



August 8, 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: Soil Assessment and Remediation Work Plan**  
Cimarex Energy  
Crow Flats 16 St. 2H  
30-015-35556

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

Dear Mr. Bratcher

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

Cimarex Energy (Cimarex) has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

#### **Background Information**

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

The Crow Flats 15 St. 2H is located approximately 17 miles East of Artesia, New Mexico. The legal location for this site is Unit Letter M, Section 16, Township 16 South and Range 28 East. More specifically the latitude and longitude for this release are 32.917130 North and -104.188290 West. A site plan is presented in Appendix I.

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

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 the Pajarito Dune land complex with 0 to 3 percent slopes. Drainage courses in this area are normally dry. Groundwater in the project vicinity is approximately 110- feet below ground surface (bgs) according to the New Mexico Office of the State Engineer. See Appendix II for the referenced groundwater data.

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

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

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

ENVIRONMENTAL CONSULTING  
ENGINEERING  
DRILLING  
CONSTRUCTION  
SPILL MANAGEMENT  
GENERAL CONTRACTING

Toll Free: 866.742.0742  
www.talonlpe.com

## Incident Description

A hole in the fire tube on the heater treater caused a release of 15bbls of oil and 5bbls of produced water. The fluid was contained within the berms of the battery. 12bbls of fluid was recovered from the battery. Talon mobilized personnel to conduct a site assessment and soil sampling. Upon receipt of laboratory results from the initial sampling event it was evident that further delineation of the impacted area would be necessary. In order to delineate chlorides to 250 mg/kg per NMOCD requirements Talon mobilized an air rotary drilling rig to conduct the delineation within the battery. The results of our soil sampling activities are summarized in the table below.

## Laboratory Results

See [Appendix III](#) for complete report of laboratory results.

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	34.5	34000	1010	32200
S-1	0.5	137	12800	2410	18300
S-2	0	21.1	8130	119	1660
S-2	0.5	15.6	5040	383	3550
S-3	0	10.9	22000	200	7850
S-3	0.5	4.64	29200	ND	15100
BH-1	5	ND	816	ND	23.6
BH-1	10	ND	128	ND	ND

(--) Analyte Not Tested

(ND) Analyte Not Detected


## Proposed Remedial Actions

- The impacted area will be excavated using visual observations, PID readings, and chloride titrations to guide the excavation. Starting at 1-foot bgs.
- Once field results indicate that all of the impacted material was removed a confirmation sample will be taken and sent to the lab to insure all of the impacted material was removed.
- All of the excavated material will be hauled to an NMOCD solid waste disposal facility.
- The excavation will be backfilled with caliche and contoured to match the surrounding terrain.

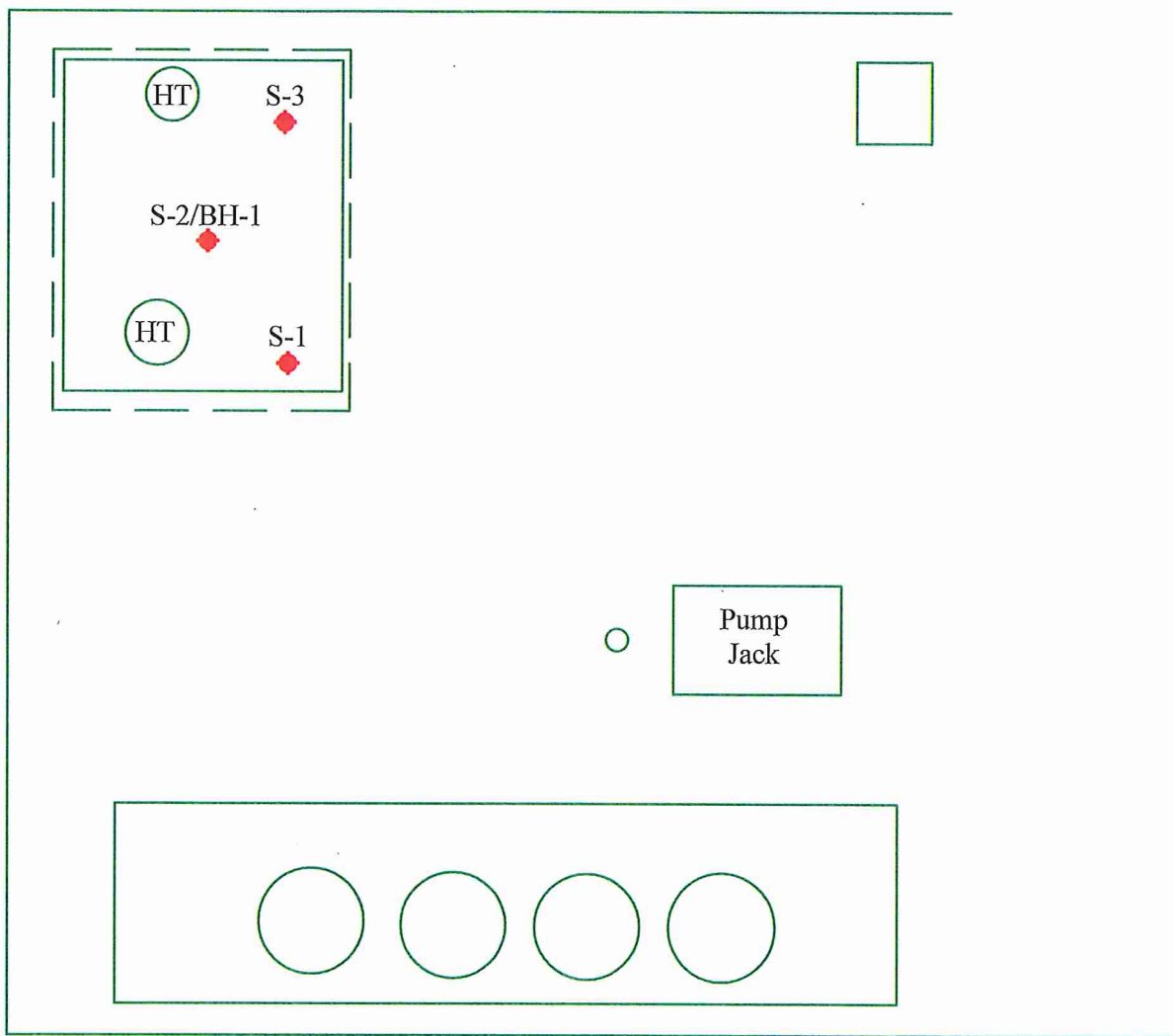
Should you have any questions or if further information is required, please do not hesitate to contact our office at (575)-746-8768.

Respectfully submitted,

  
Sheldon Hitchcock  
Project Manager

  
David J. Adkins  
District Manager

# SITE PLAN



0 10 20  
Scale in Feet

Legend  
◆ - Sample Location



Date: 08/11/2014

Scale: 1" = 20'

Drawn By: TJS

Crow Flats 16 States 2H  
Cimarex Energy  
Eddy County, New Mexico  
Figure 1 - Site Plan

**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 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 09342</a>			ED	4	4	3	19	16S	29E	582737	3640640*	6961	220	110	110

Average Depth to Water: **110 feet**

Minimum Depth: **110 feet**

Maximum Depth: **110 feet**

Record Count: 1

### Basin/County Search:

County: Eddy

### UTMNAD83 Radius Search (in meters):

Easting (X): 575999

Northing (Y): 3642389

Radius: 7000

\*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

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

Form C-141  
Revised August 8, 2011

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

## Release Notification and Corrective Action

### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: CIMAREX ENERGY	Contact: James Tinney
Address : 600 N Marienfeld Ste 600, Midland TX 79701	Telephone No. (575) 706-0095
Facility Name: Crow Flats 16 state 2H	Facility Type: Production Battery

Surface Owner	Mineral Owner	API No. 30-015-35556
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### LOCATION OF RELEASE

Unit Letter M	Section 16	Township 016-S	Range 028-E	Feet from the 660	North/South Line south	Feet from the 330	East/West Line west	County ; Eddy
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Latitude:32.917130 Longitude: -104.188290

### NATURE OF RELEASE

Type of Release: oil/produce water	Volume of Release: 15 oil/5 pw	Volume Recovered: 12 bbls total
Source of Release: hole in heater fire tube	Date and Hour of Occurrence:5/4/2014 @ 0900 hrs	Date and Hour of Discovery: 5/4/2014 @ 0900 hrs
Was Immediate Notice Given? x Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher , 5/5/14 @ 0710 hrs, no answer left message	
By Whom? James Tinney	Date and Hour: 5/5/14 @ 0710 hrs	
Was a Watercourse Reached? <input type="checkbox"/> Yes x No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* hole in fire tube on heater, picked up standing oil and produce water. Release was in an unlined berm.

Describe Area Affected and Cleanup Action Taken.\*

Area affected 36' x 30' contained inside dirt berm (unlined). Called vac truck picked up standing oil and emptied heater.  
Work plan: repair equipment, pick up contaminated soil.

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: <i>James Tinney</i>	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: James Tinney	Approved by Environmental Specialist:		
Title: Production Foreman	Approval Date:	Expiration Date:	
E-mail Address: jtinney@cimarex.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 05/05/2014	Phone: (575) 706-0095		

\* Attach Additional Sheets If Necessary



# LABORATORY RESULTS



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

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May 16, 2014

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: CROW FLATS

Enclosed are the results of analyses for samples received by the laboratory on 05/09/14 12:25.

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

**Analytical Results For:**

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

 Received: 05/09/2014  
 Reported: 05/16/2014  
 Project Name: CROW FLATS  
 Project Number: 70116205801  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 05/07/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S-1 0' (H401411-01)**

BTEx 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	05/14/2014	ND	2.57	128	2.00	1.88	
Toluene*	6.26	1.00	05/14/2014	ND	2.46	123	2.00	0.702	
Ethylbenzene*	9.04	1.00	05/14/2014	ND	2.31	115	2.00	1.10	
Total Xylenes*	19.2	3.00	05/14/2014	ND	7.02	117	6.00	0.363	
Total BTEX	34.5	6.00	05/14/2014	ND					

Surrogate: Dibromofluoromethane 99.1 % 61.3-142

Surrogate: Toluene-d8 101 % 71.3-129

Surrogate: 4-Bromofluorobenzene 130 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	34000	16.0	05/14/2014	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	1010	100	05/14/2014	ND	191	95.3	200	6.37		
DRO >C10-C28	32200	100	05/14/2014	ND	205	102	200	7.53		

Surrogate: 1-Chlorooctane 249 % 65.2-140

Surrogate: 1-Chlorooctadecane 938 % 63.6-154

Cardinal Laboratories

\*==Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 05/09/2014  
Reported: 05/16/2014  
Project Name: CROW FLATS  
Project Number: 70116205801  
Project Location: EDDY COUNTY, NM

Sampling Date: 05/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-1 .5' (H401411-02)**
**BTEX 8260B**
**mg/kg**
**Analyzed By: ms**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	2.46	2.00	05/14/2014	ND	2.57	128	2.00	1.88	
Toluene*	36.9	2.00	05/14/2014	ND	2.46	123	2.00	0.702	
Ethylbenzene*	32.7	2.00	05/14/2014	ND	2.31	115	2.00	1.10	
Total Xylenes*	64.7	6.00	05/14/2014	ND	7.02	117	6.00	0.363	
Total BTEX	137	12.0	05/14/2014	ND					

Surrogate: Dibromofluoromethane 97.4 % 61.3-142

Surrogate: Toluene-d8 101 % 71.3-129

Surrogate: 4-Bromofluorobenzene 122 % 65.7-141

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12800	16.0	05/14/2014	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	2410	100	05/14/2014	ND	191	95.3	200	6.37	
DRO >C10-C28	18300	100	05/14/2014	ND	205	102	200	7.53	

Surrogate: 1-Chlorooctane 309 % 65.2-140

Surrogate: 1-Chlorooctadecane 425 % 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  
DAVID ADKINS  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received: 05/09/2014  
Reported: 05/16/2014  
Project Name: CROW FLATS  
Project Number: 70116205801  
Project Location: EDDY COUNTY, NM

Sampling Date: 05/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-2 0' (H401411-03)**

BTEX 8260B		mg/kg	Analyzed By: ms				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.214	0.100	05/14/2014	ND	2.57	128	2.00	1.88	
Toluene*	4.28	0.100	05/14/2014	ND	2.46	123	2.00	0.702	
Ethylbenzene*	5.19	0.100	05/14/2014	ND	2.31	115	2.00	1.10	
Total Xylenes*	11.4	0.300	05/14/2014	ND	7.02	117	6.00	0.363	
Total BTEX	21.1	0.600	05/14/2014	ND					

Surrogate: Dibromofluoromethane 96.2 % 61.3-142

Surrogate: Toluene-d8 102 % 71.3-129

Surrogate: 4-Bromofluorobenzene 223 % 65.7-141

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8130	16.0	05/14/2014	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	119	50.0	05/14/2014	ND	191	95.3	200	6.37	
DRO >C10-C28	1660	50.0	05/14/2014	ND	205	102	200	7.53	

Surrogate: 1-Chlorooctane 140 % 65.2-140

Surrogate: 1-Chlorooctadecane 161 % 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  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

 Received: 05/09/2014  
 Reported: 05/16/2014  
 Project Name: CROW FLATS  
 Project Number: 70116205801  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 05/07/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S-2 .5' (H401411-04)**

BTEx 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	05/14/2014	ND	2.57	128	2.00	1.88	
Toluene*	2.50	0.500	05/14/2014	ND	2.46	123	2.00	0.702	
Ethylbenzene*	4.13	0.500	05/14/2014	ND	2.31	115	2.00	1.10	
Total Xylenes*	8.98	1.50	05/14/2014	ND	7.02	117	6.00	0.363	
Total BTEx	15.6	3.00	05/14/2014	ND					

Surrogate: Dibromofluoromethane 96.9 % 61.3-142

Surrogate: Toluene-d8 96.8 % 71.3-129

Surrogate: 4-Bromofluorobenzene 131 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5040	16.0	05/14/2014	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	383	50.0	05/14/2014	ND	191	95.3	200	6.37		
DRO >C10-C28	3550	50.0	05/14/2014	ND	205	102	200	7.53		

Surrogate: 1-Chlorooctane 202 % 65.2-140

Surrogate: 1-Chlorooctadecane 283 % 63.6-154

Cardinal Laboratories

\*==Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 05/09/2014  
 Reported: 05/16/2014  
 Project Name: CROW FLATS  
 Project Number: 70116205801  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 05/07/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S-3 0' (H401411-05)**

BTEx 8260B		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	05/14/2014	ND	2.57	128	2.00	1.88	
Toluene*	1.85	0.200	05/14/2014	ND	2.46	123	2.00	0.702	
Ethylbenzene*	2.75	0.200	05/14/2014	ND	2.31	115	2.00	1.10	
Total Xylenes*	6.29	0.600	05/14/2014	ND	7.02	117	6.00	0.363	
Total BTEX	10.9	1.20	05/14/2014	ND					

Surrogate: Dibromofluoromethane 98.0 % 61.3-142

Surrogate: Toluene-d8 99.5 % 71.3-129

Surrogate: 4-Bromofluorobenzene 162 % 65.7-141

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	05/14/2014	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	200	50.0	05/14/2014	ND	191	95.3	200	6.37		
DRO >C10-C28	7850	50.0	05/14/2014	ND	205	102	200	7.53		

Surrogate: 1-Chlorooctane 176 % 65.2-140

Surrogate: 1-Chlorooctadecane 266 % 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: 05/09/2014  
Reported: 05/16/2014  
Project Name: CROW FLATS  
Project Number: 70116205801  
Project Location: EDDY COUNTY, NM

Sampling Date: 05/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-3 .5' (H401411-06)**

BTX 8260B		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	05/14/2014	ND	2.57	128	2.00	1.88	
Toluene*	0.684	0.200	05/14/2014	ND	2.46	123	2.00	0.702	
Ethylbenzene*	1.09	0.200	05/14/2014	ND	2.31	115	2.00	1.10	
Total Xylenes*	2.86	0.600	05/14/2014	ND	7.02	117	6.00	0.363	
Total BTX	4.64	1.20	05/14/2014	ND					

Surrogate: Dibromofluoromethane 94.2 % 61.3-142

Surrogate: Toluene-d8 97.8 % 71.3-129

Surrogate: 4-Bromofluorobenzene 156 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	29200	16.0	05/14/2014	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	<50.0	50.0	05/14/2014	ND	191	95.3	200	6.37	
DRO >C10-C28	15100	50.0	05/14/2014	ND	205	102	200	7.53	

Surrogate: 1-Chlorooctane 133 % 65.2-140

Surrogate: 1-Chlorooctadecane 510 % 63.6-154

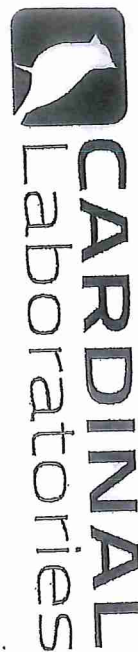
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\* = Accredited Analyte

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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

ANALYSIS REQUEST

Company Name: Talon/LPE		P.O. #:															
Project Manager:		Company: Talon/LPE															
Address: 408 W. Texas Ave.		Attn:															
City: Artesia		Address:															
State: NM Zip: 88210		City:															
Phone #: 575-746-8768		State: Zip:															
Fax #: 575-746-8905		Phone #:															
Project #: 20116205801		Fax #:															
Project Name: <u>Crew Flats</u> <u>Flow Flats</u>		PRESERV															
Project Location: <u>Eddy</u>		SAMPLING															
Sample Name: <u>G. Barro</u>																	
FOR LAB USE ONLY																	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	PH	Chlorides	BIEX
<u>H40141</u>	<u>S-1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>5-2-14</u>	<u>11:50</u>	<u>11</u>	<u>1</u>	<u>1</u>
<u>2</u>	<u>S-1</u>	<u>0.5</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>12:00</u>	<u>12:00</u>	<u>11</u>	<u>1</u>	<u>1</u>
<u>3</u>	<u>S-2</u>	<u>0.5</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>12:05</u>	<u>12:05</u>	<u>11</u>	<u>1</u>	<u>1</u>
<u>4</u>	<u>S-2</u>	<u>0.5</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>12:15</u>	<u>12:15</u>	<u>11</u>	<u>1</u>	<u>1</u>
<u>5</u>	<u>S-2</u>	<u>0.5</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>12:19</u>	<u>12:19</u>	<u>11</u>	<u>1</u>	<u>1</u>
<u>6</u>	<u>S-3</u>	<u>0.5</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>12:19</u>	<u>12:19</u>	<u>11</u>	<u>1</u>	<u>1</u>
<p>PLEASE NOTE: Liability and Damages. Cardinal's liability and damage coverage is limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause, shall be subject to the terms and conditions of the applicable policy. In no event shall Cardinal be liable for indirect or consequential damages, including without limitation, business interruption, loss of data or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>																	
Relinquished By: <u>[Signature]</u>		Received By: <u>[Signature]</u>		REMARKS:													
Relinquished Date: <u>5/2/14</u>		Received Date: <u>5/2/14</u>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:													
Relinquished Time: <u>11:50</u>		Received Time: <u>11:50</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #:													
Delivered By: (Circle One) <u>UPS</u>		Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact		CHECKED BY: <u>[Signature]</u>													
Sampler - UPS - Bus - Other:		Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/>		4:30 <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No													



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

July 08, 2014

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: CROW FLATS #16

Enclosed are the results of analyses for samples received by the laboratory on 07/01/14 15:40.

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

**Analytical Results For:**

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

Received:	07/01/2014	Sampling Date:	06/25/2014
Reported:	07/08/2014	Sampling Type:	Soil
Project Name:	CROW FLATS #16	Sampling Condition:	Cool & Intact
Project Number:	701162.058.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: BH-1 5' (H402006-01)**

BTX 8260B		mg/kg		Analyzed By: ms/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/07/2014	ND	2.18	109	2.00	9.71		
Toluene*	<0.050	0.050	07/07/2014	ND	1.84	92.2	2.00	9.99		
Ethylbenzene*	<0.050	0.050	07/07/2014	ND	1.75	87.3	2.00	10.4		
Total Xylenes*	<0.150	0.150	07/07/2014	ND	5.43	90.6	6.00	11.5		
Total BTX	<0.300	0.300	07/07/2014	ND						

Surrogate: Dibromofluoromethane 103 % 61.3-142

Surrogate: Toluene-d8 104 % 71.3-129

Surrogate: 4-Bromofluorobenzene 106 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	816	16.0	07/08/2014	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	07/04/2014	ND	180	90.2	200	1.72		
DRO >C10-C28	23.6	10.0	07/04/2014	ND	193	96.4	200	0.0794		

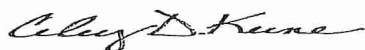
Surrogate: 1-Chlorooctane 113 % 65.2-140

Surrogate: 1-Chlorooctadecane 124 % 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  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	07/01/2014	Sampling Date:	06/25/2014
Reported:	07/08/2014	Sampling Type:	Soil
Project Name:	CROW FLATS #16	Sampling Condition:	Cool & Intact
Project Number:	701162.058.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: BH-1 10' (H402006-02)**

BTX 8260B		mg/kg		Analyzed By: ms/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/07/2014	ND	2.16	108	2.00	1.57		
Toluene*	<0.050	0.050	07/07/2014	ND	1.78	89.0	2.00	2.82		
Ethylbenzene*	<0.050	0.050	07/07/2014	ND	1.69	84.3	2.00	3.97		
Total Xylenes*	<0.150	0.150	07/07/2014	ND	5.25	87.5	6.00	2.78		
Total BTX	<0.300	0.300	07/07/2014	ND						

Surrogate: Dibromofluoromethane 97.7 % 61.3-142

Surrogate: Toluene-d8 104 % 71.3-129

Surrogate: 4-Bromofluorobenzene 101 % 65.7-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	07/08/2014	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	07/04/2014	ND	180	90.2	200	1.72		
DRO >C10-C28	<10.0	10.0	07/04/2014	ND	193	96.4	200	0.0794		

Surrogate: 1-Chlorooctane 115 % 65.2-140

Surrogate: 1-Chlorooctadecane 126 % 63.6-154

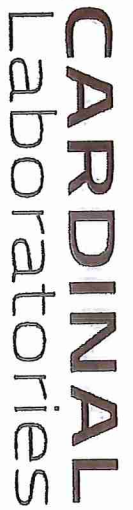
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Celey D. Keene, Lab Director/Quality Manager



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