

### **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:** pSAD1416456027

1RP - 3081

**APACHE CORP** 



May 10, 2012

HOBBS OCD

MAY 1 0 2012

Mr. Geoffrey Leking **NMOCD District I** 

1625 N. French Dr. Hobbs, NM 88240

RECEIVED

**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 Subject:

Soil Assessment and Remediation Work Plan

Legacy Reserves Operating, LP

State K Com No. 3 API#30-025-23847

GMBJ10,

AUSTIN

911 West Anderson Lane Suite 202 Austin, Texas 78757 Phone 512,989,3428 Fax 512.989.3487

Our soil sampling results and proposed remediation activities consist of the following:

Dear Mr. Leking,

HOBBS

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

**Incident Date** 

March 14, 2012

MIDLAND

2901 State Hwy 349 Midland, Texas 79706 Phone 432,522,2133 Fax 432.522.2180

II Commercial Place Schertz, Texas 78154 Phone 210.265.8025 Fax 210.568.2191

SAN ANTONIO

THI SA 525 South Main Street Suite 535 Tulsa, Oklahoma 74103 Phone 918.742.0871 Fax 918.382.0232 **Background Information** 

The State K Com No. 3 is located approximately seven (7) miles southwest of Lovington, New Mexico. The legal location for the site is Section 30, Township 16 South and Range 35 East in Lea County, New Mexico. More specifically, the latitude and longitude for the release are 32.887575 North and 103.391621 West. 0-30-165-35E

Legacy Reserves Operating, LP has contracted Talon/LPE (Talon) to perform soil

assessment and remediation services at the above referenced State K Com No. 3 release.

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 Kimbrough gravely loam complex soils with 0 to 3 percent slopes. The local surface and shallow geology, Tertiary Age sedimentary deposits within in the Ogallala Formation, is comprised of calcareous-loamy alluvium and calcareous-loamy eolian deposits derived from sedimentary rock and hard caliches. Drainage courses in this area are normally dry. The New Mexico State Engineer's web site indicates the nearest ground water data to be in S30-T16S-R36E. The ground water in Section 30 is reported to be a depth of 80-feet below ground surface (bgs). The referenced groundwater data is presented in Appendix I.

The ranking for this site is 10 based on the as following:

**ENVIRONMENTAL CONSULTING ENGINEERING** 

DRILLING CONSTRUCTION SPILL MANAGEMENT GENERAL CONTRACTING

50' - 100' Depth to ground water Wellhead Protection Area >1000°

Distance to surface water body >1000'

Toll Free: 866.742.0742 www.talonlpe.com

### **Incident Description**

On March 14, 2012 the Oil Conservation Division (OCD) of Hobbs issued a Letter of Violation (LOV) to Legacy Reserves that there was contamination inside the berms of the tank battery and the southeast corner was leaking outside the berm at the State K Com No. 3. The OCD requested a remediation plan be submitted.

### **Actions Taken**

On March 22, 2012 Talon/LPE mobilized personnel to begin assessment and soil sampling for the construction of a work plan. Grab soil samples were collected in the impacted area utilizing a hand auger. The soil samples were collected from inside the berm (S-1) and from the impacted area located in the pooling area outside berm on southeast corner (S-2).

On March 30, 2012 Talon/LPE mobilized personnel again for soil sampling activities utilizing a backhoe. Grab soil samples were collected from the impacted area inside the flow path (S-3) to a depth of 2-feet deep where refusal was encountered.

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 chlorides were analyzed per Method SM4500Cl-B. The complete laboratory report is attached as Appendix II.

### **Analytical Results**

Analytical results received from Cardinal Laboratories are summarized below:

April 3, 2012

<u>Sample</u>	<u>Depth</u>	BTEX	Chlorides	TPH (mg/kg)
S-1, Berm area	0' 2'	187.255 96.766	32 128	16,410 10,120
S-2, Outside Berm	0'	<0.150	208	1460
April 5, 2012				
Sample	<u>Depth</u>	<u>BTEX</u>	Chlorides	TPH (mg/kg)
S-3, Flow path	0' 1' 2'	<0.150 <0.150 <0.150	48 784 368	<10 <10 <10

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 1,000 mg/kg. The chloride remediation standard is considered to be 1,000 mg/kg.

### **Summary and Conclusions**

- Ground water in the project vicinity is 80-feet below land surface per the New Mexico State Engineer Database.
- Based upon the results of the laboratory data obtained for this investigation, the vertical impacts of the hydrocarbon release have been documented to extend greater than 2-foot below ground surface inside the bermed area.

### **Proposed Remedial Actions**

- The impacted area of the southeast corner of the berm will be removed and transported to a NMOCD approved solid waste disposal facility. The southeast corner of the berm will be re-constructed with new material transported from a local borrow pit.
- The impacted area inside the tank battery will be carefully scraped with a backhoe where possible. The remaining visibly impacted soil in the battery will be hand-excavated by a roustabout crew and stockpiled on plastic sheeting.
- The entire area within the tank battery will be treated with Micro Blaze, a petroleum bioremediation agent.
- The impacted soil (S-2) outside the tank battery will be excavated to a depth of 3-4 feet. All excavated soil will be transported to a NMOCD approved solid waste disposal facility.
- Confirmation soil samples will be collected from the impacted areas upon completion of excavation activities. The soil samples will be submitted to the laboratory for TPH analysis using Method 8015M, and BTEX analysis using Method 8021B.
- Upon NMOCD approval of the confirmation samples, the excavated area will be backfilled to grade using new material transported from a local borrow pit. The area will be contoured to match the existing terrain and seeded using an approved seed mixture for the area.
- Remediation of historical contamination remaining in place within the tank battery would be deferred until closure of the facility.

- A final report documenting all field activities and lab reports will be provided to the NMOCD Hobbs Office and BLM utilizing Form C-141 and Form 3160-5 respectively.
- Upon closure of this location, Legacy Reserves Operating, LP will address any remaining concerns necessary to obtain NMOCD approval for final reclamation of this facility.

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

## APPENDIX I GROUNDWATER DATA LETTER OF VIOLATION (LOV)



### 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

(R=POD has been replaced, O=orphaned,

(quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is (quarters are smallest to largest) closed)

water right file.)	closed)	(quart	ers are	sr	nalle	st to I	argest)	(NAD83	UTM in me	ters)	(	In feet)	
POD Number	POD Code Subbasin	County	Q Q 64 16			_Tws_	_Rng_	x	Y	Distance		•	Water Column
L 01608 POD1		LE	2	2	30	16S	36E	650795	3641175*	1311	145	80	65
L 02145	Ĺ	LE	2	3	31	16S	36E	650033	3638743*	1313	120	78	42
L 02187	L	LE	2	3	31	16S	36E	650033	3638743*	1313	122	74	48
L 02212	Ł	LE	2	3	31	16S	36E	650033	3638743*	1313	105	45	60
L 04932	L	LE	2	1	30	16S	36E	E 649990	0 3641162*	1484	104	90	14
									Averag	je Depth to	Water:	73	feet
										Minimum	Depth:	45	feet
										Maximum	Depth:	90	feet 

**Record Count: 5** 

UTMNAD83 Radius Search (in meters):

Easting (X): 650714

Northing (Y): 3639866

Radius: 2000

<sup>\*</sup>UTM location was derived from PLSS - see Help



## NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

Susana Martinez

Governor

Jami Bailey
Division Director
Oil Conversation Division

John H. Bemis
Cabinet Secretary

<sup>4</sup>Response Required - Deadline Enclosed\*

Field Inspection Program.

Preventing the Adjoint of Our Pavisonment?

14-Mar-12

HOBBS OCD

LEGACY RESERVES OPERATING, LP

MAR 1 5 2012

P O BOX 10848

MIDLAND TX 79702

RECEIVED

LETTER OF VIOLATION - Inspection

Dear Operator

The following inspection(s) indicate that the well-equipment, location or operational status of the well(s) failed to meet standards of the New Mexico Oil Conservation Division as described in the detail section below. To comply with standards imposed by Rules and Regulations of the Division, corrective action must be taken immediately and the situation brought into compliance. The detail section indicates preliminary findings and/or probable nature of the violation. This determination is based on an inspection of your well or facility by an inspector employed by the Oil Conservation Division on the date(s) indicated.

Please notify the proper district office of the Division, in writing, of the date corrective actions are scheduled to be made so that arrangements can be made to reinspect the well and/or facility

### INSPECTION DETAIL SECTION

STATE K COM No.003

O-30-16S-36E

30-025-23847-00-00

Inspection Date

Type Inspection

Inspector

Violation

<sup>1</sup>Significant Non-Comphance? Corrective Action Due By:

Inspection No

03/14/2012

Routine/Periodic

Maxey Brown

Yes

No

6/17/2012

MGB1207434480

Violations

Absent Well Identification Signs (Rule 103)

Surface Leaks/Spills

Comments on Inspection

NEED TO INSTALL SIGN A FTANK BATTERY RULE 19 15 16 8 MUST INCLUDE

CURRENT OPERATOR ALSO CONTAMINATION INSIDE OF BERM AND LEAKING TO THE SOUTHLAST CORNER ON THE OUTSIDE IDENTIFY FILE C-141 REPORT AND TAKE CORRECTIVE ACTION PROD IS CURRENT NEW LEGACY SIGN AT WELL MGB

In the event that a satisfactory response is not received to this letter of direction by the "Corrective Action Due By " date shown above further enforcement will occur. Such enforcement may include this office applying to the Division for an order summoning you to a hearing before a Division Examiner in Santa Fe to show cause why you should not be ordered to permanently plug and abandon this well. Such a hearing may result in imposition of CIVIL PENALTIES for your violation of OCD rules.

Sincerely,

Hobbs OCD District Office

COMPLIANCE OFFICER

Note, Information in Detail Section comes directly from field inspector data entries - not all blanks will contain data. Significant Non-Compliance events are reported directly to the LPA, Region VI. Dallas, Texas.

## APPENDIX II LABORATORY RESULTS



April 03, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: STATE K COM, NO. 3

Enclosed are the results of analyses for samples received by the laboratory on 03/26/12 16:40.

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 <a href="https://www.tceq.texas.gov/field/qa/lab\_accred\_certif.html">www.tceq.texas.gov/field/qa/lab\_accred\_certif.html</a>.

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.

Celey D. Keene

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



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

Received:

03/26/2012

Sampling Date:

03/22/2012

Reported:

04/03/2012

Sampling Type:

Soil

Project Name:

STATE K COM. NO. 3

Sampling Condition:

Cool & Intact

Project Number:

701047.048.01

Sample Received By:

Jodi Henson

Project Location:

SEC.30.T16S-R36E

Sample ID: S-1 0' IMPACTED AREA IN BERM (H200723-01)

BTEX 8021B	mg,	'kg	Analyze	d By: AP					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	8S	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.655	0.200	03/30/2012	ND	1.97	98.3	2.00	4.99	
Toluene*	14.7	0.500	03/30/2012	ND	2.11	105	2.00	5.41	
Ethylbenzene*	14.9	0.500	03/30/2012	ND	2.13	106	2.00	5.66	
Total Xylenes*	157	1.50	03/30/2012	ND	6.66	111	6.00	6.07	
Surrogate: 4-Bromofluorobenzene (PIL	144	% 64.4-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/27/2012	ND	416	104	400	0.00	
TPH 8015M	mg,	kg	Analyzed By: N	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	3910	100	03/28/2012	ND	193	96.3	200	3.15	
DRO >C10-C28	12500	100	03/28/2012	ND	181	90.4	200	7.27	
Surrogate: 1-Chlorooctane	1.76	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	151	% 57.6-15	8						

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 valved 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 Cerdinal in the performance of the services hereunder by Cardinal, regardless of whether such claims a based upon any of the above stated reasons or otherwise. Results refers only to the samples advantage to the performance of the services hereunder by Cardinal in a performance of the services hereunder by Cardinal interactions.

Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager



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

Fax To:

(575) 745-8905

Received:

03/26/2012

Sampling Date:

03/22/2012

Reported:

04/03/2012

Sampling Type:

Soil

STATE K COM. NO. 3

Sampling Condition:

Cool & Intact

Project Name: Project Number:

701047.048.01

Project Location:

SEC.30.T16S-R36E

Sample Received By:

Jodi Henson

Sample ID: S-1 2' (H200723-02)

BTEX 8021B	mg/	kg	Analyze	d By: AP					5-04
Analyte	Result	Reporting Limit	Analyzed	Method 8lank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.446	0.050	03/30/2012	ND	1.97	98.3	2.00	4.99	
Toluene*	3.12	0.050	03/30/2012	ND	2.11	105	2.00	5.41	
Ethylbenzene*	10.0	0.050	03/30/2012	ND	2.13	106	2.00	5.66	
Total Xylenes*	83.2	0.150	03/30/2012	ND	6.66	111	6.00	6.07	
Surrogate: 4-Bromofluorobenzene (PIL	240 5	% 64.4-13	·						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/27/2012	ND	416	104	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	2970	100	03/28/2012	ND	193	96.3	200	3.15	
DRO >C10-C28	7150	100	03/28/2012	ND	181	90.4	200	7.27	
Surrogate: 1-Chlorooctane	245	% 55.5-15	·						
Surrogate: 1-Chlorooctadecane	132 5	% 57.6-15	8						

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keine



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

Received: Reported: 03/26/2012

04/03/2012

Project Name: Project Number: STATE K COM. NO. 3 701047.048.01

Project Location:

SEC.30.T16S-R36E

Sampling Date:

03/22/2012

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: S-2 0' IMPACTED AREA OUT OF BERM (H200723-03)

BTEX 8021B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2012	ND	1.97	98.3	2.00	4.99	
Toluene*	<0.050	0.050	04/03/2012	ND	2.11	105	2.00	5.41	
Ethylbenzene*	<0.050	0.050	04/03/2012	ND	2.13	106	2.00	5.66	
Total Xylenes*	<0.150	0.150	04/03/2012	ND	6.66	111	6.00	6.07	
Surrogate: 4-Bromofluorobenzene (PIL	100 %	64.4-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Anatyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/27/2012	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/28/2012	ND	193	96.3	200	3.15	
DRO >C10-C28	1460	10.0	03/28/2012	ND	181	90.4	200	7.27	
Surrogate: 1-Chlorooctane	103 9	% 55.5-15	4						
Surrogate: I-Chlorooctadecane	128 9	% 57.6-15	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Kuna

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

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Kune

## Laboratories

101 East Warland, Nobbe, HWi 38238

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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AMAI VEIS DECLIEST																				Add'i Phone #:	Thurst River				
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	7.0 %	Company: Talon/LPE	Afin:	A ddrage:	Gliye	Stais: Zip:	**		ECENY, SAMPLING	Hai	:38A: :000 :3	ACID/8	/	Str. 1:350	/ 984:1 210/12/ci	,,			warned fasten an entituate of out, staff in shade to it a changing the properties of the changing of the properties in the changing of the cha	Ö	REMARICS:		MACH	Calculation and a second a second and a second a second and a second a	1.203.2076 ## 26
) 393-2476			te: MM Zip: 8,210		Project Owner Legacy Reserves 3		A		BATRIX	89T	AWOWA TAME	(G)RAE WASTE SOIL SOIL SOIL SUUDG		, <u> </u>	461m.				PLEASE NOTE: Lackley and Densigns. Controls such and density recurrence remaining which shade in controls of tot, stating stat	nervices become by Cruf nel, replicates of without user claim? Spring upon nev of the approximation of the control of the cont	11mc	2 received	1.40 400 Just	Confidence Container Cook Integral Cook Inte	ர் Cardinal cannot accept vorbal changes. Plaase fox writton chenges to 500
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)	Project Blanager:	Address:	City:	Phone 5:	Project #:	Froject Mame:	Project Location:	Sampler Name:	FOR LAB USE ONLY		- 32 C	£620074		3	h				PLEASE NOTE: Linbing a PLEASE NOTE: Linbing a PLAYEDS, All Counts included to retvice. In no event shell G	Reinquished By	m. s. sstudel	Refinquished Ly:	Soulle	Sampler - DPS	r Cardinal



April 05, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: STATE K COM. NO. 3

Enclosed are the results of analyses for samples received by the laboratory on 03/30/12 16:30.

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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited 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.

Celeg & Keine

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



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

Received:

03/30/2012

2012

Sampling Date:

03/30/2012

Reported:

04/05/2012

Sampling Type:

Soil

Project Name:

STATE K COM. NO. 3

Sampling Condition:

Cool & Intact

Project Number:

701047.048.01

Sample Received By:

Jodi Henson

Project Location:

SEC.30.T16S-R36E

### Sample ID: S-3 0' FLOWPATH (H200770-01)

BTEX 8021B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2012	ND	2.02	101	2.00	4.99	
Toluene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.78	
Ethylbenzene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.56	
Total Xylenes*	<0.150	0.150	04/05/2012	ND	6.52	109	6.00	4.30	
Surrogate: 4-Bromofluorobenzene (PIL	100 9	% 64.4-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	B\$	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/02/2012	ND	400	100	400	3.92	
TPH 8015M	mg/	'kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/02/2012	ND	238	119	200	14.0	
DRO >C10-C28	<10.0	10.0	04/02/2012	ND	216	108	200	2.13	
Surrogate: 1-Chlorooctane	113 9	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	108 9	% 57.6-15	8						

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\*=Accredited Analyte

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Celey & Keene



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

Fax To:

(575) 745-8905

Received: Reported: 03/30/2012

04/05/2012

Project Name: Project Number: STATE K COM. NO. 3 701047.048.01

Project Location:

SEC.30.T16S-R36E

Sampling Date:

03/30/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S-3 1' (H200770-02)

BTEX 8021B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2012	ND	2.02	101	2.00	4.99	
Toluene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.78	
Ethylbenzene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.56	
Total Xylenes*	<0.150	0.150	04/05/2012	ND	6.52	109	6.00	4.30	
Surrogate: 4-Bromofluorobenzene (PIL	103 9	% 64.4-13	4						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	04/02/2012	ND	400	100	400	3.92	
TPH 8015M	mg/	'kg	Analyzed By: I						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/02/2012	ND	238	119	200	14.0	
DRO >C10-C28	<10.0	10.0	04/02/2012	ND	216	108	200	2.13	
Surrogate: 1-Chlorooctane	118 5	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	110 5	% 57.6-15	8						

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\*=Accredited Analyte

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:

03/30/2012

Reported:

04/05/2012

Project Name: Project Number: STATE K COM. NO. 3 701047.048.01

Project Location:

SEC.30.T16S-R36E

Sampling Date:

03/30/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

...,...

Sample ID: S-3 2' (H200770-03)

BTEX 8021B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	04/05/2012	ND	2.02	101	2.00	4.99	
Toluene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.78	
Ethylbenzene*	<0.050	0.050	04/05/2012	ND	2.11	105	2.00	4.56	
Total Xylenes*	<0.150	0.150	04/05/2012	ND	6.52	109	6.00	4.30	
Surrogate: 4-Bromofluorohenzene (PIL.	101 %	6 64.4-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	04/02/2012	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	04/02/2012	ND	238	119	200	14.0	
DRO >C10-C28	<10.0	10.0	04/02/2012	ND	216	108	200	2.13	
Surrogate: 1-Chlorooctane	121 %	6 55.5-15	4						
Surrogate: 1-Chlorooctadecane	1169	6 57.6-15	8						

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\*=Accredited Analyte

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500CI-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 & Keine

## CARDINAL Laboratories

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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Sample Condition
Cool Intact
Cool Intact
No No No Sampler - UPS - Bus - Other.) Delivered By: (Circle One)

Time:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-24/6.