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Work Plan

**Devon Energy: Cotton Draw Unit No. 65
30-015-10842 *2RP-3429***

March 18, 2016

Prepared By:

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

Prepared For:

Devon Energy

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

Subject: **Soil Assessment and Remediation Work Plan**
 Devon Energy
 Cotton Draw Unit # 65(30-015-10843) *2RP-3429*

Dear Mr. Bratcher,

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.

Incident Date

November 27, 2015 & December 22, 2015

Background Information and Soil Survey

The Cotton Draw Unit #65 is located approximately forty-five (45) miles southeast of Carlsbad, New Mexico. The legal location for this site is Unit Letter G, Section 2, Township 25 South, and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.161085918° North and -103.746039442° West. See site plan in Appendix I.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service (NRCS), the soil in this area is made up of Berino complex with 0 to 3 percent slopes. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

According to the Chevron Texaco ground water trend map, the ground water in this area is between 390 and 400 feet below ground surface (BGS). 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, 5,000 mg/kg for TPH and 1,000 mg/kg for total chlorides. See Appendix II.

Incident Description and Initial Remedial Actions

On November 27, 2015 the transfer pump malfunctioned causing the storage tanks to overflow releasing approximately 1202 barrels of mixed fluids into the lined containment and onto location. No fluids left the location. A vac truck was called to the location and recovered 1197 barrel of mixed fluids. See initial C-141 in [Appendix III](#).

There had been a previous release on July 24, 2015 (2RP-3167). This remediation plan had been previously approved by BLM and NMOCD on November 25, 2015. See [Appendix IV](#). The impacted area from this release is included in the same footprint as the 11/27/15 release. See the site plan in [Appendix I](#) indicating both release areas.

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. Laboratory results from the soil sampling event are summarized in the table below.

Laboratory Results

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

December 16, 2015

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0'	16.1	6000	449	3710
	1'	<0.300	752	<10	157
	2'	<0.300	496	<10	31.3
	3'	<0.300	480	<10	<10
S-2	0'	<0.300	880	<10	107
	1'	<0.300	448	<10	<10
	2'	<0.300	1250	<10	<10
	3'	<0.300	1340	<10	<10

March 11, 2016

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-3	0'	4.89	3000	83.2	3240
	1'	<0.300	<16	<10	<10
	2'	<0.300	720	<10	<10
	3'	<0.300	64	<10	14
S-4	0'	4.97	304	197	13900
	1'	<0.300	160	<10	264
	2'	<0.300	368	<10	123
Refusal	3'	5.62	544	189	1910

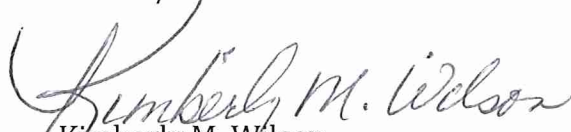
Conclusions and Proposed Remedial Actions

- Ground water in the project vicinity is greater than 450-feet below land surface.
- Based on the depth to groundwater, it is unlikely that the impacts identified from this release will pose a threat to groundwater after proposed remediation activities are complete.
- The impact areas will be excavated to a depth of 0.5-feet deep. All contaminated soil will be transported to Lea Land, LLC, an NMOCD approved disposal facility.
- Once the backfill activities are complete the work area will be compacted and re-contoured to match the surrounding location.
- On behalf of Devon Energy we are respectfully requesting that the historical chloride impacts be remediated upon the facility closure.
- A final closure report documenting all remedial actions and analytical results will be provided to the BLM and 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

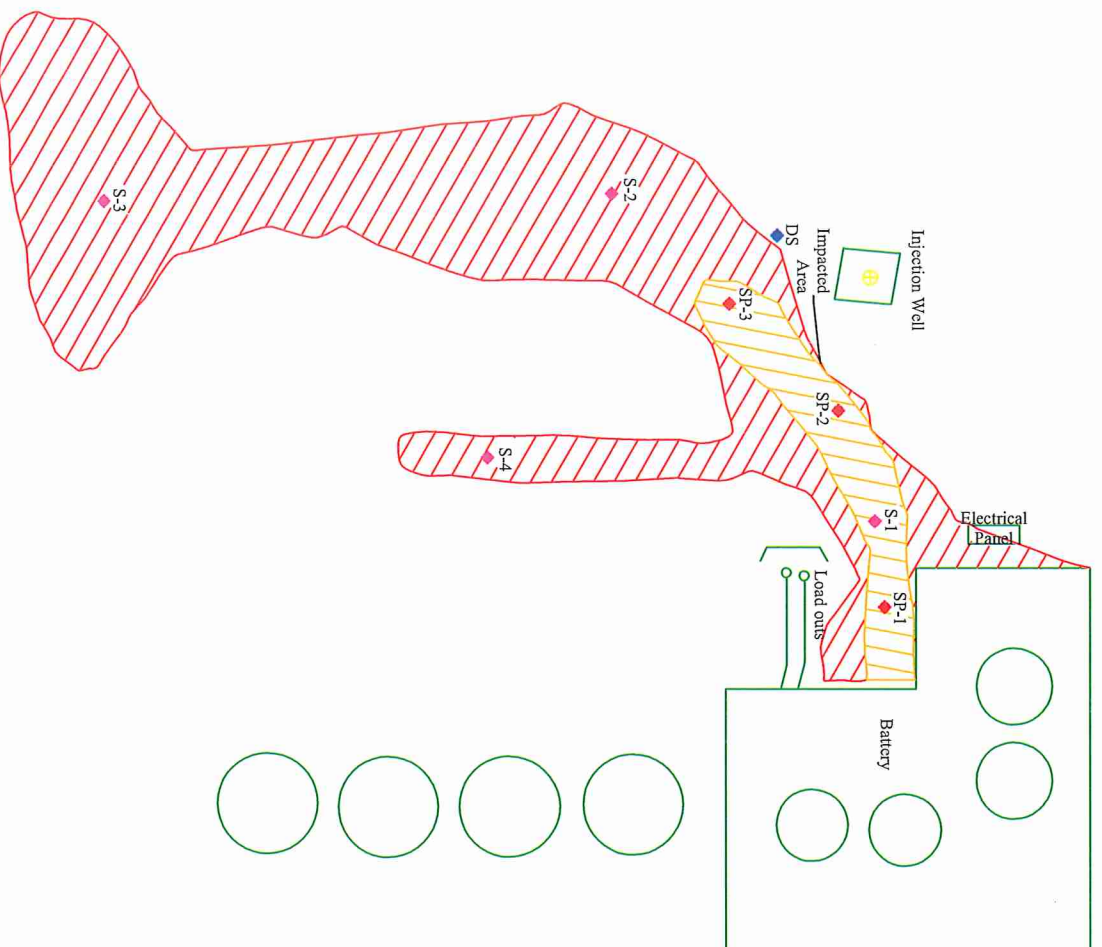
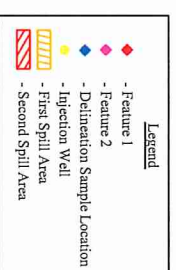
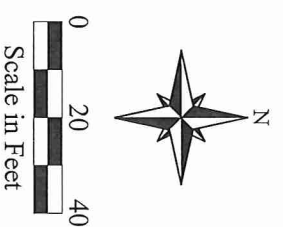

David J. Adkins
District Manager

Attachments:

Appendix I Site Plan
Appendix II Groundwater Data
Appendix III Initial C-141's
Appendix IV OCD/BLM Approval
Appendix X Laboratory Results

APPENDIX I

SITE MAP



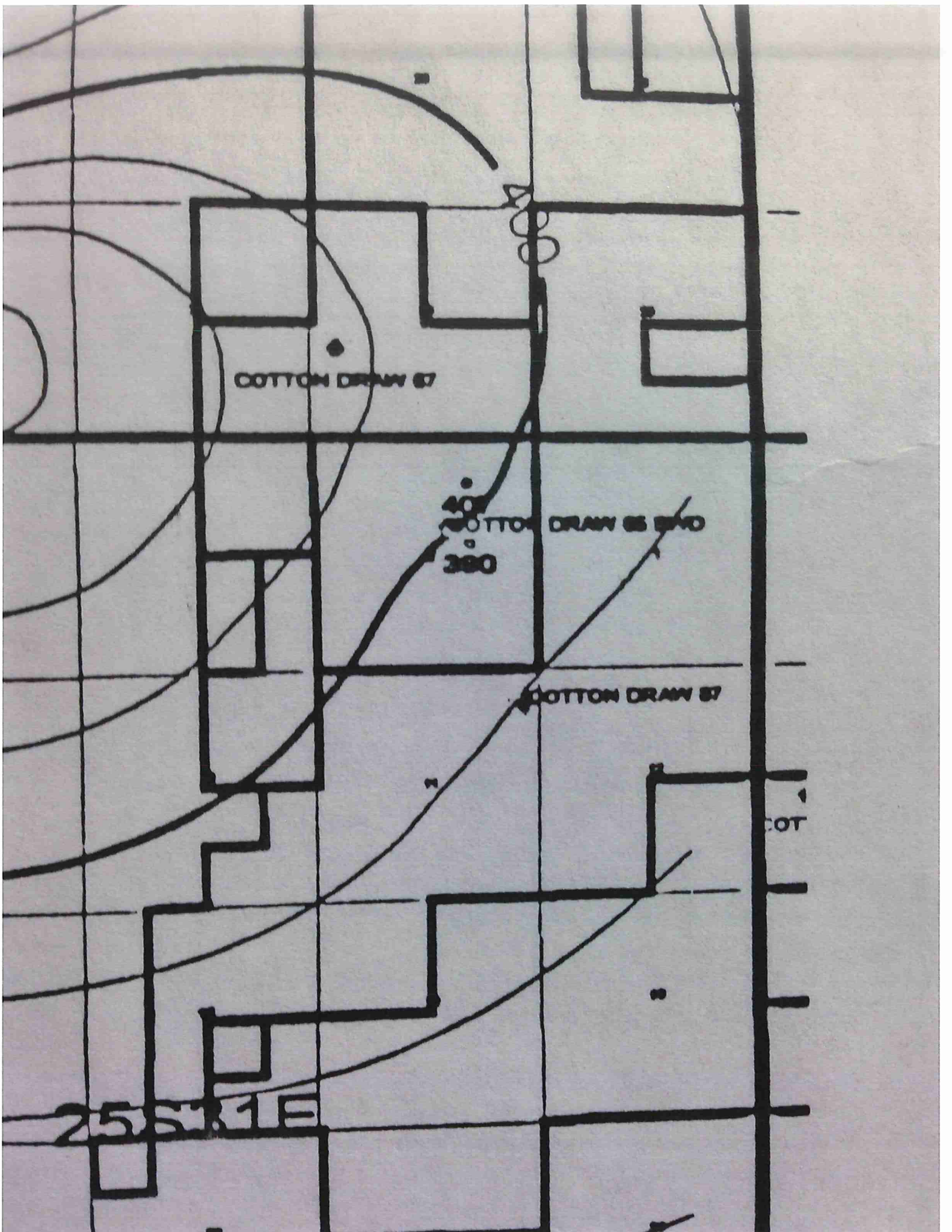
Date: 03/14/2016

Scale: 1" = 40'

Drawn By: TJS

Cotton Draw #65
Devon Energy Corporation
Eddy County, New Mexico
Figure 1 - Site Plan

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 02572			ED	4	2	2	02	25S	31E	618695	3559294*	200	852		
C 02571			ED	4	1	2	02	25S	31E	618292	3559294*	203	860		
C 02573			ED	1	4	2	02	25S	31E	618499	3559091*	203			
C 02574			ED	1	1	2	02	25S	31E	618092	3559494*	449			
C 02569			ED	4	4	2	02	25S	31E	618699	3558891*	451	1016		
C 02568			ED	4	3	1	01	25S	31E	619103	3558892*	728	1025		
C 02570			ED	4	2	4	02	25S	31E	618704	3558489*	831	895		
C 03830 POD1		CUB	ED	4	2	4	02	25S	31E	618632	3558432	872	450		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 8

UTMNAD83 Radius Search (in meters):

Easting (X): 618495

Northing (Y): 3559294

Radius: 4000

*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

NM OIL CONSERVATION

ARTESIA DISTRICT

DEC 03 2015

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

NAB1533831844

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production	Contact Garry Michael, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88220	Telephone No. 575-513-4895
Facility Name Cotton Draw Unit 65	Facility Type Salt Water Disposal

Surface Owner Federal	Mineral Owner State	API No. 30-015-10843
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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
G	2	25S	31E	1980	North	1980	East	Eddy

Latitude: 32.161085918

Longitude: -103.746039442

NATURE OF RELEASE

Type of Release Produced Water & Oil	Volume of Release 1202bbls	Volume Recovered 1197bbls
Source of Release Storage Tanks	Date and Hour of Occurrence November 27, 2015 12:00 PM	Date and Hour of Discovery November 27, 2015 12:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jim Amos, BLM Mike Bratcher, OCD	
By Whom? Garry Michael, Production Foreman	Date and Hour Jim Amos, BLM November 27, 2015 3:00 PM Mike Bratcher, OCD November 27, 2015 3:05 PM	
Was a Watercourse Reached? ☐ Yes ☒ 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.*

Transfer pump went down causing the storage tanks to overflow releasing approximately 1202bbls produced water and oil into lined containment and on to location. The transfer pumps were immediately reset to start transferring water to stop the over flow.

Describe Area Affected and Cleanup Action Taken.*

The affected area on location was caused from an overflow of approximately 22bbls from lined containment starting Northeast and running Southwest on location causing a 70'x80' area on location next to the containment. The storage tanks overflowed releasing approximately 1196bbls produced water and approximately 6bbls oil with no fluids leaving location. A vacuum truck was called and recovered approximately 1179bbls produced water and approximately 1bbl oil from lined containment and approximately 12bbls produced water and approximately 5bbls oil from location. Lined containment was checked for holes and none were found. An environmental agency will be contacted for remediation.

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: Sheila Fisher	OIL CONSERVATION DIVISION	
Printed Name: Sheila Fisher	Signed By: <i>[Signature]</i> Approved by Environmental Specialist:	
Title: Field Admin Support	Approval Date: 12/4/15	Expiration Date: N/A
E-mail Address: Sheila.Fisher@dyn.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines reached ☐ SUBMIT REMEDIATION PROPOSAL NO	
Date: 12/3/15	Phone: 575.748.1829	LATER THAN: 1/4/16

* Attach Additional Sheets If Necessary

2RP.3429

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

NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141
Revised August 8, 2011

JUL 27 2015

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

RECEIVED

Release Notification and Corrective Action

NAB1520955287

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company	Contact Garry Michael; Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-513-4895
Facility Name Cotton Draw Unit 65	Facility Type Salt Water Disposal

Surface Owner Federal	Mineral Owner State	API No 30-015-10843
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LOCATION OF RELEASE

Unit Letter G	Section 2	Township 25S	Range 31E	Feet from the 1980	North/South Line North	Feet from the 1980	East/West Line East	County Eddy
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Latitude: 32.161085918

Longitude: -103.746039442

NATURE OF RELEASE

Type of Release: produced water release	Volume of Release 1,442 BBLS	Volume Recovered 1,441.5 BBLS
Source of Release 8 inch fiberglass inlet line	Date and Hour of Occurrence July 24, 2015 8:45 AM	Date and Hour of Discovery July 24, 2015 8:45 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher; OCD & Jim Amos; BLM	
By Whom? Assistant Production Foreman; Matt Nettles	Date and Hour July 24, 2015 11:15 AM	
Was a Watercourse Reached? ☐ Yes ☒ 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.* It appears the glue connecting two pieces of 8 inch fiberglass inlet line to the gun barrels failed allowing the pieces to separate. The inlet valves to the salt water disposal were immediately shut and locked out to prevent further release.
--

Describe Area Affected and Cleanup Action Taken.* 1,442 BBLS of produced water was released from an 8 inch fiberglass inlet line to the gun barrels. 1,440 BBLS remained in lined containment. No holes were found in the liner. 2 BBLS of produced water did overflow onto the pad from the containment. The 2 BBLS produced water overflowed from the containment on the west side of the containment. It flowed in a westerly direction and affected an area approximately 20 ft. x 50 ft. 1.5 BBLS were recovered via vacuum truck. The affected soil will be analyzed. Clean up to be determined upon analysis if soil samples.

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: Sandy Farley	OIL CONSERVATION DIVISION	
Printed Name: Sandra Farley	Signed By <i>Mike Bratcher</i> Approved by Environmental Specialist:	
Title: Field Admin Support	Approval Date: 7/28/15	Expiration Date: N/A
E-mail Address: sandy.farley@dmv.com	Conditions of Approval:	Attached ☐
Date: July 27, 2015 Phone: 575.746.5587	Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 8/30/15	

* Attach Additional Sheets If Necessary

2RP-3167

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

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 23 2015

Form C-141
Revised August 8, 2011

Submit Copy to appropriate District Office in
conformance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB1535837018		OPERATOR		☒ Initial Report	☐ Final Report
Name of Company Devon Energy Production		Contact Garry Michael, Production Foreman			
Address 6488 Seven Rivers Hwy Artesia, NM 88220		Telephone No. 575-513-4895			
Facility Name Cotton Draw Unit 65-lease road		Facility Type Salt Water Disposal			
Surface Owner Federal		Mineral Owner State		API No. 30-015-10843	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	2	25S	31E	1980	North	1980	East	Eddy

Latitude: 32.161085918

Longitude: -103.746039442

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 2bbls	Volume Recovered 0bbls
Source of Release Flow line next to road	Date and Hour of Occurrence December 22, 2015 1:00 PM	Date and Hour of Discovery December 22, 2015 1:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jim Amos, BLM Mike Bratcher, OCD	
By Whom? Ray Carter, Assistant Production Foreman	Date and Hour Jim Amos, BLM December 23, 2015 1:05 PM Mike Bratcher, OCD December 23, 2015 1:10 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

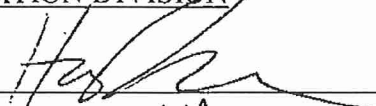
Describe Cause of Problem and Remedial Action Taken.*

Flow line to the East of the lease road was struck by unknown object and cut causing a 2bbl spray in the lease road. The transfer pump was immediately isolated and a crew was contacted to fuse the line back together. Repairs have been made to the line.

Describe Area Affected and Cleanup Action Taken.*

2bbls of produced water was released from a flow line. The size of the affected area is 10'x10' contained completely on the lease road to the East of the Cotton Draw Unit 65. 0bbls were recovered and an environmental agency will be contacted for remediation.

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: Sheila Fisher	OIL CONSERVATION DIVISION	
Printed Name: Sheila Fisher	Approved by Environmental Specialist: 	
Title: Field Admin Support	Approval Date: 12/24/15	Expiration Date: N/A
E-mail Address: Sheila.Fisher@dmn.com	Conditions of Approval:	
Date: 12/23/15 Phone: 575.748.1829	Remediation per O.C.D. Rules & Guidelines	
Attached ☐		

* Attach Additional Sheets If Necessary

RECEIVED
SUBMIT REMEDIATION PROPOSAL NO
LATER THAN: 1/24/16

2RP-3467

APPENDIX IV
OCD/BLM APPROVAL

Kimberly M. Wilson

From: Kimberly M. Wilson
Sent: Wednesday, November 25, 2015 9:48 AM
To: Patterson, Heather, EMNRD
Cc: Bratcher, Mike, EMNRD; Tucker, Shelly; Fulks, Brett
Subject: RE: Cotton Draw #65 * 30-015-10843 * 2RP-3167

Thank you Heather.

From: Patterson, Heather, EMNRD [<mailto:Heather.Patterson@state.nm.us>]
Sent: Wednesday, November 25, 2015 9:31 AM
To: Kimberly M. Wilson
Cc: Bratcher, Mike, EMNRD; Tucker, Shelly; Fulks, Brett
Subject: RE: Cotton Draw #65 * 30-015-10843 * 2RP-3167

RE: Devon * Cotton Draw Unit #64 * 30-015-10843 * 2RP-3167

Kimberly,

Your work plan for the above referenced release is approved. Please note that the historic contamination does not appear to be fully delineated and further sampling may be required at the time of site closure. BLM approval is required for this site.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

Heather Patterson
Environmental Specialist
NMOCD District II
Office (575)748-1283 ext.101
Cell (575)703-0228

From: Kimberly M. Wilson [<mailto:kwilson@talonlpe.com>]
Sent: Thursday, November 19, 2015 9:19 AM
To: Patterson, Heather, EMNRD
Subject: RE: Cotton Draw #65 * 30-015-10843 * 2RP-3167

Heather here it is. Sorry about that.

From: Patterson, Heather, EMNRD [<mailto:Heather.Patterson@state.nm.us>]
Sent: Thursday, November 19, 2015 8:38 AM
To: Kimberly M. Wilson
Subject: RE: Cotton Draw #65 * 30-015-10843 * 2RP-3167

Did you send this already? I don't see it in my email...

Heather Patterson
Environmental Specialist
NMOCD District II

Kimberly M. Wilson

From: Kimberly M. Wilson
Sent: Wednesday, November 25, 2015 10:36 AM
To: Tucker, Shelly
Subject: RE: Cotton Draw #65 * 30-015-10843 * 2RP-3167

Thank you Shelly. Have a happy Thanksgiving.

From: Tucker, Shelly [mailto:stucker@blm.gov]
Sent: Wednesday, November 25, 2015 10:35 AM
To: Patterson, Heather, EMNRD
Cc: Kimberly M. Wilson; Bratcher, Mike, EMNRD; Fulks, Brett
Subject: Re: Cotton Draw #65 * 30-015-10843 * 2RP-3167

BLM concurs with the NMOCD and accepts/approves the proposal as written, with the understanding the historical impact will need to be addressed upon closure of facility.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist
Bureau of Land Management

620 E. Greene St
Carlsbad, NM 88220

575.234.5905 - Direct
575.361.0084 - Cellular

stucker@blm.gov



The **BLM acceptance/approval 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.

Confidentiality Warning: This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from

APPENDIX V
LABORTORY RESULTS

December 16, 2015

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: COTTON DRAW #65

Enclosed are the results of analyses for samples received by the laboratory on 12/09/15 12:35.

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: 12/09/2015
 Reported: 12/16/2015
 Project Name: COTTON DRAW #65
 Project Number: 70029410402
 Project Location: EDDY CTY

 Sampling Date: 12/08/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-1 0' (H503208-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	12/14/2015	ND	1.72	86.0	2.00	4.13	
Toluene*	0.815	0.200	12/14/2015	ND	1.73	86.4	2.00	3.57	
Ethylbenzene*	2.13	0.200	12/14/2015	ND	1.75	87.6	2.00	3.41	
Total Xylenes*	13.1	0.600	12/14/2015	ND	5.35	89.2	6.00	2.82	
Total BTEX	16.1	1.20	12/14/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 130 % 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	6000	16.0	12/11/2015	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	449	50.0	12/11/2015	ND	203	101	200	2.67	
DRO >C10-C28	3710	50.0	12/11/2015	ND	195	97.6	200	0.747	

Surrogate: 1-Chlorooctane 142 % 35-147

Surrogate: 1-Chlorooctadecane 131 % 28-171

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: 12/09/2015
Reported: 12/16/2015
Project Name: COTTON DRAW #65
Project Number: 70029410402
Project Location: EDDY CTY

Sampling Date: 12/08/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-1 1' (H503208-02)

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	12/14/2015	ND	1.72	86.0	2.00	4.13	
Toluene*	<0.050	0.050	12/14/2015	ND	1.73	86.4	2.00	3.57	
Ethylbenzene*	0.055	0.050	12/14/2015	ND	1.75	87.6	2.00	3.41	
Total Xylenes*	0.210	0.150	12/14/2015	ND	5.35	89.2	6.00	2.82	
Total BTX	<0.300	0.300	12/14/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	752	16.0	12/11/2015	ND	448	112	400	3.64	

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	12/11/2015	ND	203	101	200	2.67	
DRO >C10-C28	157	10.0	12/11/2015	ND	195	97.6	200	0.747	

Surrogate: 1-Chlorooctane 98.7 % 35-147

Surrogate: 1-Chlorooctadecane 102 % 28-171

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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: 12/09/2015
 Reported: 12/16/2015
 Project Name: COTTON DRAW #65
 Project Number: 70029410402
 Project Location: EDDY CTY

 Sampling Date: 12/08/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-1 2' (H503208-03)

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	12/14/2015	ND	1.72	86.0	2.00	4.13	
Toluene*	<0.050	0.050	12/14/2015	ND	1.73	86.4	2.00	3.57	
Ethylbenzene*	<0.050	0.050	12/14/2015	ND	1.75	87.6	2.00	3.41	
Total Xylenes*	<0.150	0.150	12/14/2015	ND	5.35	89.2	6.00	2.82	
Total BTX	<0.300	0.300	12/14/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	496	16.0	12/11/2015	ND	448	112	400	3.64	

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	12/11/2015	ND	203	101	200	2.67	
DRO >C10-C28	31.3	10.0	12/11/2015	ND	195	97.6	200	0.747	

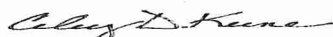
Surrogate: 1-Chlorooctane 91.3 % 35-147

Surrogate: 1-Chlorooctadecane 94.8 % 28-171

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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: 12/09/2015
 Reported: 12/16/2015
 Project Name: COTTON DRAW #65
 Project Number: 70029410402
 Project Location: EDDY CTY

 Sampling Date: 12/08/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-1 3' (H503208-04)

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	12/14/2015	ND	1.72	86.0	2.00	4.13	
Toluene*	<0.050	0.050	12/14/2015	ND	1.73	86.4	2.00	3.57	
Ethylbenzene*	<0.050	0.050	12/14/2015	ND	1.75	87.6	2.00	3.41	
Total Xylenes*	<0.150	0.150	12/14/2015	ND	5.35	89.2	6.00	2.82	
Total BTX	<0.300	0.300	12/14/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 105 % 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	480	16.0	12/11/2015	ND	448	112	400	3.64	

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	12/11/2015	ND	203	101	200	2.67	
DRO >C10-C28	<10.0	10.0	12/11/2015	ND	195	97.6	200	0.747	

Surrogate: 1-Chlorooctane 98.0 % 35-147

Surrogate: 1-Chlorooctadecane 96.7 % 28-171

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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: 12/09/2015
Reported: 12/16/2015
Project Name: COTTON DRAW #65
Project Number: 70029410402
Project Location: EDDY CTY

Sampling Date: 12/08/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S-2 0' (H503208-05)

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	12/14/2015	ND	1.72	86.0	2.00	4.13	
Toluene*	<0.050	0.050	12/14/2015	ND	1.73	86.4	2.00	3.57	
Ethylbenzene*	<0.050	0.050	12/14/2015	ND	1.75	87.6	2.00	3.41	
Total Xylenes*	<0.150	0.150	12/14/2015	ND	5.35	89.2	6.00	2.82	
Total BTEX	<0.300	0.300	12/14/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 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	880	16.0	12/11/2015	ND	448	112	400	3.64	

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	12/11/2015	ND	203	101	200	2.67	
DRO >C10-C28	107	10.0	12/11/2015	ND	195	97.6	200	0.747	

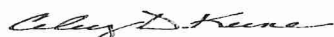
Surrogate: 1-Chlorooctane 92.3 % 35-147

Surrogate: 1-Chlorooctadecane 86.8 % 28-171

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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: 12/09/2015
 Reported: 12/16/2015
 Project Name: COTTON DRAW #65
 Project Number: 70029410402
 Project Location: EDDY CTY

 Sampling Date: 12/08/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-2 1' (H503208-06)

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	12/14/2015	ND	1.72	86.0	2.00	4.13	
Toluene*	<0.050	0.050	12/14/2015	ND	1.73	86.4	2.00	3.57	
Ethylbenzene*	<0.050	0.050	12/14/2015	ND	1.75	87.6	2.00	3.41	
Total Xylenes*	<0.150	0.150	12/14/2015	ND	5.35	89.2	6.00	2.82	
Total BTX	<0.300	0.300	12/14/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	448	16.0	12/11/2015	ND	448	112	400	3.64	

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	12/11/2015	ND	203	101	200	2.67	
DRO >C10-C28	<10.0	10.0	12/11/2015	ND	195	97.6	200	0.747	

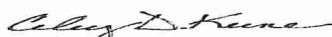
Surrogate: 1-Chlorooctane 94.5 % 35-147

Surrogate: 1-Chlorooctadecane 93.0 % 28-171

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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: 12/09/2015
 Reported: 12/16/2015
 Project Name: COTTON DRAW #65
 Project Number: 70029410402
 Project Location: EDDY CTY

 Sampling Date: 12/08/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-2 2' (H503208-07)

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	12/14/2015	ND	1.72	86.0	2.00	4.13	
Toluene*	<0.050	0.050	12/14/2015	ND	1.73	86.4	2.00	3.57	
Ethylbenzene*	<0.050	0.050	12/14/2015	ND	1.75	87.6	2.00	3.41	
Total Xylenes*	<0.150	0.150	12/14/2015	ND	5.35	89.2	6.00	2.82	
Total BTX	<0.300	0.300	12/14/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	1250	16.0	12/11/2015	ND	448	112	400	3.64	

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	12/11/2015	ND	203	101	200	2.67	
DRO >C10-C28	<10.0	10.0	12/11/2015	ND	195	97.6	200	0.747	

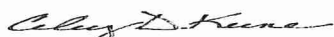
Surrogate: 1-Chlorooctane 89.8 % 35-147

Surrogate: 1-Chlorooctadecane 92.2 % 28-171

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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: 12/09/2015
 Reported: 12/16/2015
 Project Name: COTTON DRAW #65
 Project Number: 70029410402
 Project Location: EDDY CTY

Sampling Date: 12/08/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S-2 3' (H503208-08)

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	12/14/2015	ND	1.72	86.0	2.00	4.13	
Toluene*	<0.050	0.050	12/14/2015	ND	1.73	86.4	2.00	3.57	
Ethylbenzene*	<0.050	0.050	12/14/2015	ND	1.75	87.6	2.00	3.41	
Total Xylenes*	<0.150	0.150	12/14/2015	ND	5.35	89.2	6.00	2.82	
Total BTX	<0.300	0.300	12/14/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	1340	16.0	12/11/2015	ND	448	112	400	3.64	

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	12/11/2015	ND	203	101	200	2.67	
DRO >C10-C28	<10.0	10.0	12/11/2015	ND	195	97.6	200	0.747	

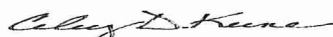
Surrogate: 1-Chlorooctane 94.3 % 35-147

Surrogate: 1-Chlorooctadecane 90.6 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

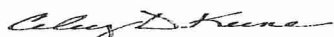
Notes and Definitions

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



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

ANALYSIS REQUEST

Company Name: Talon/LPE

Project Manager: Kimberly M. Wilson

Address: 408 W. Texas Ave.

City: Artesia State: NM zip: 88210

Phone #: 575-746-8768 Fax #: 575-746-8905

Project #: Project Owner: Wilson

Project Name: Western Branch #45

Project Location: Eddy City

Sampler Name: Kim Wilson

FOR LAB USE ONLY

Lab I.D. Sample I.D.

4503208

5-1 0'

5-1 1'

5-1 2'

5-1 3'

5-2 0'

5-2 1'

5-2 2'

5-2 3'

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

12/8/15 12:01

12:03

12:05

12:08

12:01

12:14

12:18

12:20

12:20

12:20

12:20

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12:20

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12:20

12:20

Chlorides
TPH
BTEX

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Relinquished By:

Date: 12/19/15

Received By:

Time: 12:05

Relinquished By: [Signature]

Received By: [Signature]

Time: 12:05

Relinquished By: [Signature]

Received By: [Signature]

Time: 12:05

Relinquished By: [Signature]

Received By: [Signature]

Time: 12:05

Relinquished By: [Signature]

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

3.80

Sample Condition
☒ Cool ☐ Intact
☒ Yes ☐ No

CHECKED BY: [Signature]

Time: 12:05

Relinquished By: [Signature]

Received By: [Signature]

Time: 12:05

Relinquished By: [Signature]

Received By: [Signature]

Time: 12:05

Relinquished By: [Signature]

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

#54



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

March 11, 2016

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: CDU #65

Enclosed are the results of analyses for samples received by the laboratory on 03/10/16 15:45.

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/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: 03/10/2016
Reported: 03/11/2016
Project Name: CDU #65
Project Number: 700794.161.01
Project Location: EDDY COUNTY, NM

Sampling Date: 03/09/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-3 0' (H600532-01)

BTX 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	03/11/2016	ND	1.75	87.7	2.00	10.6	
Toluene*	0.210	0.050	03/11/2016	ND	1.79	89.7	2.00	7.59	
Ethylbenzene*	0.701	0.050	03/11/2016	ND	1.62	80.8	2.00	8.89	
Total Xylenes*	3.98	0.150	03/11/2016	ND	4.99	83.2	6.00	9.98	
Total BTX	4.89	0.300	03/11/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 141 % 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	3000	16.0	03/11/2016	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	83.2	10.0	03/11/2016	ND	193	96.5	200	0.498	
DRO >C10-C28	3240	10.0	03/11/2016	ND	195	97.5	200	3.86	

Surrogate: 1-Chlorooctane 82.6 % 35-147

Surrogate: 1-Chlorooctadecane 122 % 28-171

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

 Received: 03/10/2016
 Reported: 03/11/2016
 Project Name: CDU #65
 Project Number: 700794.161.01
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/09/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-3 1' (H600532-02)

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	03/11/2016	ND	1.75	87.7	2.00	10.6	
Toluene*	<0.050	0.050	03/11/2016	ND	1.79	89.7	2.00	7.59	
Ethylbenzene*	<0.050	0.050	03/11/2016	ND	1.62	80.8	2.00	8.89	
Total Xylenes*	<0.150	0.150	03/11/2016	ND	4.99	83.2	6.00	9.98	
Total BTEX	<0.300	0.300	03/11/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	<16.0	16.0	03/11/2016	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/11/2016	ND	193	96.5	200	0.498	
DRO >C10-C28	<10.0	10.0	03/11/2016	ND	195	97.5	200	3.86	

Surrogate: 1-Chlorooctane 74.5 % 35-147

Surrogate: 1-Chlorooctadecane 81.8 % 28-171

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

Received: 03/10/2016
Reported: 03/11/2016
Project Name: CDU #65
Project Number: 700794.161.01
Project Location: EDDY COUNTY, NM

Sampling Date: 03/09/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-3 2' (H600532-03)

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	03/11/2016	ND	1.75	87.7	2.00	10.6	
Toluene*	<0.050	0.050	03/11/2016	ND	1.79	89.7	2.00	7.59	
Ethylbenzene*	<0.050	0.050	03/11/2016	ND	1.62	80.8	2.00	8.89	
Total Xylenes*	<0.150	0.150	03/11/2016	ND	4.99	83.2	6.00	9.98	
Total BTEX	<0.300	0.300	03/11/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 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	720	16.0	03/11/2016	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/11/2016	ND	193	96.5	200	0.498	
DRO >C10-C28	<10.0	10.0	03/11/2016	ND	195	97.5	200	3.86	

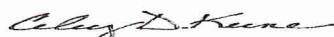
Surrogate: 1-Chlorooctane 60.2 % 35-147

Surrogate: 1-Chlorooctadecane 66.5 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

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

Received: 03/10/2016
Reported: 03/11/2016
Project Name: CDU #65
Project Number: 700794.161.01
Project Location: EDDY COUNTY, NM

Sampling Date: 03/09/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-3 3' (H600532-04)

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	03/11/2016	ND	1.75	87.7	2.00	10.6	
Toluene*	<0.050	0.050	03/11/2016	ND	1.79	89.7	2.00	7.59	
Ethylbenzene*	<0.050	0.050	03/11/2016	ND	1.62	80.8	2.00	8.89	
Total Xylenes*	<0.150	0.150	03/11/2016	ND	4.99	83.2	6.00	9.98	
Total BTEX	<0.300	0.300	03/11/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 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	64.0	16.0	03/11/2016	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/11/2016	ND	193	96.5	200	0.498	
DRO >C10-C28	14.0	10.0	03/11/2016	ND	195	97.5	200	3.86	

Surrogate: 1-Chlorooctane 76.5 % 35-147

Surrogate: 1-Chlorooctadecane 82.9 % 28-171

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Analytical Results For:

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

Received: 03/10/2016
Reported: 03/11/2016
Project Name: CDU #65
Project Number: 700794.161.01
Project Location: EDDY COUNTY, NM

Sampling Date: 03/09/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-4 0' (H600532-05)

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	03/11/2016	ND	1.75	87.7	2.00	10.6	
Toluene*	0.083	0.050	03/11/2016	ND	1.79	89.7	2.00	7.59	
Ethylbenzene*	0.652	0.050	03/11/2016	ND	1.62	80.8	2.00	8.89	
Total Xylenes*	4.23	0.150	03/11/2016	ND	4.99	83.2	6.00	9.98	
Total BTEX	4.97	0.300	03/11/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 136 % 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	304	16.0	03/11/2016	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	197	50.0	03/11/2016	ND	193	96.5	200	0.498		
DRO >C10-C28	13900	50.0	03/11/2016	ND	195	97.5	200	3.86		

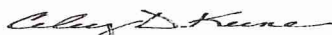
Surrogate: 1-Chlorooctane 114 % 35-147

Surrogate: 1-Chlorooctadecane 432 % 28-171

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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: 03/10/2016
 Reported: 03/11/2016
 Project Name: CDU #65
 Project Number: 700794.161.01
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/09/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-4 1' (H600532-06)

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	03/11/2016	ND	1.75	87.7	2.00	10.6	
Toluene*	<0.050	0.050	03/11/2016	ND	1.79	89.7	2.00	7.59	
Ethylbenzene*	<0.050	0.050	03/11/2016	ND	1.62	80.8	2.00	8.89	
Total Xylenes*	<0.150	0.150	03/11/2016	ND	4.99	83.2	6.00	9.98	
Total BTEX	<0.300	0.300	03/11/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 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	160	16.0	03/11/2016	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/11/2016	ND	193	96.5	200	0.498	
DRO >C10-C28	364	10.0	03/11/2016	ND	195	97.5	200	3.86	

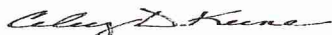
Surrogate: 1-Chlorooctane 79.4 % 35-147

Surrogate: 1-Chlorooctadecane 79.7 % 28-171

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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: 03/10/2016
Reported: 03/11/2016
Project Name: CDU #65
Project Number: 700794.161.01
Project Location: EDDY COUNTY, NM

Sampling Date: 03/09/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-4 2' (H600532-07)

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	03/11/2016	ND	1.75	87.7	2.00	10.6	
Toluene*	<0.050	0.050	03/11/2016	ND	1.79	89.7	2.00	7.59	
Ethylbenzene*	<0.050	0.050	03/11/2016	ND	1.62	80.8	2.00	8.89	
Total Xylenes*	<0.150	0.150	03/11/2016	ND	4.99	83.2	6.00	9.98	
Total BTEX	<0.300	0.300	03/11/2016	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	368	16.0	03/11/2016	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/11/2016	ND	193	96.5	200	0.498	
DRO >C10-C28	123	10.0	03/11/2016	ND	195	97.5	200	3.86	

Surrogate: 1-Chlorooctane 73.7 % 35-147

Surrogate: 1-Chlorooctadecane 84.2 % 28-171

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KIMBERLY WILSON
408 W. TEXAS AVE.
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Fax To: (575) 745-8905

Received: 03/10/2016
Reported: 03/11/2016
Project Name: CDU #65
Project Number: 700794.161.01
Project Location: EDDY COUNTY, NM

Sampling Date: 03/09/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-4 3' (H600532-08)

BTEX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2016	ND	1.75	87.7	2.00	10.6	
Toluene*	0.064	0.050	03/11/2016	ND	1.79	89.7	2.00	7.59	
Ethylbenzene*	0.840	0.050	03/11/2016	ND	1.62	80.8	2.00	8.89	
Total Xylenes*	4.71	0.150	03/11/2016	ND	4.99	83.2	6.00	9.98	
Total BTEX	5.62	0.300	03/11/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 161 % 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	544	16.0	03/11/2016	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS					QM-07	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	189	10.0	03/11/2016	ND	193	96.5	200	0.498	
DRO >C10-C28	1910	10.0	03/11/2016	ND	195	97.5	200	3.86	

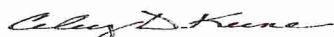
Surrogate: 1-Chlorooctane 101 % 35-147

Surrogate: 1-Chlorooctadecane 92.1 % 28-171

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

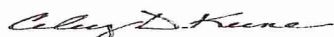
Notes and Definitions

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-03	The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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-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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Celey D. Keene, Lab Director/Quality Manager



ANALYSIS REQUEST

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