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Soil Assessment and Remediation Work Plan

Cotton Draw Unit #255H

30-015-43739 * 2RP-4106

Prepared For:

Devon Energy Production

6488 Seven Rivers Hwy

Artesia, New Mexico 88210

Prepared By:

Kimberly M. Wilson

TALON/LPE

408 W. Texas Avenue

Artesia, New Mexico 88210

March 29, 2017

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

Subject: **Soil Assessment and Remediation Work Plan**
Cotton Draw Unit #255H
* 30-015-43739 * 2RP-4106

Dear Mr. Bratcher,

Devon Corporation 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.

Site Information

The Cotton Draw #255 is located approximately fifty-eight (58) miles east of Carlsbad, New Mexico. The legal location for this release is Unit Letter A, Section 13, Township 25 South and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.1370258 North and -103.7250735 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 Berino complex with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Quaternary in age and is comprised of eolian sands and piedmont deposits which include silty soils underlain with a sandy clay loam and hard caliche. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates that there is no known ground water in the area. See [Appendix II](#) for the referenced groundwater data.

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

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

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, and 5,000 mg/kg for TPH. The clean up criteria for total chlorides is considered to be 1,000 mg/kg.

Incident Description and Initial Remedial Actions

On January 20, 2017 a contractor released 5 barrels of fluid from the frac blender. A vac truck was called to the location and recovered 4 barrels of fluid. A site plan is presented in [Appendix I](#) which illustrates the impacted area. See initial C-141 in [Appendix II](#) and site photos in [Appendix IV](#)

On March 8, 2016 Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected utilizing a hand auger.

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

March 13, 2017

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0'	--	11100	--	--
	0.5'	--	2800	--	--
	1'	--	208	--	--
	2'	--	128	--	--
	3'	--	352	--	--
	4'	--	272	--	--
S-2	0'	--	9600	--	--
	0.5'	--	3680		
	1'	--	176	--	--
	2'	--	144	--	--
	3'	--	32	--	--
	4'	--	32	--	--
S-3	0'	--	6930	--	--
	0.5'	--	4800	--	--
	1'	--	48	--	--
	2'	--	48	--	--
	3'	--	32	--	--
	4'	--	64	--	--
S-4	0'	--	304	--	--
	0.5'	--	160	--	--
	1'	--	16	--	--
	2'	--	16	--	--
	3'	--	32	--	--
	4'	--	<16	--	--
S-5	0	--	4530	--	--
	0.5'	--	2400	--	--
	1	--	80	--	--
	2	--	48	--	--
	3	--	48	--	--

	4	--	32	--	--
S-6	0	--	13600	--	--
	0.5'	--	800	--	--
	1	--	320	--	--
	2	--	128	--	--
	3	--	80	--	--
	4		32		

Proposed Remedial Actions

- The impacted areas surrounding S-1, S-2, S-3 and S-5 will be excavated to a depth of 1-foot deep. The impacted area located at S-6 will be excavated to only 0.5-feet deep.
- Field chloride titrations will be used to guide the horizontal extent of the excavation at S-3, S-5 and S-6.
- All contaminated soil will be transported to Lea Land, LLC, a NMOCD approved disposal facility.
- The excavated area will be backfilled with new caliche. Once the backfill activities are complete the work area will be compacted.
- A final closure report documenting all remedial actions will be provided to the NMOCD Artesia Office along with a Final C-141 Form.

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

Kimberly M. Wilson
Project Manager

David J. Adkins
District Manager

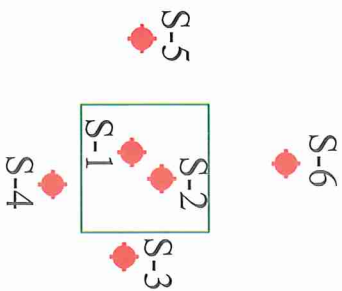
Attachments:

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

APPENDIX I

SITE MAP

Lease
Road

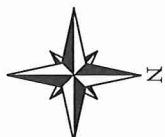


Well



Well

Legend
♦ - Sample Location



Date: 04/06/2017

Scale: 1" = 60'

Drawn By: TJS

Cotton Draw #255
Devon Energy Corporation
Eddy County, New Mexico
Figure 1 - Site Plan

APPENDIX II
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	Code	POD Sub-basin	County	Q 6	Q 4	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C 03830 POD1		CUB	ED	4	2	4	02	25S	31E		618632	3558432	2743	450		
C 02570			ED	4	2	4	02	25S	31E		618704	3558489*	2744	895		
C 02568			ED	4	3	1	01	25S	31E		619103	3558892*	2884	1025		
C 02569			ED	4	4	2	02	25S	31E		618699	3558891*	3078	1016		
C 02573			ED	1	4	2	02	25S	31E		618499	3559091*	3355			
C 02572			ED	4	2	2	02	25S	31E		618695	3559294*	3428	852		
C 02571			ED	4	1	2	02	25S	31E		618292	3559294*	3639	860		
C 02574			ED	1	1	2	02	25S	31E		618092	3559494*	3917			

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count:8

UTMNAD83 Radius Search (in meters):

Easting (X): 620345

Northing (Y): 3556289

Radius: 5000

*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.

1/24/17 3:05 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

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

NM OIL CONSERVATION
ARTESIA DISTRICT
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.

RECEIVED

Release Notification and Corrective Action

NAB1703949379

OPERATOR <input checked="" type="checkbox"/> Initial Report <input type="checkbox"/> Final Report	
Name of Company: Devon Energy Production Co LP (6137)	Contact: Brett Fuls, EHS Professional
Address: PO Box 250 Artesia, NM 88211	Telephone No. 432-301-3223
Facility Name: Cotton Draw Unit 255H	Facility Type: Oil Well
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-43739	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	13	25S	31E	200	North	640	East	Eddy

Latitude: **32.1370258** Longitude: **-103.7250735**

NATURE OF RELEASE

Type of Release: Produced Treated Water	Volume of Release: 5 BBLS	Volume Recovered: 4 BBLS
Source of Release: Blender	Date and Hour of Occurrence: 1/20/2017, 12:30 AM	Date and Hour of Discovery: 1/20/2017, 12:30 AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? NA, spill was under 25 barrels and not required	
By Whom? NA	Date and Hour: NA, spill was under 25 barrels and not required	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

Describe Cause of Problem and Remedial Action Taken.* A contractor released 5 bbls from the frac blender into the blender's secondary containment, and then proceeded to drive the blender over the containment before having a vacuum truck remove the fluid.

Describe Area Affected and Cleanup Action Taken.* 5 barrels of produced treated water was released onto the ground approximately 90 feet north of the wellhead. The spill was contained to the location pad and covered an approximate 10,000 square feet area. The 5 barrel release mixed with the rain water already on the pad. A vacuum truck was called to location and recovered 4 bbls of the produced treated water. A remediation contractor will be contacted.

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>Denise Menoud</i>		OIL CONSERVATION DIVISION	
Printed Name: Denise Menoud		Approved by Environmental Specialist: <i>Crystal Wee</i>	
Title: Field Admin Support		Approval Date: 2/1/17	Expiration Date: N/A
E-mail Address: Denise.Menoud@dvn.com		Conditions of Approval: CoAs attached	
Date: 2/1/2017 Phone: 575-746-5544		Attached <input checked="" type="checkbox"/>	

* Attach Additional Sheets If Necessary

2RP-4106

APPENDIX III
LABORATORY RESULTS

March 13, 2017

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: COTTON DRAW UNIT #255

Enclosed are the results of analyses for samples received by the laboratory on 03/10/17 13:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 03/10/2017
Reported: 03/13/2017
Project Name: COTTON DRAW UNIT #255
Project Number: 700794.212.01
Project Location: EDDY CO.

Sampling Date: 03/08/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: S-1 0' (H700633-01)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11100	16.0	03/13/2017	ND	416	104	400	0.00		

Sample ID: S-1 0.5' (H700633-02)

Chloride, SM4500Cl-B			mg/kg Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2800	16.0	03/13/2017	ND	416	104	400	0.00		

Sample ID: S-1 1' (H700633-03)

Chloride, SM4500Cl-B			mg/kg Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	03/13/2017	ND	416	104	400	0.00		

Sample ID: S-1 2' (H700633-04)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	03/13/2017	ND	416	104	400	0.00		

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Received: 03/10/2017
Reported: 03/13/2017
Project Name: COTTON DRAW UNIT #255
Project Number: 700794.212.01
Project Location: EDDY CO.

Sampling Date: 03/08/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: S-1 3' (H700633-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	03/13/2017	ND	416	104	400	0.00	

Sample ID: S-1 4' (H700633-06)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	03/13/2017	ND	416	104	400	0.00		

Sample ID: S-2 0' (H700633-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9600	16.0	03/13/2017	ND	416	104	400	0.00		

Sample ID: S-2 0.5' (H700633-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3680	16.0	03/13/2017	ND	416	104	400	0.00	

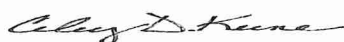
Sample ID: S-2 1' (H700633-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	03/13/2017	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/10/2017
Reported: 03/13/2017
Project Name: COTTON DRAW UNIT #255
Project Number: 700794.212.01
Project Location: EDDY CO.

Sampling Date: 03/08/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: S-2 2' (H700633-10)

Chloride, SM4500Cl-B			mg/kg Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/13/2017	ND	416	104	400	0.00	

Sample ID: S-2 3' (H700633-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/13/2017	ND	416	104	400	0.00	

Sample ID: S-2 4' (H700633-12)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/13/2017	ND	416	104	400	0.00		

Sample ID: S-3 0' (H700633-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6930	16.0	03/13/2017	ND	416	104	400	0.00	

Sample ID: S-3 0.5' (H700633-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	03/13/2017	ND	416	104	400	0.00	

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Reported: 03/13/2017
Project Name: COTTON DRAW UNIT #255
Project Number: 700794.212.01
Project Location: EDDY CO.

Sampling Date: 03/08/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: S-3 1' (H700633-15)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/13/2017	ND	416	104	400	0.00	

Sample ID: S-3 2' (H700633-16)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	03/13/2017	ND	416	104	400	0.00		

Sample ID: S-3 3' (H700633-17)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/13/2017	ND	416	104	400	3.77		

Sample ID: S-3 4' (H700633-18)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	03/13/2017	ND	416	104	400	0.00		

Sample ID: S-4 0' (H700633-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	03/13/2017	ND	416	104	400	3.77		

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Reported: 03/13/2017
Project Name: COTTON DRAW UNIT #255
Project Number: 700794.212.01
Project Location: EDDY CO.

Sampling Date: 03/08/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: S-4 0.5' (H700633-20)

Chloride, SM4500Cl-B			mg/kg								Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	160	16.0	03/13/2017	ND	416	104	400	3.77				

Sample ID: S-4 1' (H700633-21)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	03/13/2017	ND	416	104	400	3.77		

Sample ID: S-4 2' (H700633-22)

Chloride, SM4500Cl-B			mg/kg								Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	16.0	16.0	03/13/2017	ND	416	104	400	3.77				

Sample ID: S-4 3' (H700633-23)

Chloride, SM4500Cl-B			mg/kg								Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	32.0	16.0	03/13/2017	ND	416	104	400	3.77				

Sample ID: S-4 4' (H700633-24)

Chloride, SM4500Cl-B			mg/kg Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/13/2017	ND	416	104	400	3.77		

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/10/2017
Reported: 03/13/2017
Project Name: COTTON DRAW UNIT #255
Project Number: 700794.212.01
Project Location: EDDY CO.

Sampling Date: 03/08/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: S-5 0' (H700633-25)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4530	16.0	03/13/2017	ND	416	104	400	3.77	

Sample ID: S-5 0.5' (H700633-26)

Chloride, SM4500Cl-B			mg/kg								Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	2400	16.0	03/13/2017	ND	416	104	400	3.77				

Sample ID: S-5 1' (H700633-27)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/13/2017	ND	416	104	400	3.77	

Sample ID: S-5 2' (H700633-28)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/13/2017	ND	416	104	400	3.77	

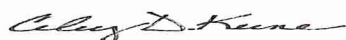
Sample ID: S-5 3' (H700633-29)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	03/13/2017	ND	416	104	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/10/2017
Reported: 03/13/2017
Project Name: COTTON DRAW UNIT #255
Project Number: 700794.212.01
Project Location: EDDY CO.

Sampling Date: 03/08/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: S-5 4' (H700633-30)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/13/2017	ND	416	104	400	3.77	

Sample ID: S-6 0' (H700633-31)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13600	16.0	03/13/2017	ND	416	104	400	3.77	

Sample ID: S-6 0.5' (H700633-32)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	03/13/2017	ND	416	104	400	3.77	

Sample ID: S-6 1' (H700633-33)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	03/13/2017	ND	416	104	400	3.77	

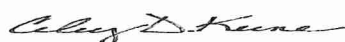
Sample ID: S-6 2' (H700633-34)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/13/2017	ND	416	104	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/10/2017
Reported: 03/13/2017
Project Name: COTTON DRAW UNIT #255
Project Number: 700794.212.01
Project Location: EDDY CO.

Sampling Date: 03/08/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: S-6 3' (H700633-35)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/13/2017	ND	416	104	400	3.77	

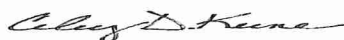
Sample ID: S-6 4' (H700633-36)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/13/2017	ND	416	104	400	3.77	

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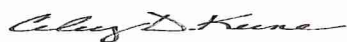
Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



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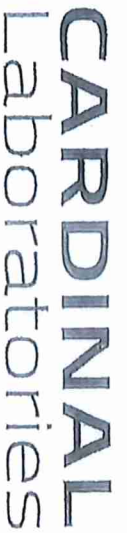
Page 1 of 4

Company Name: Talon/LPE		P.O. #:	
Project Manager: Kimberly Wilson		Company: Talon/LPE	
Address: 408 W. Texas Ave.		Attn:	
City: Artesia	State: NM	Zip: 88210	Address:
Phone #: 575-746-8768	Fax #: 575-746-8905	City:	State:
Project #: 700794, 2120	Project Owner: Devon	Phone #:	Zip:
Project Name: Cotton Drive Unit # 235	Project Location: Edaly City	Fax #:	
Sampler Name: Kim Wilson	FOR LAB USE ONLY		

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :				ACID/BASE:
100633	S-1	0.5'	6								3/8/17		Chlorides
1	2	0.5'	6										
2	3	1.1'	6										
3	4	2.1'	6										
4	5	3.1'	6										
5	6	4.1'	6										
6	7	5.2'	6										
7	8	6.1'	6										
8	9	7.1'	6										
9	10	8.1'	6										

Relinquished By: Kim Wilson	Date: 3-10-17	Received By: [Signature]	Received Date: 3-10-17
Delivered By: [Signature]	Time: 13:55	Sample Condition: Cool Intact	CHECKED BY: [Signature]
Sampler - UPS - Bus - Other:	26.7c	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	7.0. #15

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



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ANALYSIS REQUEST

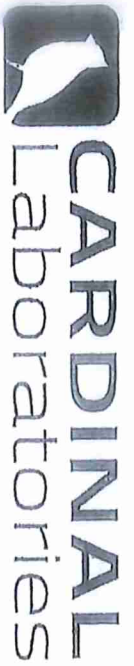
Company Name: Talon/LPE		P.O. #:		
Project Manager: Kimberly Wilson		Company: Talon/LPE		
Address: 408 W. Texas Ave.				
City: Artesia	State: NM	Zip: 88210		
Phone #: 575-746-8768	Fax #: 575-746-8905	Attn:		
Project #: 700794.212.01	Project Owner: Nelson	City:		
Project Name: Cotton Road Lnd #255	State:	Zip:		
Project Location: Eddy Co	Phone #:			
Sampler Name: Kim Wilson	Fax #:			

FOR LAB USE ONLY		MATRIX		PRESERV.	SAMPLING
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
H200433	S-2	3'	✓	✓	✓
11	4'	4'	✓	✓	✓
12	S-3	0.5'	✓	✓	✓
13	0.5'	0.5'	✓	✓	✓
14	2'	2'	✓	✓	✓
15	3'	3'	✓	✓	✓
16	4'	4'	✓	✓	✓
17	0.5'	0.5'	✓	✓	✓
18	0.5'	0.5'	✓	✓	✓
19	0.5'	0.5'	✓	✓	✓
20	0.5'	0.5'	✓	✓	✓

Relinquished By: Kim Wilson	Date: 5/10/17	Received By: [Signature]	Received Date: 5/10/17
Relinquished By: [Signature]	Date: 5/10/17	Received By: [Signature]	Received Date: 5/10/17
Delivered By: (Circle One)	Time: 13:55	Sample Condition:	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Time: 13:55	<input type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact	Time: 7:00 PM
		REMARKS:	

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Rush !!



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Page 3 of 4

ANALYSIS REQUEST

Company Name: Talon/LPE		P.O. #:	
Project Manager: Kimberly Wilson		Company: Talon/LPE	
Address: 408 W. Texas Ave.		Attn:	
City: Artesia		State: NM Zip: 88210	
Phone #: 575-746-8768		Fax #: 575-746-8905	
Project #: 70079424201		Project Owner: Devon	
Project Name: Cotton Draw Unit # 255		City:	
Project Location: Lady City		State:	
Sampler Name: Kim Wilson		Phone #:	
Fax #:		Zip:	
FOR LAB USE ONLY		PRESERV. SAMPLING	
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
#100433	S-4	1'	3/8/17
21	2'	1	
22	3'	1	
23	4'	1	
24	5-5	1	
25	6.5'	1	
26	1'	1	
27	2'	1	
28	3'	1	
29	4'	1	
30		1	
Relinquished By: Kim Wilson		Received By: Paul Bess	
Date: 3/10/17		Time: 3:55	
Delivered By: (Circle One) Bob Bess		Sample Condition: Cool Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sampler - UPS - Bus - Other: 26.7c		CHECKED BY: (Initials) Rush 11	

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



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ANALYSIS REQUEST

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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