

July 2, 2012

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

AMARILLO
921 North Bivins
Amarillo Texas 79107
Phone 806 467 0607
Fax 806 467 0622

ARTESIA
408 West Texas Ave
Artesia, New Mexico 88210
Phone 575 746 8768
Fax 575 746 8905

AUSTIN
911 West Anderson Lane
Suite 202
Austin, Texas 78757
Phone 512 989.3428
Fax 512 989 3487

HOBBS
318 East Taylor Street
Hobbs, New Mexico 88240
Phone 575 393 4261
Fax 575 393 4658

MIDLAND
2901 State Hwy 349
Midland, Texas 79706
Phone 432 522 2133
Fax 432 522 2180

SAN ANTONIO
11 Commercial Place
Schertz, Texas 78154
Phone 210 265 8025
Fax 210 568 2191

TULSA
525 South Main Street
Suite 535
Tulsa, Oklahoma 74103
Phone 918 742 0871
Fax 918 382 0232

Subject: **Soil Assessment and Remediation Work Plan**
Cimarex Energy
West Shugart 31 Federal Com No. 3
API # 30-015-37350

Dear Mr. Bratcher,

Cimarex Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the referenced West Shugart 31 Federal Com No. 3 release. Talon's soil assessment results and proposed remediation activities consist of the following:

Background Information

The West Shugart 31 Federal Com No. 3 is located approximately thirty-one (31) miles southeast of Artesia, New Mexico. The legal location for the site is Section 31, Township 18 South and Range 31 East in Eddy County, New Mexico. More Specifically the latitude and longitude for the release are 32.709384 North and -103.916043 West.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Simona gravelly fine sandy loam with 0 to 3 percent slopes. The local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of alluvium and eolian sands underlain by gravelly fine sandy loam and hard caliches. According to the Texaco/Chevron Eddy County Water Trend Data Map (2005) the depth to groundwater is approximately 175-feet deep.

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

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

Incident Description

On May 11, 2012 a valve closed on the production equipment causing a pressure release valve (PRV) to malfunction causing 6 barrels hydrocarbons to spray inside the berm and behind the tank battery in the pasture. A site plan illustrating the work area is attached.

ENVIRONMENTAL CONSULTING
ENGINEERING
DRILLING
CONSTRUCTION
SPILL MANAGEMENT
GENERAL CONTRACTING

Actions Taken

On May 15, 2012 Talon/LPE mobilized personnel to begin assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected utilizing a hand auger. Grab soil samples were collected from the surface of the impacted areas to a depth of 1-foot deep. The impacted area was then treated using a total of 500 gallons of fresh water and Micro-Blaze, a bio-remediation agent.

All soil samples were collected by Talon personnel wearing clean nitrile gloves. The samples were placed in laboratory provided sample containers, iced and transported to Cardinal Laboratories in Hobbs, New Mexico. The samples were tested for TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, volatile organics (BTEX) using EPA Method 8021B and analysis of Chlorides using Method SM4500CL-B. The complete laboratory report is attached as Appendix II.

Analytical Results

Analytical results received from Cardinal Laboratories are summarized below:

May 18, 2012

<u>Sample, Depth</u>	<u>Location</u>	<u>Chlorides</u>	<u>BTEX</u>	<u>TPH (mg/kg)</u>
S-1 0'	Bermed Area	656	10.53	14,024
0.5'		128	<0.150	33.7
1'		704	<0.150	<10
S-2 0'	Pasture	448	<0.150	5,210
0.5'		32	<0.150	32.6
1'		32	<0.150	79.7

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 5,000 mg/kg. The chloride remediation standard is considered to be 1,000 mg/kg.

Summary

- Groundwater in the project vicinity is greater than 100-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 0.5-feet below ground surface.

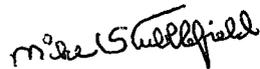
Proposed Remedial Actions

- Confirmation samples will be collected from the treated (Micro-Blazed) overspray area located in the tank battery and pasture in 60 days.
- If analytical results report the TPH to be above the Recommended Remedial Action Levels (RRAL's) for the area, a total of 500-gallons of fresh water and Micro Blaze will be re-applied to the impacted areas. Follow up samples will be obtained in 60 days.
- When analytical results for soil samples collected from the treated area report the TPH to be under the RRAL for the area a final report documenting all field activities and lab reports will be provided to the NMOCD Artesia Office including Form C-141.

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

Respectfully submitted,

TALON/LPE



Mike Stubblefield
Project Manager



David J. Adkins
District Manager

APPENDIX I
INITIAL C-141

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

Form C-141
Revised October 10, 2003

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

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-Cimarex Energy	Contact- James Tinney
Address-600 N Marienfeld Ste 600, Midland TX 79701	Telephone No 575 706 0095
Facility Name-West Shugart 31 fed com 3H	Facility Type- Tank battery

Surface Owner	Mineral Owner	Lease No.NM-0560352
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LOCATION OF RELEASE

Unit Letter	Section 31	Township 18S	Range 31E	Feet from the 660	North/South Line North	Feet from the 280	East/West Line West	County - Eddy
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Latitude-32.7086 Longitude- 103 91695

NATURE OF RELEASE

Type of Release- crude oil	Volume of Release--6 bbls	Volume Recovered-0 bbls
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? BLM-Jim Amos (left message) BLM on call number Mike Bratch -NMOCD-(left message)	
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
Valve closed on production equipment causing PRV(pressure release valve) to release, causing hydro carbons to spray inside berm area and behind battery Called for vac truck and picked up standing oil inside berm and around equipment.

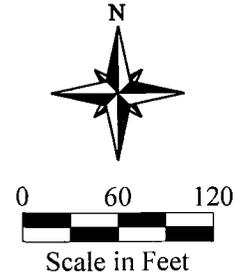
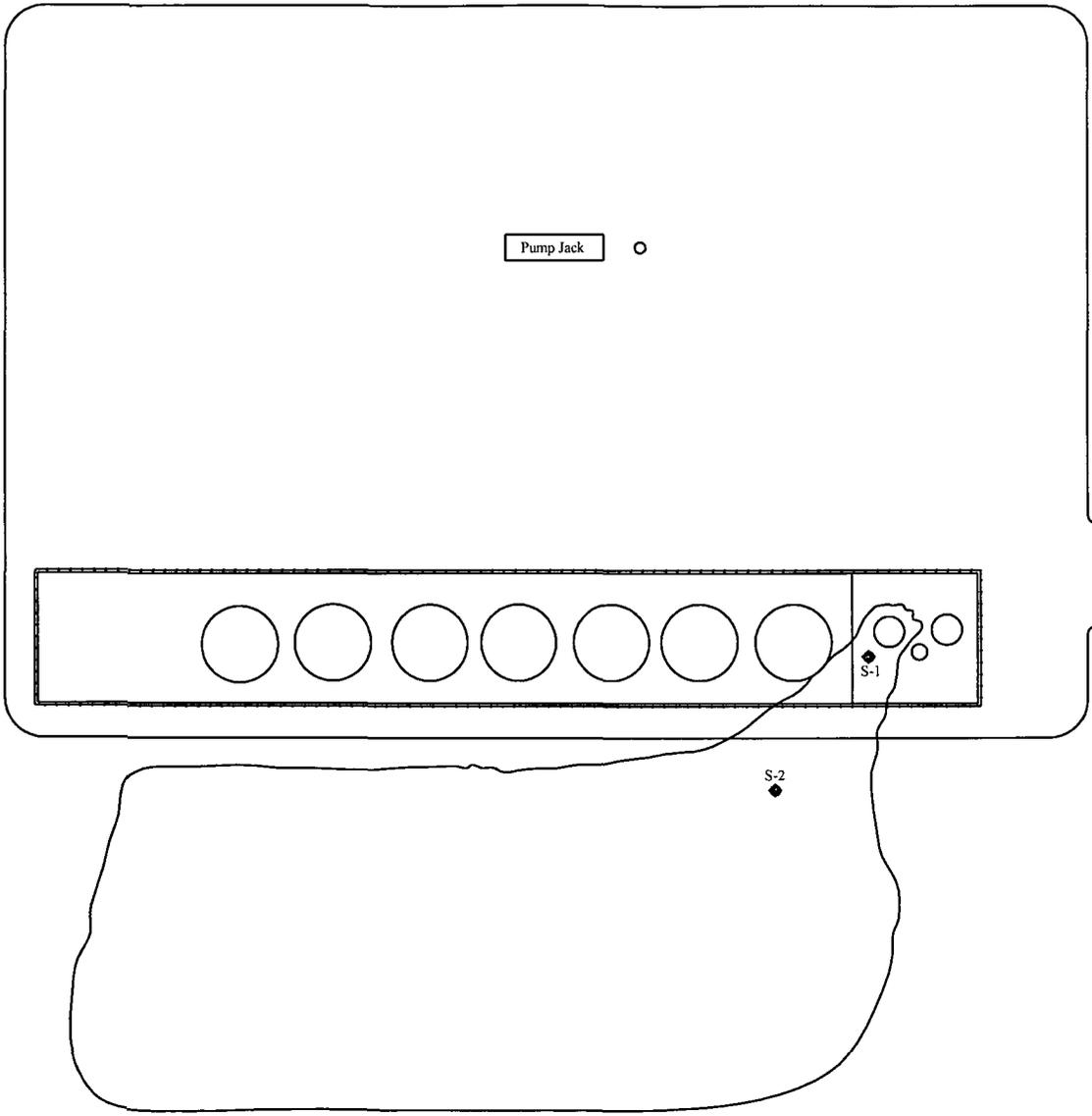
Describe Area Affected and Cleanup Action Taken
Inside berm area and pasture behind battery, cleaned up standing oil, planned to spray micro-blaze on pasture Notified Talon, LLP to do assessment and work plane.

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.	OIL CONSERVATION DIVISION		
Printed Name James Tinney	Approved by District Supervisor -		
Title: Production Foreman	Approval Date:	Expiration Date:	
E-mail Address. jtinney@cimarex.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date 5-15-12 Phone. 575-706-0095			

* Attach Additional Sheets If Necessary

SITE MAP



Legend

- ◆ - Sample Locations
- x— - Fence line



Date: 06/06/2012
 Scale: 1" = 120'
 Drawn By: TJS

West Shugart 31 Fed Com #3H
 Cimarex Energy Company
 Artesia, New Mexico
 Figure 1 - Site Plan

APPENDIX II
LABORATORY RESULTS

May 18, 2012

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

RE: WEST SHUGART 31 FEDERAL COM NO 3H

Enclosed are the results of analyses for samples received by the laboratory on 05/16/12 10:10

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	05/16/2012	Sampling Date:	05/15/2012
Reported:	05/18/2012	Sampling Type:	Soil
Project Name:	WEST SHUGART 31 FEDERAL COM NO. :	Sampling Condition:	Cool & Intact
Project Number:	701162.018.01	Sample Received By:	Jodi Henson
Project Location:	SEC 31-T18S-R31E		

Sample ID: S-1 0' BGS BERMED AREA (H201093-01)

BTEX 8021B		mg/kg		Analyzed By: ZZZ				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/17/2012	ND	2.14	107	2.00	4.14		
Toluene*	0.430	0.050	05/17/2012	ND	2.24	112	2.00	4.57		
Ethylbenzene*	2.79	0.050	05/17/2012	ND	2.22	111	2.00	4.16		
Total Xylenes*	7.31	0.150	05/17/2012	ND	6.86	114	6.00	4.40		

Surrogate 4-Bromofluorobenzene (PID) 149 % 64 4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	656	16.0	05/17/2012	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-06		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	294	50.0	05/16/2012	ND	205	103	200	5.10		
DRO >C10-C28	14000	50.0	05/16/2012	ND	222	111	200	26.6		

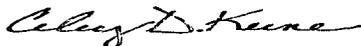
Surrogate 1-Chlorooctane 207 % 55 5-154

Surrogate 1-Chlorooctadecane 1060 % 57 6-158

Cardinal Laboratories

* = Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	05/16/2012	Sampling Date:	05/15/2012
Reported:	05/18/2012	Sampling Type:	Soil
Project Name:	WEST SHUGART 31 FEDERAL COM NO. 1	Sampling Condition:	Cool & Intact
Project Number:	701162 018.01	Sample Received By:	Jodi Henson
Project Location:	SEC.31-T18S-R31E		

Sample ID: S-1 .5' BGS BERMED AREA (H201093-02)

BTEX 8021B		mg/kg		Analyzed By: ZZZ						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/17/2012	ND	2.14	107	2.00	4.14		
Toluene*	<0.050	0.050	05/17/2012	ND	2.24	112	2.00	4.57		
Ethylbenzene*	<0.050	0.050	05/17/2012	ND	2.22	111	2.00	4.16		
Total Xylenes*	<0.150	0.150	05/17/2012	ND	6.86	114	6.00	4.40		

Surrogate 4-Bromofluorobenzene (PIE) 114 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	05/17/2012	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	05/16/2012	ND	205	103	200	5.10		
DRO >C10-C28	33.7	10.0	05/16/2012	ND	222	111	200	26.6		

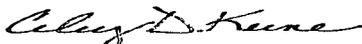
Surrogate 1-Chlorooctane 93.8 % 55.5-154

Surrogate 1-Chlorooctadecane 101 % 57.6-158

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	05/16/2012	Sampling Date:	05/15/2012
Reported:	05/18/2012	Sampling Type:	Soil
Project Name:	WEST SHUGART 31 FEDERAL COM NO	Sampling Condition:	Cool & Intact
Project Number:	701162.018.01	Sample Received By:	Jodi Henson
Project Location:	SEC.31-T18S-R31E		

Sample ID: S-1 1' BGS BERMED AREA (H201093-03)

BTEX 8021B		mg/kg		Analyzed By: ZZZ						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/17/2012	ND	2.14	107	2.00	4.14		
Toluene*	<0.050	0.050	05/17/2012	ND	2.24	112	2.00	4.57		
Ethylbenzene*	<0.050	0.050	05/17/2012	ND	2.22	111	2.00	4.16		
Total Xylenes*	<0.150	0.150	05/17/2012	ND	6.86	114	6.00	4.40		

Surrogate 4-Bromofluorobenzene (PIE) 118% 64 4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	704	16.0	05/17/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	05/16/2012	ND	205	103	200	5.10		
DRO >C10-C28	<10.0	10.0	05/16/2012	ND	222	111	200	26.6		

Surrogate 1-Chlorooctane 91.5% 55 5-154

Surrogate 1-Chlorooctadecane 99.7% 57 6-158

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	05/16/2012	Sampling Date:	05/15/2012
Reported:	05/18/2012	Sampling Type:	Soil
Project Name:	WEST SHUGART 31 FEDERAL COM NO. 1	Sampling Condition:	Cool & Intact
Project Number:	701162.018.01	Sample Received By:	Jodi Henson
Project Location:	SEC.31-T18S-R31E		

Sample ID: S-2 0' BGS PASTURE (H201093-04)

BTEX 8021B		mg/kg		Analyzed By: ZZZ						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/18/2012	ND	2.26	113	2.00	0.638		
Toluene*	<0.050	0.050	05/18/2012	ND	2.39	120	2.00	2.28		
Ethylbenzene*	<0.050	0.050	05/18/2012	ND	2.40	120	2.00	2.75		
Total Xylenes*	<0.150	0.150	05/18/2012	ND	7.46	124	6.00	3.79		

Surrogate 4-Bromofluorobenzene (PIC) 113 % 64 4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	05/17/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS							S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10	<10.0	10.0	05/16/2012	ND	205	103	200	5.10			
DRO >C10-C28	5210	10.0	05/16/2012	ND	222	111	200	26.6			

Surrogate 1-Chlorooctane 90.8 % 55 5-154

Surrogate 1-Chlorooctadecane 514 % 57 6-158

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*=Accredited Analyte

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 ARTESIA NM, 88210
 Fax To: (575) 745-8905

Received:	05/16/2012	Sampling Date:	05/15/2012
Reported:	05/18/2012	Sampling Type:	Soil
Project Name:	WEST SHUGART 31 FEDERAL COM NO. :	Sampling Condition:	Cool & Intact
Project Number:	701162.018.01	Sample Received By:	Jodi Henson
Project Location:	SEC.31-T18S-R31E		

Sample ID: S-2 .5' BGS PASTURE (H201093-05)

BTEX 8021B		mg/kg		Analyzed By: ZZZ						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/18/2012	ND	2.26	113	2.00	0.638		
Toluene*	<0.050	0.050	05/18/2012	ND	2.39	120	2.00	2.28		
Ethylbenzene*	<0.050	0.050	05/18/2012	ND	2.40	120	2.00	2.75		
Total Xylenes*	<0.150	0.150	05/18/2012	ND	7.46	124	6.00	3.79		

Surrogate 4-Bromofluorobenzene (PIE) 113 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	05/17/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	05/16/2012	ND	205	103	200	5.10		
DRO >C10-C28	32.6	10.0	05/16/2012	ND	222	111	200	26.6		

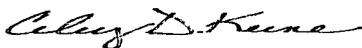
Surrogate 1-Chlorooctane 83.8 % 55.5-154

Surrogate 1-Chlorooctadecane 94.4 % 57.6-158

Cardinal Laboratories

*=Accredited Analyte

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Caley D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	05/16/2012	Sampling Date:	05/15/2012
Reported:	05/18/2012	Sampling Type:	Soil
Project Name:	WEST SHUGART 31 FEDERAL COM NO. 2	Sampling Condition:	Cool & Intact
Project Number:	701162.018.01	Sample Received By:	Jodi Henson
Project Location:	SEC.31-T18S-R31E		

Sample ID: S-2 1' BGS PASTURE (H201093-06)

BTEX 8021B		mg/kg		Analyzed By: ZZZ						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/18/2012	ND	2.26	113	2.00	0.638		
Toluene*	<0.050	0.050	05/18/2012	ND	2.39	120	2.00	2.28		
Ethylbenzene*	<0.050	0.050	05/18/2012	ND	2.40	120	2.00	2.75		
Total Xylenes*	<0.150	0.150	05/18/2012	ND	7.46	124	6.00	3.79		

Surrogate 4-Bromofluorobenzene (PIE) 114 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	05/17/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	05/17/2012	ND	194	97.2	200	3.47		
DRO >C10-C28	79.7	10.0	05/17/2012	ND	184	92.1	200	7.51		

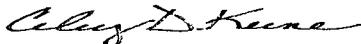
Surrogate 1-Chlorooctane 91.6 % 55.5-154

Surrogate 1-Chlorooctadecane 113 % 57.6-158

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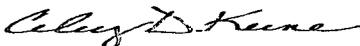
Notes and Definitions

- 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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