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Work Plan

Cimarex Energy Co.: New Mexico DD St. Com #4
[30-015-34704|2RP-3537|

March 30, 2016

Prepared By:

TALON/LPE
408 W. Texas Avenue
Artesia, New Mexico 88210

Prepared For:

Cimarex Energy Company

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

Subject: **Soil Assessment and Remediation Work Plan**
Cimarex Energy Co.
New Mexico DD St. Com #4 (30-015-34704) *2RP-3537*

Dear Mr. Bratcher,

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

Site Information

The Cimarex New Mexico DD St. Com #4 is located approximately nineteen (19) miles south of Carlsbad, New Mexico. The legal location for this facility is Unit Letter J, Section 32, Township 24 South and Range 26 East in Eddy County, New Mexico. More specifically the latitude and longitude are 32.1710014 North and -104.3118362 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 the Reagan-Upton association with 0 to 9 percent slopes. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

According to the New Mexico Office of the State Engineer database, the ground water in this area is approximately 72-feet below ground surface (BGS). The referenced ground water data is presented in [Appendix II](#). Therefore the ranking for this site is a **10** based on the following:

Depth to ground water	50'-100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

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

Incident Description and Initial Remedial Actions

On February 5, 2016 a dump valve malfunctioned on a 3-phase separator. The resulting pressure caused a fiberglass tank to rupture and release approximately 150bbls of produced water. The majority of the fluid (140bbls) was contained within the lined tank battery. The remaining fluid washed over the berms of the battery and remained on location. A vacuum truck was utilized to pump out the fluids within the berms. Talon mobilized personnel to conduct a site assessment and perform soil sampling within the impacted area utilizing a hand auger. The results of the soil sampling event are summarized in the table below.

Laboratory Results

See [Appendix IV](#) 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	5.01	3480	115	2130
S-1	1	--	240	ND	ND
S-1	2	--	--	ND	ND
S-1	3	--	--	ND	ND
S-2	0	1.20	19600	25.3	3900
S-2	1	--	80	ND	ND
S-2	2	--	--	ND	ND
S-2	3	--	--	ND	ND
S-3	0	ND	42400	74	6790
S-3	1	--	848	ND	ND
S-3	2	--	608	ND	ND
S-3	3	--	272	ND	ND

(--) Analyte Not Tested

(ND) Analyte Not Detected

Conclusions and Proposed Remedial Actions

- The impacted area will be excavated to a depth of 1-foot BGS.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- The excavation will be backfilled with caliche and contoured to match the surrounding location.

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


Sheldon L. Hitchcock
Project Manager


David J. Adkins
District Manager

Attachments

Appendix I Site Plan
Appendix II Groundwater Data
Appendix III Initial C-141
Appendix IV Laboratory Results

APPENDIX I

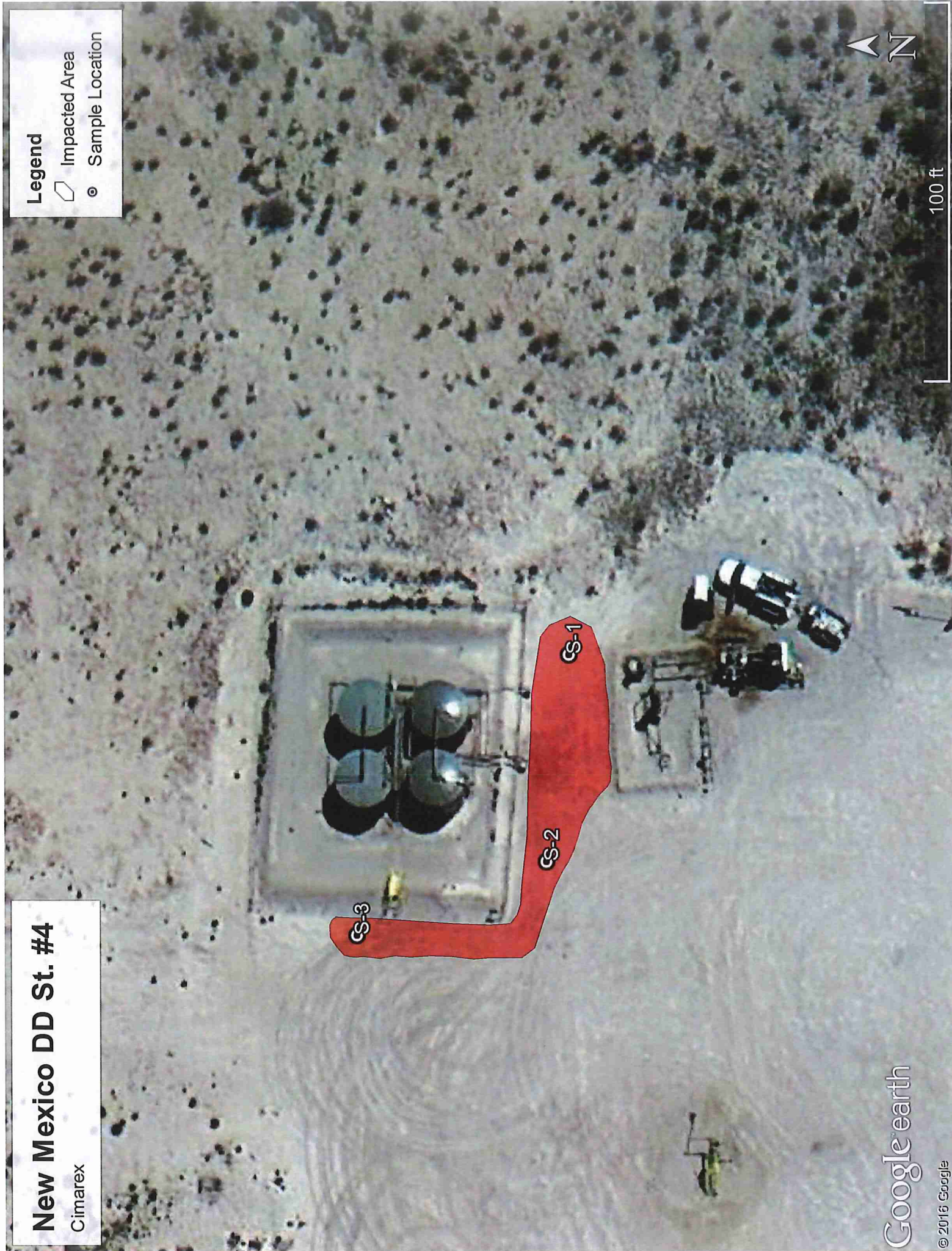
SITE PLAN

New Mexico DD St. #4

Cimarex

Legend

- Impacted Area
- Sample Location



Google earth

© 2016 Google

100 ft

APPENDIX II

GROUNDWATER DATA



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
C 02700	C		ED	1	1	3	29	24S	26E	563844	3561400*	1940	180		
C 01386	C		ED		3	1	29	24S	26E	563937	3561702*	2173	84	72	12

Average Depth to Water: 72 feet

Minimum Depth: 72 feet

Maximum Depth: 72 feet

Record Count: 2

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 564775

Northing (Y): 3559697

Radius: 2200

*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.

APPENDIX III

INITIAL C-141

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

NAB1604026777 OPERATOR ☒ Initial Report ☒ Final Report

Name of Company <u>Cimarex Energy</u> <u>102883</u>	Contact <u>Christine Alderman</u>
Address <u>600 N Marienfeld Ste 600 Midland TX</u>	Telephone No. <u>432-853-7059</u>
Facility Name <u>New Mexico DD State Com 4</u>	Facility Type <u>production</u>

Surface Owner	Mineral Owner	API No. <u>30-015-34704</u>
---------------	---------------	-----------------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<u>J</u>	<u>32</u>	<u>24S</u>	<u>26E</u>	<u>1650</u>	<u>S</u>	<u>1650</u>	<u>E</u>	<u>Eddy</u>

Latitude 32.17100 Longitude -104.31183

NATURE OF RELEASE

Type of Release <u>produced water</u>	Volume of Release <u>150 bbls</u>	Volume Recovered <u>140 bbls</u>
Source of Release tank	Date and Hour of Occurrence <u>2/5/2016</u>	Date and Hour of Discovery <u>2/5/2016</u>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <u>Mike Bratcher/Heather Patterson</u>	
By Whom? <u>Christine Alderman</u>	Date and Hour <u>2/5/2016</u>	
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.*

FEB 08 2016

RECEIVED

Describe Cause of Problem and Remedial Action Taken.*

The dump valve malfunctioned on a 3-phase separator. The pressure entering the tank caused it to rupture around the bottom of the fiberglass tank.

Describe Area Affected and Cleanup Action Taken.*

All but 8 bbls of fluid were contained within a lined berm and were recovered. The fluids stayed on location and were recovered.

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>Christine Alderman</u>	OIL CONSERVATION DIVISION	
Printed Name: <u>Christine Alderman</u>	Approved by Environmental Specialist: <u>Huf</u>	
Title: <u>ESH Supervisor</u>	Approval Date: <u>2/9/16</u>	Expiration Date: <u>N/A</u>
E-mail Address: <u>calderman@cimarex.com</u>	Conditions of Approval: <u>FINAL</u>	Attached <input type="checkbox"/>
Date: <u>2/8/2016</u> Phone: <u>432-853-7059</u>		

* Attach Additional Sheets If Necessary

2RP-3537

APPENDIX IV

LABORATORY RESULTS

March 28, 2016

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: NEW MEXICO DD ST. COM #4

Enclosed are the results of analyses for samples received by the laboratory on 03/17/16 10:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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,



Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/17/2016
Reported: 03/28/2016
Project Name: NEW MEXICO DD ST. COM #4
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/16/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-1 0' (H600588-01)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/21/2016	ND	2.17	109	2.00	8.02	
Toluene*	0.188	0.050	03/21/2016	ND	2.09	104	2.00	8.09	
Ethylbenzene*	<0.050	0.050	03/21/2016	ND	1.87	93.6	2.00	9.35	
Total Xylenes*	4.82	0.150	03/21/2016	ND	5.76	96.0	6.00	8.33	
Total BTEX	5.01	0.300	03/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 148 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3480	16.0	03/18/2016	ND	432	108	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	115	10.0	03/18/2016	ND	177	88.7	200	0.503	
DRO >C10-C28	2130	10.0	03/18/2016	ND	178	89.2	200	0.477	

Surrogate: 1-Chlorooctane 118 % 35-147

Surrogate: 1-Chlorooctadecane 108 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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

Analytical Results For:

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

 Received: 03/17/2016
 Reported: 03/28/2016
 Project Name: NEW MEXICO DD ST. COM #4
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 03/16/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-1 1' (H600588-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	03/18/2016	ND	432	108	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	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	185	92.3	200	1.14	
Surrogate: 1-Chlorooctane		87.8 %	35-147						
Surrogate: 1-Chlorooctadecane		91.4 %	28-171						

Sample ID: S-1 2' (H600588-03)

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	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	185	92.3	200	1.14	
Surrogate: 1-Chlorooctane	87.8 %	35-147							
Surrogate: 1-Chlorooctadecane	92.0 %	28-171							

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

Received: 03/17/2016
Reported: 03/28/2016
Project Name: NEW MEXICO DD ST. COM #4
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/16/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-1 3' (H600588-04)

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	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	185	92.3	200	1.14	
<hr/>									
Surrogate: 1-Chlorooctane	90.8 %	35-147							
Surrogate: 1-Chlorooctadecane	93.1 %	28-171							

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* = Accredited Analyte

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SHELDON HITCHCOCK
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 03/17/2016
Reported: 03/28/2016
Project Name: NEW MEXICO DD ST. COM #4
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/16/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-2 0' (H600588-05)

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	03/21/2016	ND	2.17	109	2.00	8.02	
Toluene*	0.073	0.050	03/21/2016	ND	2.09	104	2.00	8.09	
Ethylbenzene*	0.064	0.050	03/21/2016	ND	1.87	93.6	2.00	9.35	
Total Xylenes*	1.07	0.150	03/21/2016	ND	5.76	96.0	6.00	8.33	
Total BTEX	1.20	0.300	03/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	19600	16.0	03/18/2016	ND	432	108	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	25.3	10.0	03/18/2016	ND	177	88.7	200	0.503	
DRO >C10-C28	3900	10.0	03/18/2016	ND	178	89.2	200	0.477	

Surrogate: 1-Chlorooctane 88.1 % 35-147

Surrogate: 1-Chlorooctadecane 160 % 28-171

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

Received: 03/17/2016
Reported: 03/28/2016
Project Name: NEW MEXICO DD ST. COM #4
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/16/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-2 1' (H600588-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/18/2016	ND	432	108	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	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	185	92.3	200	1.14	
Surrogate: 1-Chlorooctane		89.8 %	35-147						
Surrogate: 1-Chlorooctadecane		93.1 %	28-171						

Sample ID: S-2 2' (H600588-07)

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	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	185	92.3	200	1.14	
Surrogate: 1-Chlorooctane	92.3 %	35-147							
Surrogate: 1-Chlorooctadecane	94.6 %	28-171							

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SHELDON HITCHCOCK
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 03/17/2016
Reported: 03/28/2016
Project Name: NEW MEXICO DD ST. COM #4
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/16/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-2 3' (H600588-08)

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	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	185	92.3	200	1.14	
<hr/>									
Surrogate: 1-Chlorooctane	82.1 %	35-147							
Surrogate: 1-Chlorooctadecane	87.5 %	28-171							

Cardinal Laboratories

* = Accredited Analyte

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

Analytical Results For:

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

Received:	03/17/2016	Sampling Date:	03/16/2016
Reported:	03/28/2016	Sampling Type:	Soil
Project Name:	NEW MEXICO DD ST. COM #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S-3 0' (H600588-09)

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	03/21/2016	ND	2.17	109	2.00	8.02	
Toluene*	<0.050	0.050	03/21/2016	ND	2.09	104	2.00	8.09	
Ethylbenzene*	<0.050	0.050	03/21/2016	ND	1.87	93.6	2.00	9.35	
Total Xylenes*	<0.150	0.150	03/21/2016	ND	5.76	96.0	6.00	8.33	
Total BTX	<0.300	0.300	03/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	42400	16.0	03/18/2016	ND	432	108	400	0.00	

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	74.0	10.0	03/18/2016	ND	177	88.7	200	0.503		
DRO >C10-C28	6790	10.0	03/18/2016	ND	178	89.2	200	0.477		

Surrogate: 1-Chlorooctane 73.4 % 35-147

Surrogate: 1-Chlorooctadecane 286 % 28-171

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

Analytical Results For:

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

Received:	03/17/2016	Sampling Date:	03/16/2016
Reported:	03/28/2016	Sampling Type:	Soil
Project Name:	NEW MEXICO DD ST. COM #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S-3 1' (H600588-10)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	848	16.0	03/18/2016	ND	432	108	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	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	185	92.3	200	1.14	

Surrogate: 1-Chlorooctane 77.6 % 35-147

Surrogate: 1-Chlorooctadecane 81.3 % 28-171

Sample ID: S-3 2' (H600588-11)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	608	16.0	03/18/2016	ND	432	108	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	03/24/2016	ND	189	94.4	200	1.39		
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	185	92.3	200	1.14		

Surrogate: 1-Chlorooctane 81.9 % 35-147

Surrogate: 1-Chlorooctadecane 85.1 % 28-171

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

Analytical Results For:

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

Received:	03/17/2016	Sampling Date:	03/16/2016
Reported:	03/28/2016	Sampling Type:	Soil
Project Name:	NEW MEXICO DD ST. COM #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S-3 3' (H600588-12)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	03/18/2016	ND	432	108	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	03/24/2016	ND	189	94.4	200	1.39		
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	185	92.3	200	1.14		
Surrogate: 1-Chlorooctane	78.3 %	35-147								
Surrogate: 1-Chlorooctadecane	81.4 %	28-171								

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Pg 1 of 2

Company Name: Talon/LE
Project Manager:

Address: 408 W. Texas Ave.

City: Artesia

Phone #: 575-746-8768

State: NM Zip: 88210
Fax #: 575-746-8905

Project #:

Project Owner:

Project Name: New Mexico DD Stream #4
Project Location:

Sampler Name: S. Hinchcock

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H100588

5-10'

5-11'

5-12'

5-13'

5-20'

5-21'

5-22'

5-23'

5-30'

5-31'

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE

ICE / COOL

OTHER :

DATE

TIME

TPH * 3/23/16 Added

BTEX

Chlorides

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: Cimarex

Attn: Mary Papp

Address:

City:

State:

Zip:

Phone #: 575-725-7674

Fax #:

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Relinquished By:

Date: 3/16/16 Received By:

Sheldon Nien

Date: 3/23/16 Received By:

Sheldon Nien

Time:

Time:

Sample Condition

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

540

Intact ☒ Yes ☐ No

CHECKED BY:

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

Stop at if less than 250
3/23: Sheldon added TPH to all.

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



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

PG 20P

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