



October 9, 2015

AMARILLO
921 North Bivins
Amarillo, Texas 79107
Phone 806.467.0607
Fax 806.467.0622

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

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

Subject: **Soil Assessment and Remediation Work Plan**
Devon Energy
Cotton Draw Unit #153
30-015-38535 2RP-3241
AMENDED

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

Dear Mr. Nettles,

Devon Energy 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.

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

Incident Date

The date of release was July 19, 2015

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

Background Information

The Cotton Draw Unit #153 is located approximately forty-five (45) miles southeast of Carlsbad, New Mexico. The legal location for this site is Unit Letter B, Section 3, Township 25 South, and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.166176° North and -103.763611° West. See the site plan in [Appendix I](#).

SAN ANTONIO
11 Commercial Place
Schertz, Texas 78154
Phone 210.265.8025
Fax 210.568.2191

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 Berino complex with 0 to 3 percent slopes, eroded. Drainage courses in this area are normally dry. Ground water in the project vicinity is greater than 100' according to the Chevron Texaco Water Trend map. No groundwater data is provided by the New Mexico Office of the State Engineers office. See [Appendix II](#).

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

ENVIRONMENTAL CONSULTING	Depth to ground water	>100'
ENGINEERING	Wellhead Protection Area	>1000'
DRILLING	Distance to surface water body	>1000'
CONSTRUCTION		
SPILL MANAGEMENT		
GENERAL CONTRACTING		

Incident Description

On July 19, 2015 the suction lines in the circulation pumps were not closed which caused a release of 40 barrels of oil on the Cotton Draw #153 location. A vac truck was immediately called to the location and recovered 35 barrels of oil. All the oil stayed on location. See site plan in [Appendix I](#).

Actions Taken

On July 21, 2015 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 to a depth from 0.5-feet to 4-feet below ground surface. Laboratory results from the soil sampling event are summarized in the table below. [See Table 1](#).

On September 15, 2015 Talon personnel returned to the site to obtain deeper vertical delineation samples utilizing a backhoe to a total depth of 9-feet below ground surface. The complete laboratory results are presented in [Table 2](#).

On September 24, 2015 Talon personnel returned to the site to obtain deeper vertical delineation samples with a drill rig to a total depth of 20-feet below ground surface. After consultation with the NMOCD, the boring was located where shown on the site plan to avoid underground utilities. The complete laboratory results are presented in [Table 3](#).

All soil samples were collected by Talon personnel wearing clean nitrile gloves. The soil samples were placed in laboratory provided sample containers, iced and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were tested for TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, and volatile organics (BTEX) using EPA Method 8021B. The chloride samples were analyzed per Method SM4500Cl-B.

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

July 29, 2015

Table 1

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0'	2700	928	40700	131000
	0.5'	654	1580	9120	17700
S-2	0'	840	5520	11500	28800
	1'	<0.300	2520	10.4	157
	2'	<0.300	3840	<10	42.4
	3'	<0.300	3120	<10	64.6
	4'	<0.300	5920	<10	26.6
S-3	0'	105	432	2220	48900
	1'	0.510	128	<10	96.7
	2'	<0.300	464	<10	21.4
	3'	<0.300	1060	<10	<10
	4'	<0.300	2920	<10	<10
S-4	0'	253	32	4280	18500
	1'	<0.300	16	<10	<10
	2'	<0.300	32	<10	81.8
	3'	<0.300	64	<10	<10
	4'	<0.300	224	<10	<10

September 22, 2015

Table 2

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-2	5'	--	7300	--	--
	6'	--	8100	--	--
	7'	--	5300	--	--
	8'	--	4080	--	--
	9'	--	2920	--	--
S-3	5'	--	5600	--	--
	6'	--	4960	--	--
	7'	--	2400	--	--
	8'	--	1500	--	--
	9'	--	704	--	--

--Analyte Not Tested

September 22, 2015

Table 3

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
DS-1	5'	--	2640	--	--
	7'	--	240	--	--
	10'	--	128	--	--
	15'	--	176	--	--
	20'	--	304	--	--

DS – Delineation Sample

--Analyte Not Tested

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

Proposed Remedial Actions

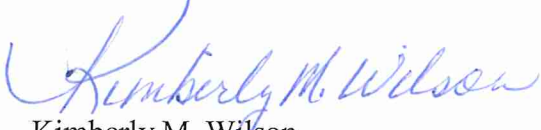
- The hydrocarbon impacted areas will be excavated to a depth of 1-foot deep and treated with both high nitrogen fertilizer and mircoblaze as bioremediation agents. The remainder of contaminants will be remediated at the close of facility.
- All contaminated soil will be transported to Lea Land, LLC disposal facility.
- After the delineation procedures preformed, it is apparent that the chlorides on location are historical. Therefore on behalf of Devon Energy we respectfully request that the chloride impact on the location be remediated upon the closure of the facility.

- The excavated areas will be backfilled with new caliche. Once the backfill activities are complete the work areas will be machine compacted and re-contoured to match the surrounding location.
- A final closure report documenting all remedial actions and analytical results 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

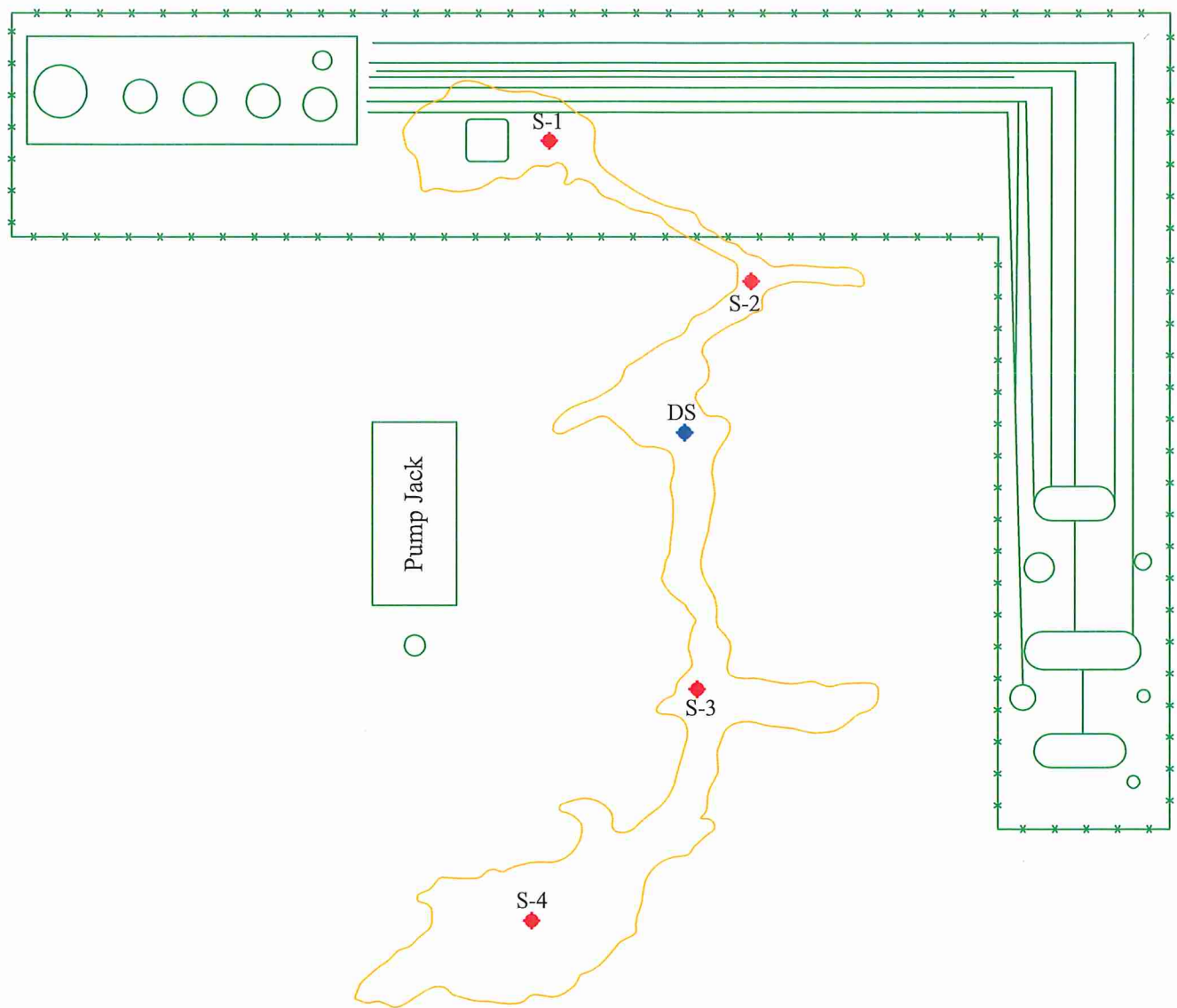


David J. Adkins
District Manager

APPENDIX I

SITE MAP

REGULATOR'S STIPULATIONS



NTS



Scale in Feet

Legend

- ◆ - Sample Location
- ◆ - Delineation Sample Location
- - Impacted Area



Date: 10/08/2015

Scale: NTS

Drawn By: TJS

Cotton Draw #153
Devon Energy Corporation
Eddy County, New Mexico
Figure 1 - Site Plan

Kimberly M. Wilson

From: Bratcher, Mike, EMNRD [mike.bratcher@state.nm.us]
Sent: Thursday, September 10, 2015 7:42 AM
To: Kimberly M. Wilson; Tucker, Shelly
Cc: Patterson, Heather, EMNRD; Fulks, Brett; David Adkins
Subject: RE: Cotton Draw #153 * 30-015-38535 * DOR: 7/19/2015

RE: Devon Energy * Cotton Draw Unit 153H * 30-015-38535 * B-3-25s-31e
NMOCD Tracking: 2RP-3241 * Date of release: 7/19/15

Greetings,

OCD concurs with BLM. A site delineation for chloride and hydrocarbon impact will be required prior to review of a remediation proposal.

Mike Bratcher
NMOCD District 2
811 S. First Street
Artesia, NM 88210
O: 575-748-1283 X108
C: 575-626-0857
F: 575-748-9720

From: Tucker, Shelly [<mailto:stucker@blm.gov>]
Sent: Wednesday, September 09, 2015 11:22 AM
To: Kimberly M. Wilson
Cc: Patterson, Heather, EMNRD; Fulks, Brett; Bratcher, Mike, EMNRD; David Adkins
Subject: Re: Cotton Draw #153 * 30-015-38535 * DOR: 7/19/2015

Kimberly,

In regards to the Cotton Draw #153 * 30-015-38535 * DOR: 7/19/2015

The BLM has reviewed your proposal and requires the additional information prior to approval being given:

1. Further delineation will be required on S-1, S-2 and S-3

The BLM approval/acceptance does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02572			ED	4	2	2	02	25S	31E	618695	3559294*	282	852		
C 02571			ED	4	1	2	02	25S	31E	618292	3559294*	284	860		
C 02574			ED	1	1	2	02	25S	31E	618092	3559494*	403			
C 02573			ED	1	4	2	02	25S	31E	618499	3559091*	403			
C 02569			ED	4	4	2	02	25S	31E	618699	3558891*	636	1016		
C 02568			ED	4	3	1	01	25S	31E	619103	3558892*	855	1025		
C 02570			ED	4	2	4	02	25S	31E	618704	3558489*	1026	895		
C 03830 POD1		CUB	ED	4	2	4	02	25S	31E	618632	3558432	1069	450		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 8

UTMNAD83 Radius Search (in meters):

Easting (X): 618495

Northing (Y): 3559494

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.

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	Devon Energy Production	Contact	Garry Michael
Address	6488 Seven Rivers Hwy Artesia, NM 88220	Telephone No.	575-513-4895
Facility Name	Cotton Draw Unit 153H	Facility Type	Oil

Surface Owner	Federal	Mineral Owner	Federal	API No.	30-015-38535
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	3	25 S	31 E	200	North	1980	East	Eddy

Latitude: N 32°16'62.16"

Longitude: W 103°76'35.73"

NATURE OF RELEASE

Type of Release Spill Oil	Volume of Release 40 bbls	Volume Recovered 35 bbls
Source of Release Suction Lines in the circulating pump where not closed	Date and Hour of Occurrence 7.19.2015 @ 4:00 AM	Date and Hour of Discovery 7.19.2015 @ 4:00 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jim Amos BLM Mike Bratcher OCD	
By Whom? Eduardo Enriquez	Date and Hour 7.19.2015 @ 4:56 AM 7.19.2015 @ 4:58 AM	
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.*

On July 19, 2015 Pace Energy Lease Operator was driving by the Cotton Draw Unit 153 H at 4:00 AM when he noticed fluid on location. The fluid was coming from the suction lines in-the circulating pump, Lease Operator proceeded to close the valves to stop the spill.

Describe Area Affected and Cleanup Action Taken.*

Horizon trucking was called to recover 35 bbls. Further documentation to follow.

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>Corina Moya</i>	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Corina Moya			
Title: Field Admin Support	Approved by Environmental Specialist:	Approval Date:	Expiration Date:
E-mail Address: corina.moya@dnv.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 7.20.2015	Phone: 575.746.5559		

* Attach Additional Sheets If Necessary

APPENDIX III
LABORATORY RESULTS

July 29, 2015

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: COTTON DRAW #153

Enclosed are the results of analyses for samples received by the laboratory on 07/22/15 14:04.

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/ga/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: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-1 0' (H501910-01)

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	242	20.0	07/27/2015	ND	2.03	102	2.00	8.11	
Toluene*	1200	20.0	07/27/2015	ND	2.06	103	2.00	6.56	
Ethylbenzene*	224	20.0	07/27/2015	ND	2.17	108	2.00	7.81	
Total Xylenes*	1040	60.0	07/27/2015	ND	5.74	95.6	6.00	7.18	
Total BTEX	2700	120	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 85.6-137

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	07/28/2015	ND	432	108	400	3.77	

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	40700	200	07/24/2015	ND	182	90.9	200	0.943		
DRO >C10-C28	131000	200	07/24/2015	ND	186	93.0	200	0.951		

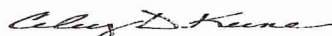
Surrogate: 1-Chlorooctane 1260 % 47.2-157

Surrogate: 1-Chlorooctadecane 4380 % 52.1-176

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: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-1 .5' (H501910-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	50.0	5.00	07/27/2015	ND	2.03	102	2.00	8.11	
Toluene*	283	5.00	07/27/2015	ND	2.06	103	2.00	6.56	
Ethylbenzene*	56.6	5.00	07/27/2015	ND	2.17	108	2.00	7.81	
Total Xylenes*	265	15.0	07/27/2015	ND	5.74	95.6	6.00	7.18	
Total BTEX	654	30.0	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 125 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1580	16.0	07/28/2015	ND	432	108	400	3.77	

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	9120	100	07/24/2015	ND	182	90.9	200	0.943		
DRO >C10-C28	17700	100	07/24/2015	ND	186	93.0	200	0.951		

Surrogate: 1-Chlorooctane 263 % 47.2-157

Surrogate: 1-Chlorooctadecane 325 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 KIMBERLY WILSON
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 Fax To: (575) 745-8905

 Received: 07/22/2015
 Reported: 07/29/2015
 Project Name: COTTON DRAW #153
 Project Number: 70079416201
 Project Location: SEC 3, T25S, R31E

 Sampling Date: 07/21/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-2 0' (H501910-03)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	15.6	5.00	07/27/2015	ND	2.03	102	2.00	8.11	
Toluene*	257	5.00	07/27/2015	ND	2.06	103	2.00	6.56	
Ethylbenzene*	88.6	5.00	07/27/2015	ND	2.17	108	2.00	7.81	
Total Xylenes*	478	15.0	07/27/2015	ND	5.74	95.6	6.00	7.18	
Total BTEX	840	30.0	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 150 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5520	16.0	07/28/2015	ND	432	108	400	3.77	

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	11500	100	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	28800	100	07/24/2015	ND	186	93.0	200	0.951	

Surrogate: 1-Chlorooctane 492 % 47.2-157

Surrogate: 1-Chlorooctadecane 282 % 52.1-176

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: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-2 1' (H501910-04)

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	07/27/2015	ND	2.03	102	2.00	8.11	
Toluene*	0.070	0.050	07/27/2015	ND	2.06	103	2.00	6.56	
Ethylbenzene*	<0.050	0.050	07/27/2015	ND	2.17	108	2.00	7.81	
Total Xylenes*	<0.150	0.150	07/27/2015	ND	5.74	95.6	6.00	7.18	
Total BTX	<0.300	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PII) 120 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2520	16.0	07/28/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	10.4	10.0	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	157	10.0	07/24/2015	ND	186	93.0	200	0.951	

Surrogate: 1-Chlorooctane 101 % 47.2-157

Surrogate: 1-Chlorooctadecane 122 % 52.1-176

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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: 07/22/2015
 Reported: 07/29/2015
 Project Name: COTTON DRAW #153
 Project Number: 70079416201
 Project Location: SEC 3, T25S, R31E

 Sampling Date: 07/21/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-2 2' (H501910-05)

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	07/27/2015	ND	2.03	102	2.00	8.11	
Toluene*	<0.050	0.050	07/27/2015	ND	2.06	103	2.00	6.56	
Ethylbenzene*	<0.050	0.050	07/27/2015	ND	2.17	108	2.00	7.81	
Total Xylenes*	<0.150	0.150	07/27/2015	ND	5.74	95.6	6.00	7.18	
Total BTX	<0.300	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 120 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	42.4	10.0	07/24/2015	ND	186	93.0	200	0.951	

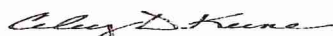
Surrogate: 1-Chlorooctane 97.7 % 47.2-157

Surrogate: 1-Chlorooctadecane 111 % 52.1-176

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Analytical Results For:

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

 Received: 07/22/2015
 Reported: 07/29/2015
 Project Name: COTTON DRAW #153
 Project Number: 70079416201
 Project Location: SEC 3, T25S, R31E

 Sampling Date: 07/21/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-2 3' (H501910-06)

BTEx 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	07/27/2015	ND	2.03	102	2.00	8.11	
Toluene*	<0.050	0.050	07/27/2015	ND	2.06	103	2.00	6.56	
Ethylbenzene*	<0.050	0.050	07/27/2015	ND	2.17	108	2.00	7.81	
Total Xylenes*	<0.150	0.150	07/27/2015	ND	5.74	95.6	6.00	7.18	
Total BTEX	<0.300	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	64.6	10.0	07/24/2015	ND	186	93.0	200	0.951	

Surrogate: 1-Chlorooctane 90.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 104 % 52.1-176

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Analytical Results For:

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Fax To: (575) 745-8905

Received: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-2 4' (H501910-07)

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	07/27/2015	ND	2.03	102	2.00	8.11	
Toluene*	<0.050	0.050	07/27/2015	ND	2.06	103	2.00	6.56	
Ethylbenzene*	<0.050	0.050	07/27/2015	ND	2.17	108	2.00	7.81	
Total Xylenes*	<0.150	0.150	07/27/2015	ND	5.74	95.6	6.00	7.18	
Total BTX	<0.300	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5920	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	26.6	10.0	07/24/2015	ND	186	93.0	200	0.951	

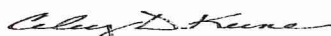
Surrogate: 1-Chlorooctane 96.7 % 47.2-157

Surrogate: 1-Chlorooctadecane 109 % 52.1-176

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Analytical Results For:

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

Received: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-3 0' (H501910-08)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.51	1.00	07/27/2015	ND	2.03	102	2.00	8.11	
Toluene*	28.4	1.00	07/27/2015	ND	2.06	103	2.00	6.56	
Ethylbenzene*	12.0	1.00	07/27/2015	ND	2.17	108	2.00	7.81	
Total Xylenes*	63.4	3.00	07/27/2015	ND	5.74	95.6	6.00	7.18	
Total BTEX	105	6.00	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 142 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	07/28/2015	ND	432	108	400	3.77	

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	2220	200	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	48900	200	07/24/2015	ND	186	93.0	200	0.951	


Surrogate: 1-Chlorooctane 188 % 47.2-157

Surrogate: 1-Chlorooctadecane 394 % 52.1-176

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Fax To: (575) 745-8905

Received: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-3 1' (H501910-09)

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	07/27/2015	ND	2.03	102	2.00	8.11	
Toluene*	<0.050	0.050	07/27/2015	ND	2.06	103	2.00	6.56	
Ethylbenzene*	0.081	0.050	07/27/2015	ND	2.17	108	2.00	7.81	
Total Xylenes*	0.429	0.150	07/27/2015	ND	5.74	95.6	6.00	7.18	
Total BTEX	0.510	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 127 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	96.7	10.0	07/24/2015	ND	186	93.0	200	0.951	

Surrogate: 1-Chlorooctane 93.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 108 % 52.1-176

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Analytical Results For:

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

Received:	07/22/2015	Sampling Date:	07/21/2015
Reported:	07/29/2015	Sampling Type:	Soil
Project Name:	COTTON DRAW #153	Sampling Condition:	Cool & Intact
Project Number:	70079416201	Sample Received By:	Judy Garcia
Project Location:	SEC 3, T25S, R31E		

Sample ID: S-3 2' (H501910-10)

BTEx 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	07/27/2015	ND	2.25	113	2.00	3.58	
Toluene*	<0.050	0.050	07/27/2015	ND	2.26	113	2.00	4.24	
Ethylbenzene*	<0.050	0.050	07/27/2015	ND	2.43	121	2.00	5.59	
Total Xylenes*	<0.150	0.150	07/27/2015	ND	6.38	106	6.00	6.15	
Total BTEX	<0.300	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	21.4	10.0	07/24/2015	ND	186	93.0	200	0.951	

Surrogate: 1-Chlorooctane 104 % 47.2-157

Surrogate: 1-Chlorooctadecane 115 % 52.1-176

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Analytical Results For:

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

Received: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-3 3' (H501910-11)

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	07/27/2015	ND	2.25	113	2.00	3.58	
Toluene*	<0.050	0.050	07/27/2015	ND	2.26	113	2.00	4.24	
Ethylbenzene*	<0.050	0.050	07/27/2015	ND	2.43	121	2.00	5.59	
Total Xylenes*	<0.150	0.150	07/27/2015	ND	6.38	106	6.00	6.15	
Total BTX	<0.300	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 116 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1060	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	<10.0	10.0	07/24/2015	ND	186	93.0	200	0.951	

Surrogate: 1-Chlorooctane 87.7 % 47.2-157

Surrogate: 1-Chlorooctadecane 100 % 52.1-176

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Analytical Results For:

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

Received: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-3 4' (H501910-12)

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	07/27/2015	ND	2.25	113	2.00	3.58	
Toluene*	<0.050	0.050	07/27/2015	ND	2.26	113	2.00	4.24	
Ethylbenzene*	<0.050	0.050	07/27/2015	ND	2.43	121	2.00	5.59	
Total Xylenes*	<0.150	0.150	07/27/2015	ND	6.38	106	6.00	6.15	
Total BTX	<0.300	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 117 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2920	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	<10.0	10.0	07/24/2015	ND	186	93.0	200	0.951	

Surrogate: 1-Chlorooctane 85.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 94.4 % 52.1-176

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Analytical Results For:

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

Received:	07/22/2015	Sampling Date:	07/21/2015
Reported:	07/29/2015	Sampling Type:	Soil
Project Name:	COTTON DRAW #153	Sampling Condition:	Cool & Intact
Project Number:	70079416201	Sample Received By:	Judy Garcia
Project Location:	SEC 3, T25S, R31E		

Sample ID: S-4 0' (H501910-13)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	07/29/2015	ND	2.04	102	2.00	1.20	
Toluene*	27.1	2.00	07/29/2015	ND	2.10	105	2.00	1.21	
Ethylbenzene*	30.9	2.00	07/29/2015	ND	2.24	112	2.00	0.960	
Total Xylenes*	195	6.00	07/29/2015	ND	5.93	98.8	6.00	2.60	
Total BTX	253	12.0	07/29/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/28/2015	ND	432	108	400	3.77	

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	4280	50.0	07/24/2015	ND	182	90.9	200	0.943		
DRO >C10-C28	18500	50.0	07/24/2015	ND	186	93.0	200	0.951		

Surrogate: 1-Chlorooctane 248 % 47.2-157

Surrogate: 1-Chlorooctadecane 212 % 52.1-176

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: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-4 1' (H501910-14)

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	07/27/2015	ND	2.25	113	2.00	3.58	
Toluene*	<0.050	0.050	07/27/2015	ND	2.26	113	2.00	4.24	
Ethylbenzene*	<0.050	0.050	07/27/2015	ND	2.43	121	2.00	5.59	
Total Xylenes*	<0.150	0.150	07/27/2015	ND	6.38	106	6.00	6.15	
Total BTX	<0.300	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 117 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	<10.0	10.0	07/24/2015	ND	186	93.0	200	0.951	

Surrogate: 1-Chlorooctane 97.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 107 % 52.1-176

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: 07/22/2015
 Reported: 07/29/2015
 Project Name: COTTON DRAW #153
 Project Number: 70079416201
 Project Location: SEC 3, T25S, R31E

 Sampling Date: 07/21/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-4 2' (H501910-15)

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	07/27/2015	ND	2.25	113	2.00	3.58	
Toluene*	<0.050	0.050	07/27/2015	ND	2.26	113	2.00	4.24	
Ethylbenzene*	<0.050	0.050	07/27/2015	ND	2.43	121	2.00	5.59	
Total Xylenes*	<0.150	0.150	07/27/2015	ND	6.38	106	6.00	6.15	
Total BTX	<0.300	0.300	07/27/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 116 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/24/2015	ND	182	90.9	200	0.943	
DRO >C10-C28	81.8	10.0	07/24/2015	ND	186	93.0	200	0.951	

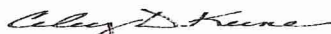
Surrogate: 1-Chlorooctane 91.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 106 % 52.1-176

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: 07/22/2015
Reported: 07/29/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: SEC 3, T25S, R31E

Sampling Date: 07/21/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-4 3' (H501910-16)

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	07/28/2015	ND	2.25	113	2.00	3.58	
Toluene*	<0.050	0.050	07/28/2015	ND	2.26	113	2.00	4.24	
Ethylbenzene*	<0.050	0.050	07/28/2015	ND	2.43	121	2.00	5.59	
Total Xylenes*	<0.150	0.150	07/28/2015	ND	6.38	106	6.00	6.15	
Total BTX	<0.300	0.300	07/28/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	07/28/2015	ND	432	108	400	3.77		

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	07/24/2015	ND	182	90.9	200	0.943		
DRO >C10-C28	<10.0	10.0	07/24/2015	ND	186	93.0	200	0.951		


Surrogate: 1-Chlorooctane 99.8 % 47.2-157

Surrogate: 1-Chlorooctadecane 110 % 52.1-176

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: 07/22/2015
 Reported: 07/29/2015
 Project Name: COTTON DRAW #153
 Project Number: 70079416201
 Project Location: SEC 3, T25S, R31E

 Sampling Date: 07/21/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-4 4' (H501910-17)

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	07/28/2015	ND	2.25	113	2.00	3.58	
Toluene*	<0.050	0.050	07/28/2015	ND	2.26	113	2.00	4.24	
Ethylbenzene*	<0.050	0.050	07/28/2015	ND	2.43	121	2.00	5.59	
Total Xylenes*	<0.150	0.150	07/28/2015	ND	6.38	106	6.00	6.15	
Total BTX	<0.300	0.300	07/28/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 117 % 85.6-137

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	07/28/2015	ND	432	108	400	3.77	

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	07/27/2015	ND	191	95.6	200	2.17	
DRO >C10-C28	<10.0	10.0	07/27/2015	ND	171	85.5	200	3.18	

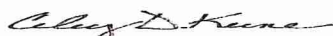
Surrogate: 1-Chlorooctane 93.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 115 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
BS1	Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Do. 10F2

#54



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

#54

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

PL 2027

September 22, 2015

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: COTTON DRAW #153

Enclosed are the results of analyses for samples received by the laboratory on 09/16/15 14:52.

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.

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: 09/16/2015
Reported: 09/22/2015
Project Name: COTTON DRAW #153
Project Number: 70079416401
Project Location: EDDY CTY

Sampling Date: 09/15/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-2 6' (H502434-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8100	1.00	09/21/2015	ND	416	104	400	3.77	

Sample ID: S-2 7' (H502434-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5300	1.00	09/21/2015	ND	416	104	400	3.77	

Sample ID: S-2 8' (H502434-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4080	1.00	09/21/2015	ND	416	104	400	3.77	

Sample ID: S-2 9' (H502434-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2920	1.00	09/21/2015	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: 09/16/2015
 Reported: 09/22/2015
 Project Name: COTTON DRAW #153
 Project Number: 70079416401
 Project Location: EDDY CTY

 Sampling Date: 09/15/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-3 5' (H502434-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5600	1.00	09/21/2015	ND	416	104	400	3.77	

Sample ID: S-3 6' (H502434-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4960	1.00	09/21/2015	ND	416	104	400	3.77	

Sample ID: S-3 7' (H502434-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	1.00	09/21/2015	ND	416	104	400	3.77	

Sample ID: S-3 8' (H502434-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1500	1.00	09/21/2015	ND	416	104	400	3.77	

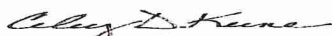
Sample ID: S-3 9' (H502434-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	1.00	09/21/2015	ND	416	104	400	3.77	

Cardinal Laboratories

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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: 09/16/2015
Reported: 09/22/2015
Project Name: COTTON DRAW #153
Project Number: 70079416401
Project Location: EDDY CTY

Sampling Date: 09/15/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia


Sample ID: S-2 5' (H502434-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7300	1.00	09/21/2015	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by 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

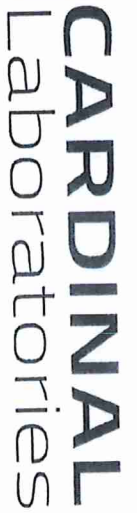
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Celey D. Keene, Lab Director/Quality Manager



Page 6 of 6

ANALYSIS REQUEST

* Cardinal cannot accept verbal changes. Please fax written changes to 503-353-4240

September 28, 2015

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: COTTON DRAW #153

Enclosed are the results of analyses for samples received by the laboratory on 09/25/15 11:38.

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.

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: 09/25/2015
 Reported: 09/28/2015
 Project Name: COTTON DRAW #153
 Project Number: 70079416201
 Project Location: EDDY CTY

 Sampling Date: 09/24/2015
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Judy Garcia

Sample ID: DS-1 5' (H502554-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2640	16.0	09/26/2015	ND	464	116	400	0.00		

Sample ID: DS-1 7' (H502554-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	09/26/2015	ND	464	116	400	0.00		

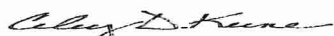
Sample ID: DS-1 10' (H502554-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	09/26/2015	ND	464	116	400	0.00		

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by 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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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

September 28, 2015

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: COTTON DRAW #153

Enclosed are the results of analyses for samples received by the laboratory on 09/25/15 11:38.

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.

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: 09/25/2015
Reported: 09/28/2015
Project Name: COTTON DRAW #153
Project Number: 70079416201
Project Location: EDDY CTY

Sampling Date: 09/24/2015
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Judy Garcia

Sample ID: DS-1 15' (H502555-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	09/26/2015	ND	464	116	400	0.00	

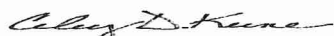
Sample ID: DS-1 20' (H502555-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	09/26/2015	ND	464	116	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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Celey D. Keene, Lab Director/Quality Manager

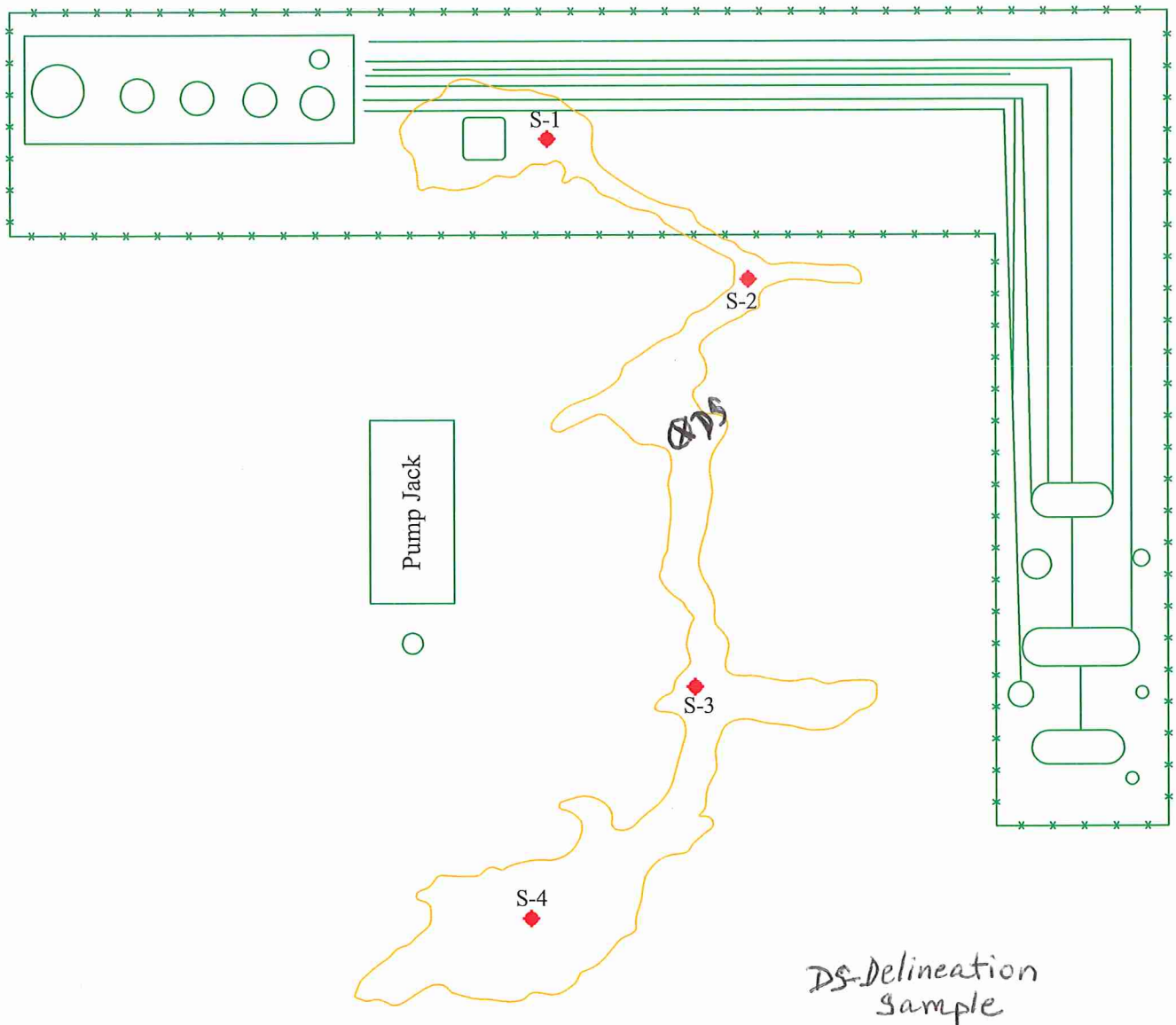


CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

ANALYSIS REQUEST

Company Name: Talon/LE		P.O. #:					
Project Manager: Kimberly Wilson		Company: Talon/LE					
Address: 408 W. Texas Ave.		Attn:					
City: Artesia		State: NM zip: 88210					
Phone #: 575-746-8768		Fax #: 575-746-8905					
Project #: 720794162.0		Project Owner: Delon					
Project Name: Cotton Draw 153		City:					
Project Location: Eddy County		State: Zip:					
Sampler Name: Kim Wilson		Phone #:					
Fax #:		PRESERV					
FOR LAB USE ONLY		SAMPLING					
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	DATE	TIME	ANALYSIS REQUEST
1500355	DS-1 151	6	1	GROUNDWATER	9/24/95	1	Chlorides
2 DS-1 201	6	1	1	WASTEWATER	9/24/95	1	
				SOIL			
				OIL			
				SLUDGE			
				OTHER:			
				ACID/BASE:			
				ICE/COOL			
				OTHER:			
Relinquished By: Kim Wilson		Date: 09/25/95		Received By: Judy Garcia		CHECKED BY: (initials)	
Time: 11:38		Time: 11:38		Sample Condition		Cool (initials)	
Delivered By: (Circle One)		25.0°C		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sampler - UPS - Bus - Other:		25.0°C		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326		#21		Rush!			



*Jim can you
add this sample
point.
Thank you*



NTS
Scale in Feet

Legend	
	- Sample Location
	- Impacted Area



Date: 08/14/2015

Scale: NTS

Drawn By: TJS

Cotton Draw #153
Devon Energy Corporation
Eddy County, New Mexico
Figure 1 - Site Plan