessment and to generate a work plan.

Describe Area Affected and Cleanup Action Taken.\* The area affected was along the pipeline measuring approximately 15' long by 8-10' wide in the farmers field. Talon/LPE utilized an air rotary drilling rig to vertically delineate the site. Once delineation activities were complete a work plan was drafted, submitted and subsequently approved by the NMOCD. Per the approved work plan the impacted area was excavated to a depth of 15-feet deep, backfilled to 4.5-feet deep, a 20-mil liner was installed and the excavation was backfilled and contoured to match the surrounding terrain.

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: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Michael Barrett	Approved by District Supervisor:	
Title: Production Supervisor	Approval Date:	Expiration Date:
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval:	
Date: 12/15/2014 Phone: 575-623-8424	Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

## LABORATORY RESULTS





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

July 18, 2014

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ASAU #161

Enclosed are the results of analyses for samples received by the laboratory on 07/11/14 16:15.

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](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





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: 07/11/2014  
Reported: 07/18/2014  
Project Name: ASAU #161  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 07/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-1 3' (H402119-01)**

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	07/16/2014	ND	2.28	114	2.00	2.77	
Toluene*	<0.050	0.050	07/16/2014	ND	2.28	114	2.00	1.94	
Ethylbenzene*	0.103	0.050	07/16/2014	ND	2.39	119	2.00	2.07	
Total Xylenes*	0.379	0.150	07/16/2014	ND	7.18	120	6.00	1.62	
Total BTEX	0.482	0.300	07/16/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 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	3120	16.0	07/17/2014	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	59.3	50.0	07/15/2014	ND	192	95.9	200	0.641	
DRO >C10-C28	2360	50.0	07/15/2014	ND	203	102	200	3.60	

Surrogate: 1-Chlorooctane 113 % 65.2-140

Surrogate: 1-Chlorooctadecane 155 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/11/2014  
Reported: 07/18/2014  
Project Name: ASAU #161  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 07/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-2 3' (H402119-02)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	07/17/2014	ND	2.26	113	2.00	3.51	
Toluene*	<1.00	1.00	07/17/2014	ND	2.08	104	2.00	3.14	
Ethylbenzene*	9.40	1.00	07/17/2014	ND	2.18	109	2.00	3.52	
Total Xylenes*	34.3	3.00	07/17/2014	ND	6.55	109	6.00	3.43	
Total BTEX	44.1	6.00	07/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 119 % 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	5520	16.0	07/17/2014	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
S-06									

Surrogate: 1-Chlorooctane 189 % 65.2-140

Surrogate: 1-Chlorooctadecane 268 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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: 07/11/2014  
Reported: 07/18/2014  
Project Name: ASAU #161  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 07/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-3 3' (H402119-03)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	11.7	5.00	07/17/2014	ND	2.26	113	2.00	3.51	
Toluene*	72.1	5.00	07/17/2014	ND	2.08	104	2.00	3.14	
Ethylbenzene*	96.3	5.00	07/17/2014	ND	2.18	109	2.00	3.52	
Total Xylenes*	250	15.0	07/17/2014	ND	6.55	109	6.00	3.43	
Total BTEX	430	30.0	07/17/2014	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	7360	16.0	07/17/2014	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	5580	200	07/15/2014	ND	192	95.9	200	0.641	
DRO >C10-C28	23900	200	07/15/2014	ND	203	102	200	3.60	

S-06

Surrogate: 1-Chlorooctane 311 % 65.2-140

Surrogate: 1-Chlorooctadecane 580 % 63.6-154

**Cardinal Laboratories**

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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: 07/11/2014  
Reported: 07/18/2014  
Project Name: ASAU #161  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 07/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-4 2.5' (H402119-04)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	40.6	10.0	07/17/2014	ND	2.26	113	2.00	3.51	
Toluene*	166	10.0	07/17/2014	ND	2.08	104	2.00	3.14	
Ethylbenzene*	141	10.0	07/17/2014	ND	2.18	109	2.00	3.52	
Total Xylenes*	463	30.0	07/17/2014	ND	6.55	109	6.00	3.43	
Total BTEX	811	60.0	07/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 117 % 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	4880	16.0	07/17/2014	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
				S-06					

Surrogate: 1-Chlorooctane 520 % 65.2-140

Surrogate: 1-Chlorooctadecane 1250 % 63.6-154

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**Analytical Results For:**

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

Received: 07/11/2014  
Reported: 07/18/2014  
Project Name: ASAU #161  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 07/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-5 3' (H402119-05)**

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	29.9	5.00	07/17/2014	ND	2.26	113	2.00	3.51	
Toluene*	120	5.00	07/17/2014	ND	2.08	104	2.00	3.14	
Ethylbenzene*	87.9	5.00	07/17/2014	ND	2.18	109	2.00	3.52	
Total Xylenes*	213	15.0	07/17/2014	ND	6.55	109	6.00	3.43	
Total BTEX	451	30.0	07/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 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	22000	16.0	07/17/2014	ND	400	100	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
		S-06							

Surrogate: 1-Chlorooctane 234 % 65.2-140

Surrogate: 1-Chlorooctadecane 462 % 63.6-154

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**Analytical Results For:**

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

Received: 07/11/2014  
Reported: 07/18/2014  
Project Name: ASAU #161  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 07/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-6 8' (H402119-06)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	129	5.00	07/17/2014	ND	2.26	113	2.00	3.51	
Toluene*	261	5.00	07/17/2014	ND	2.08	104	2.00	3.14	
Ethylbenzene*	223	5.00	07/17/2014	ND	2.18	109	2.00	3.52	
Total Xylenes*	514	15.0	07/17/2014	ND	6.55	109	6.00	3.43	
Total BTEX	1130	30.0	07/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 120 % 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	13300	16.0	07/17/2014	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	5960	200	07/15/2014	ND	192	95.9	200	0.641	
DRO >C10-C28	9420	200	07/15/2014	ND	203	102	200	3.60	

Surrogate: 1-Chlorooctane 212 % 65.2-140

Surrogate: 1-Chlorooctadecane 229 % 63.6-154

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### 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

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Celey D. Keene, Lab Director/Quality Manager





(575) 393-2326 FAX (575) 393-2476

ANALYSIS REQUEST





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

July 30, 2014

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ASAU #161

Enclosed are the results of analyses for samples received by the laboratory on 07/23/14 10:50.

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/ga/lab/accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,

Mike Snyder For Celey D. Keene  
Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/23/2014  
Reported: 07/30/2014  
Project Name: ASAU #161  
Project Number: 701307.  
Project Location: LIMEROCK

Sampling Date: 07/17/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Nick Fullerton

**Sample ID: B-1 10' (H402245-01)**

BTEx 8021B			mg/kg		Analyzed By: MS			S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	9.13	0.500	07/26/2014	ND	1.71	85.3	2.00	0.346	
Toluene*	49.2	0.500	07/26/2014	ND	1.72	86.0	2.00	1.98	
Ethylbenzene*	58.1	0.500	07/26/2014	ND	1.70	85.0	2.00	0.0438	
Total Xylenes*	134	1.50	07/26/2014	ND	5.34	88.9	6.00	2.81	
Total BTEX	251	3.00	07/26/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 135 % 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	12500	16.0	07/28/2014	ND	400	100	400	7.69	
TPH 8015M									

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	813	50.0	07/26/2014	ND	184	92.0	200	3.18	
DRO >C10-C28	3210	50.0	07/26/2014	ND	206	103	200	5.65	

Surrogate: 1-Chlorooctane 150 % 65.2-140

Surrogate: 1-Chlorooctadecane 173 % 63.6-154

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/23/2014  
Reported: 07/30/2014  
Project Name: ASAU #161  
Project Number: 701307.  
Project Location: LIMEROCK

Sampling Date: 07/17/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Nick Fullerton

**Sample ID: B-1 15' (H402245-02)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	35.5	2.00	07/26/2014	ND	1.71	85.3	2.00	0.346	
Toluene*	131	2.00	07/26/2014	ND	1.72	86.0	2.00	1.98	
Ethylbenzene*	89.4	2.00	07/26/2014	ND	1.70	85.0	2.00	0.0438	
Total Xylenes*	199	6.00	07/26/2014	ND	5.34	88.9	6.00	2.81	
Total BTEX	455	12.0	07/26/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	8000	16.0	07/28/2014	ND	400	100	400	7.69	
TPH 8015M									S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2970	50.0	07/26/2014	ND	184	92.0	200	3.18	
DRO >C10-C28	4280	50.0	07/26/2014	ND	206	103	200	5.65	

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2970	50.0	07/26/2014	ND	184	92.0	200	3.18	
DRO >C10-C28	4280	50.0	07/26/2014	ND	206	103	200	5.65	

Surrogate: 1-Chlorooctane 160 % 65.2-140

Surrogate: 1-Chlorooctadecane 172 % 63.6-154

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/23/2014  
Reported: 07/30/2014  
Project Name: ASAU #161  
Project Number: 701307  
Project Location: LIMEROCK

Sampling Date: 07/17/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Nick Fullerton

**Sample ID: B-1 20' (H402245-03)**

BTEx 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	07/27/2014	ND	1.71	85.3	2.00	0.346	
Toluene*	2.95	0.200	07/27/2014	ND	1.72	86.0	2.00	1.98	
Ethylbenzene*	7.34	0.200	07/27/2014	ND	1.70	85.0	2.00	0.0438	
Total Xylenes*	13.5	0.600	07/27/2014	ND	5.34	88.9	6.00	2.81	
Total BTEx	24.0	1.20	07/27/2014	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	3760	16.0	07/28/2014	ND	400	100	400	7.69	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	243	50.0	07/26/2014	ND	184	92.0	200	3.18	
DRO >C10-C28	2620	50.0	07/26/2014	ND	206	103	200	5.65	

Surrogate: 1-Chlorooctane 141 % 65.2-140

Surrogate: 1-Chlorooctadecane			171 %		63.6-154				
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\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 07/23/2014  
Reported: 07/30/2014  
Project Name: ASAU #161  
Project Number: 701307  
Project Location: LIMEROCK

Sampling Date: 07/17/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Nick Fullerton

**Sample ID: B-1 25' (H402245-04)**

BTX 8021B			mg/kg						
			Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.86	0.100	07/27/2014	ND	1.71	85.3	2.00	0.346	
Toluene*	9.40	0.100	07/27/2014	ND	1.72	86.0	2.00	1.98	
Ethylbenzene*	11.1	0.100	07/27/2014	ND	1.70	85.0	2.00	0.0438	
Total Xylenes*	24.9	0.300	07/27/2014	ND	5.34	88.9	6.00	2.81	
Total BTX	47.3	0.600	07/27/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	8660	16.0	07/28/2014	ND	400	100	400	7.69	
TPH 8015M			mg/kg						
			Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	146	10.0	07/26/2014	ND	184	92.0	200	3.18	
DRO >C10-C28	1190	10.0	07/26/2014	ND	206	103	200	5.65	

Surrogate: 1-Chlorooctane 136 % 65.2-140

Surrogate: 1-Chlorooctadecane 154 % 63.6-154

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/23/2014  
Reported: 07/30/2014  
Project Name: ASAU #161  
Project Number: 701307.  
Project Location: LIMEROCK

Sampling Date: 07/17/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Nick Fullerton

**Sample ID: B-1 30' (H402245-05)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	07/27/2014	ND	1.71	85.3	2.00	0.346	
Toluene*	1.42	0.100	07/27/2014	ND	1.72	86.0	2.00	1.98	
Ethylbenzene*	3.67	0.100	07/27/2014	ND	1.70	85.0	2.00	0.0438	
Total Xylenes*	10.6	0.300	07/27/2014	ND	5.34	88.9	6.00	2.81	
Total BTEX	15.8	0.600	07/27/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1420	16.0	07/28/2014	ND	400	100	400	7.69	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	130	10.0	07/26/2014	ND	184	92.0	200	3.18	
DRO >C10-C28	1460	10.0	07/26/2014	ND	206	103	200	5.65	

Surrogate: 1-Chlorooctane 131 % 65.2-140

Surrogate: 1-Chlorooctadecane 156 % 63.6-154

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/23/2014  
Reported: 07/30/2014  
Project Name: ASAU #161  
Project Number: 701307.  
Project Location: LIMEROCK

Sampling Date: 07/17/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Nick Fullerton

**Sample ID: B-1 40' (H402245-06)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/27/2014	ND	1.71	85.3	2.00	0.346	
Toluene*	<0.050	0.050	07/27/2014	ND	1.72	86.0	2.00	1.98	
Ethylbenzene*	<0.050	0.050	07/27/2014	ND	1.70	85.0	2.00	0.0438	
Total Xylenes*	<0.150	0.150	07/27/2014	ND	5.34	88.9	6.00	2.81	
Total BTEX	<0.300	0.300	07/27/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	800	16.0	07/28/2014	ND	400	100	400	7.69	
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	07/26/2014	ND	184	92.0	200	3.18	
DRO >C10-C28	247	10.0	07/26/2014	ND	206	103	200	5.65	

Surrogate: 1-Chlorooctane 121 % 65.2-140

Surrogate: 1-Chlorooctadecane 143 % 63.6-154

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 07/23/2014  
Reported: 07/30/2014  
Project Name: ASAU #161  
Project Number: 701307.  
Project Location: LIMEROCK

Sampling Date: 07/17/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Nick Fullerton

**Sample ID: B-1 50' (H402245-07)**

BTEX 8021B mg/kg			Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/27/2014	ND	1.71	85.3	2.00	0.346	
Toluene*	<0.050	0.050	07/27/2014	ND	1.72	86.0	2.00	1.98	
Ethylbenzene*	<0.050	0.050	07/27/2014	ND	1.70	85.0	2.00	0.0438	
Total Xylenes*	<0.150	0.150	07/27/2014	ND	5.34	88.9	6.00	2.81	
Total BTEX	<0.300	0.300	07/27/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	07/25/2014	ND	416	104	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	07/26/2014	ND	184	92.0	200	3.18	
DRO >C10-C28	<10.0	10.0	07/26/2014	ND	206	103	200	5.65	

Surrogate: 1-Chlorooctane 126 % 65.2-140

Surrogate: 1-Chlorooctadecane 139 % 63.6-154

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### 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

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Mike Snyder For 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

<b>Company Name:</b>		TALON LPE	P.O.#:	
<b>Project Manager:</b>		D. ADKINS	<b>Company:</b>	
<b>Address:</b>		408 W. TEXAS	<b>Attn:</b>	
<b>City:</b>		Arlington	<b>State:</b>	TX
<b>Phone #:</b>		(714) 441-4835	<b>Fax #:</b>	
<b>Project #:</b>		701307	<b>Project Owner:</b>	Linc-Rock
<b>Project Name:</b>		ASA # 161	<b>City:</b>	
<b>Project Location:</b>			<b>State:</b>	
<b>Sampler Name:</b>		D. ADKINS	<b>Phone #:</b>	
<b>FOR LAB USE ONLY:</b>			<b>Fax #:</b>	
			<b>MATRIX</b>	
			<b>PRESERV.</b>	
			<b>SAMPLING</b>	

Lab I.D.	Sample I.D.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH	BTEX	TOTAL Chlorides
H402246																
1 B-1,	10'	-	-	-	-	-	-	-	-	-	-	7/17/94	0900	-	-	-
2 R-1,	15'	-	-	-	-	-	-	-	-	-	-	7/17	0915	-	-	-
3 R-1	20'	-	-	-	-	-	-	-	-	-	-	7/17	0930	-	-	-
4 B-1	25'	-	-	-	-	-	-	-	-	-	-	7/17	0940	-	-	-
5 R-1	30'	-	-	-	-	-	-	-	-	-	-	7/17	1000	-	-	-
6 R-1	40'	-	-	-	-	-	-	-	-	-	-	7/17	1030	-	-	-
7 R-1	50'	-	-	-	-	-	-	-	-	-	-	7/17	1100	-	-	-

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<b>Reinquinished By:</b>		Date: 8/23/94	Time: 8:00 AM	Received By: D.A. Adams
<b>Relinquished By:</b>		Date:	Time:	Received By:
<b>Delivered By: (Circle One)</b>		<b>CHECKED BY:</b>		
<b>Sampler - UPS - Bus - Other:</b>		<b>COOL INTACT?</b>		
		<b>No Yes No Yes</b>		
		<b>Initials</b>		
		<b>REMARKS:</b>		
		<b>Phone Result: [ ] Yes [ ] No Add'l Phone #: _____</b>		
		<b>Add'l Fax #: _____</b>		



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September 12, 2014

DAVID ADKINS  
TALON LPE  
408 W. TEXAS AVE.  
ARTESIA, NM 88210

RE: ASAU #161

Enclosed are the results of analyses for samples received by the laboratory on 09/08/14 14:50.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,

Caley D. Keene  
Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 09/08/2014  
Reported: 09/12/2014  
Project Name: ASAU #161  
Project Number: 701307.06601  
Project Location: LIMEROCK-EDDY

Sampling Date: 09/04/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH-2 5" (H402784-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/11/2014	ND	2.01	100	2.00	5.47	
Toluene*	<0.050	0.050	09/11/2014	ND	1.81	90.3	2.00	5.66	
Ethylbenzene*	<0.050	0.050	09/11/2014	ND	1.66	83.0	2.00	5.76	
Total Xylenes*	<0.150	0.150	09/11/2014	ND	5.04	84.0	6.00	5.90	
Total BTEX	<0.300	0.300	09/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 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	144	16.0	09/11/2014	ND	416	104	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	09/11/2014	ND	171	85.7	200	3.50	
DRO >C10-C28	<10.0	10.0	09/11/2014	ND	194	96.8	200	2.80	

Surrogate: 1-Chlorooctane 97.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 09/08/2014  
Reported: 09/12/2014  
Project Name: ASAU #161  
Project Number: 701307.06601  
Project Location: LIMEROCK-EDDY

Sampling Date: 09/04/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH-2 10" SPOON (H402784-02)**

BTEX 8021B			mg/kg							Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Benzene*	<0.050	0.050	09/11/2014	ND	2.01	100	2.00	5.47			
Toluene*	<0.050	0.050	09/11/2014	ND	1.81	90.3	2.00	5.66			
Ethylbenzene*	<0.050	0.050	09/11/2014	ND	1.66	83.0	2.00	5.76			
Total Xylenes*	<0.150	0.150	09/11/2014	ND	5.04	84.0	6.00	5.90			
Total BTEX	<0.300	0.300	09/11/2014	ND							

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	176	16.0	09/11/2014	ND	416	104	400	3.92	
TPH 8015M	mg/kg		Analyzed By: ms						

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	09/11/2014	ND	171	85.7	200	3.50	
DRO >C10-C28	<10.0	10.0	09/11/2014	ND	194	96.8	200	2.80	

Surrogate: 1-Chlorooctane 99.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/08/2014  
Reported: 09/12/2014  
Project Name: ASAU #161  
Project Number: 701307.06601  
Project Location: LIMEROCK-EDDY

Sampling Date: 09/04/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH-2 15" (H402784-03)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/11/2014	ND	2.01	100	2.00	5.47	
Toluene*	<0.050	0.050	09/11/2014	ND	1.81	90.3	2.00	5.66	
Ethylbenzene*	<0.050	0.050	09/11/2014	ND	1.66	83.0	2.00	5.76	
Total Xylenes*	<0.150	0.150	09/11/2014	ND	5.04	84.0	6.00	5.90	
Total BTX	<0.300	0.300	09/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 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	09/11/2014	ND	416	104	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	09/11/2014	ND	171	85.7	200	3.50	
DRO >C10-C28	<10.0	10.0	09/11/2014	ND	194	96.8	200	2.80	

Surrogate: 1-Chlorooctane 99.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 105 % 63.6-154

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Caley D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/08/2014  
Reported: 09/12/2014  
Project Name: ASAU #161  
Project Number: 701307.06601  
Project Location: LIMEROCK-EDDY

Sampling Date: 09/04/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH-2 20" SPOON (H402784-04)**

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/11/2014	ND	2.01	100	2.00	5.47		
Toluene*	<0.050	0.050	09/11/2014	ND	1.81	90.3	2.00	5.66		
Ethylbenzene*	<0.050	0.050	09/11/2014	ND	1.66	83.0	2.00	5.76		
Total Xylenes*	<0.150	0.150	09/11/2014	ND	5.04	84.0	6.00	5.90		
Total BTEX	<0.300	0.300	09/11/2014	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 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	256	16.0	09/11/2014	ND	416	104	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	09/11/2014	ND	171	85.7	200	3.50	
DRO >C10-C28	<10.0	10.0	09/11/2014	ND	194	96.8	200	2.80	

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 113 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/08/2014  
Reported: 09/12/2014  
Project Name: ASAU #161  
Project Number: 701307.06601  
Project Location: LIMEROCK-EDDY

Sampling Date: 09/04/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH-2 25" (H402784-05)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/11/2014	ND	2.01	100	2.00	5.47	
Toluene*	<0.050	0.050	09/11/2014	ND	1.81	90.3	2.00	5.66	
Ethylbenzene*	<0.050	0.050	09/11/2014	ND	1.66	83.0	2.00	5.76	
Total Xylenes*	<0.150	0.150	09/11/2014	ND	5.04	84.0	6.00	5.90	
Total BTEx	<0.300	0.300	09/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 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	112	16.0	09/11/2014	ND	416	104	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	09/11/2014	ND	177	88.3	200	1.34		
DRO >C10-C28	<10.0	10.0	09/11/2014	ND	200	100	200	3.79		

Surrogate: 1-Chlorooctane 93.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 102 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 09/08/2014  
Reported: 09/12/2014  
Project Name: ASAU #161  
Project Number: 701307.06601  
Project Location: LIMEROCK-EDDY

Sampling Date: 09/04/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH-2 30" (H402784-06)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/11/2014	ND	2.01	100	2.00	5.47		
Toluene*	<0.050	0.050	09/11/2014	ND	1.81	90.3	2.00	5.66		
Ethylbenzene*	<0.050	0.050	09/11/2014	ND	1.66	83.0	2.00	5.76		
Total Xylenes*	<0.150	0.150	09/11/2014	ND	5.04	84.0	6.00	5.90		
Total BTEX	<0.300	0.300	09/11/2014	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 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	09/11/2014	ND	416	104	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	09/11/2014	ND	177	88.3	200	1.34		
DRO >C10-C28	10.0	10.0	09/11/2014	ND	200	100	200	3.79		

Surrogate: 1-Chlorooctane 95.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 09/08/2014  
Reported: 09/12/2014  
Project Name: ASAU #161  
Project Number: 701307.06601  
Project Location: LIMEROCK-EDDY

Sampling Date: 09/04/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: BH-2 35" (H402784-07)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/11/2014	ND	2.01	100	2.00	5.47	
Toluene*	<0.050	0.050	09/11/2014	ND	1.81	90.3	2.00	5.66	
Ethylbenzene*	0.069	0.050	09/11/2014	ND	1.66	83.0	2.00	5.76	
Total Xylenes*	0.287	0.150	09/11/2014	ND	5.04	84.0	6.00	5.90	
Total BTEX	0.356	0.300	09/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 123 % 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	32.0	16.0	09/11/2014	ND	416	104	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	09/11/2014	ND	177	88.3	200	1.34	
DRO >C10-C28	<10.0	10.0	09/11/2014	ND	200	100	200	3.79	

Surrogate: 1-Chlorooctane 93.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

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**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

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Celey D. Keene, Lab Director/Quality Manager





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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Talon/LPE		P.O. #:		ANALYSIS REQUEST											
Project Manager: J. Atkins		Company: Talon/LPE													
Address: 408 W. Texas Ave.		Attn:													
City: Artesia		State: NM Zip: 88210													
Phone #: 575-746-8768		Fax #: 575-746-8905													
Project #: 20130206601		Project Owner: Limbeck													
Project Name: As An #161		City:													
Project Location: Eddy		State:													
Sampler Name: G. Baeza		Phone #:													
Fax #:															

Lab I.D.	Sample I.D.	# CONTAINERS	MATRIX				PRESERV.			SAMPLING			DATE	TIME	BTX	TPH	Chlorides
			GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER:	ACID/BASE	ICE / COOL	OTHER:							
H402184	BH-2 5"	1	/	/	/	/	/	/	/	/	/	9-9-14	11:00	/	/	/	/
	BH-2 10" spoon	1	/	/	/	/	/	/	/	/	/	11:05	11:05	/	/	/	/
	BH-2 15"	1	/	/	/	/	/	/	/	/	/	11:20	11:20	/	/	/	/
	BH-2 20" spoon	1	/	/	/	/	/	/	/	/	/	11:30	11:30	/	/	/	/
	BH-2 25"	1	/	/	/	/	/	/	/	/	/	11:40	11:40	/	/	/	/
	BH-2 30"	1	/	/	/	/	/	/	/	/	/	11:48	11:48	/	/	/	/
	BH-2 35"	1	/	/	/	/	/	/	/	/	/	12:03	12:03	/	/	/	/

Relinquished By: [Signature]	Date: 9-5-14	Received By: [Signature]	Date: 9-5-14
Relinquished By: [Signature]	Time: 2:50	Received By: [Signature]	Time: 2:50
Delivered By: (Circle One)		Sample Condition	
Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	
Sampler - UPS - Bus - Other:		CHECKED BY: (Initials)	
4.02		[Signature]	

Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
REMARKS:	

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



**District I**

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**District II**

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Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

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Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

COMMENTS

Action 8410

## COMMENTS

Operator: LIME ROCK RESOURCES II-A, L.P. 1111 Bagby Street Houston, TX 77002	OGRID: 277558
	Action Number: 8410
	Action Type: [C-141] Release Corrective Action (C-141)

## COMMENTS

Created By	Comment	Comment Date
jharimon	Closure report approved on 05/28/2020 by Bradford Billings	7/27/2022

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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 8410

**CONDITIONS**

Operator: LIME ROCK RESOURCES II-A, L.P. 1111 Bagby Street Houston, TX 77002	OGRID: 277558
	Action Number: 8410
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
jharimon	None	7/27/2022