



RECEIVED

By OCD; Dr. Oberding at 9:58 am, Mar 18, 2015

March 17, 2015

Ms. Stacie Singleton
Devon Energy Corporation
6488 Seven Rivers Hwy.
Artesia, NM 88210

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

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

Subject: **Soil Assessment and Remediation Work Plan**
Devon Energy Corporation
Monk 21 State Com #1H
API # 30-025-40986

APPROVED

By OCD; Dr. Oberding at 10:28 am, Mar 18, 2015

Dear Ms. Singleton

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

Crossfire, LLC (Crossfire) 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

March 2, 2015

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

Background Information

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

The Devon Energy Monk 21 St. Com #1H is located approximately thirty-seven (37) miles southwest of Hobbs, New Mexico. The legal location for this site is Unit Letter D, of Section 21, Township 21 South and Range 34 East in Lea County, New Mexico. More specifically the latitude and longitude for the release are 32.47069399 North and -103.4818853 West. See site plan in [Appendix I](#).

SAN ANTONIO
13111 Lookout Way
San Antonio, Texas 78233
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 Kimbrough gravelly loam with 0 to 3 percent slopes. Per the New Mexico bureau of Geology and Mineral Resources, the local surface and shallow geology is comprised of lower Pliocene to middle Miocene Ogallala formation. Drainage courses in this area are normally dry. Ground water in the project vicinity is approximately 140-feet below ground surface (bgs), According to the New Mexico Office of the State Engineer. See [Appendix II](#) for the referenced groundwater data.

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

While installing a new valve on a heater treater construction personnel working for Crossfire inadvertently caused the release of approximately 15bbls of produced water on the Devon Energy location. A vacuum truck was already on site working on another portion of the project when the release occurred. The vacuum truck immediately responded recovering approximately 7bbls of produced water from the location. Crews then utilized equipment on site to scrape up the heavily impacted soil and gravel on the surface of the location.

Talon mobilized personnel to perform a site assessment and soil sampling within the impacted area. Due to the rockiness of the material used to construct the well pad, refusal was encountered with a hand auger at a depth of 0.5-feet bgs [See Table 1](#). 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.

March 5, 2015

[Table 1](#)

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	ND	560	ND	ND
S-1	0.5	--	4400	--	--
S-2	0	ND	1220	ND	ND
S-2	0.5	--	3640	--	--

(--) Analyte Not Tested

(ND) Analyte Not Detected

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.


Proposed Remedial Actions

- The impacted area will initially be excavated to a depth of 1-foot bgs. Field chloride titrations will then be used to guide the vertical extent of the excavation.
- Once field results indicate the impacted soil above NMOCD RRAL's for chlorides has been successfully removed confirmation soil samples will be taken at sample locations S-1 and S-2 and analyzed at the lab for total chlorides.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- NMOCD will be presented with the analytical results from the confirmation sampling. Upon regulatory approval from NMOCD the excavated area will be backfilled with caliche and contoured to match the surrounding location.

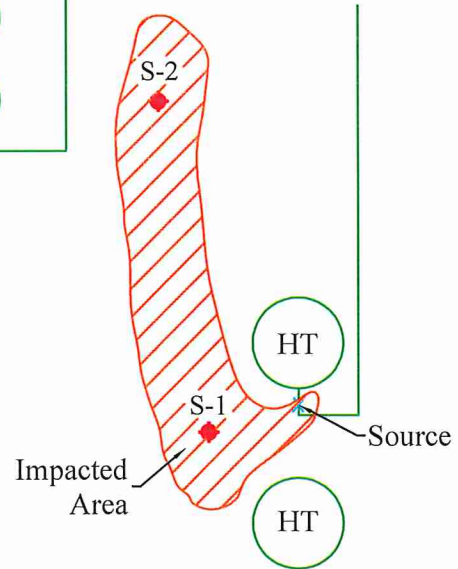
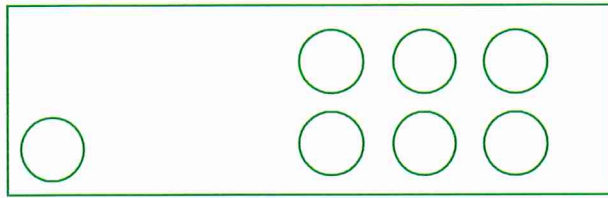
Should you have any questions or if further information is required, please do not hesitate to contact our office at (575)-746-8768.

Respectfully submitted,


Sheldon Hitchcock
Project Manager


David J. Adkins
District Manager

SITE PLAN



0 15 30
Scale in Feet

Legend
♦ - Sample Location



Date: 03/09/2015
Scale: 1" = 30'
Drawn By: TJS

Monk 21 St Com #1H
Crossfire, LLC
Lea County, New Mexico
Figure 1 - Site Plan

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
CP 01091 POD1			LE	3	3	2	28	21S	34E	643447	3591434	2210	200	140	60
CP 01067 POD1			LE	1	3	4	28	21S	34E	643448	3591342	2298	210	140	70

Average Depth to Water: 140 feet

Minimum Depth: 140 feet

Maximum Depth: 140 feet

Record Count: 2

Basin/County Search:

County: Lea

UTMNAD83 Radius Search (in meters):

Easting (X): 642725

Northing (Y): 3593524

Radius: 2400

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	Contact Tom Pettyjohn
Address PO Box 250 Artesia, NM 88211	Telephone No. 575- 748-3371
Facility Name Monk 21 State #1H	Facility Type Oil

Surface Owner State	Mineral Owner State	API No. 3002540986
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LOCATION OF RELEASE

Unit Letter D	Section 21	Township 21S	Range 34E	Feet from the 330	North/South Line N	Feet from the 460	East/West Line W	County LEA
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Latitude: **32.47071 N** Longitude: **103.48195 W**

NATURE OF RELEASE

Type of Release Brine Water	Volume of Release 15 BBLs	Volume Recovered 3BBLs
Source of Release Heater Treater	Date and Hour of Occurrence 03/03/2015 9:27 AM	Date and Hour of Discovery 03/03/2015 9:27 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Tomas Oberding at OCD	
By Whom? Tom Pettyjohn	Date and Hour 03/03/2015 10:30 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.* **N/A**

Describe Cause of Problem and Remedial Action Taken.*

Victaulic clamp was removed from valve releasing brine water all brine water in container was released.

Describe Area Affected and Cleanup Action Taken.*

The lease pad (120' by 120') was affected the cleanup will be done by 3rd party.

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.

OIL CONSERVATION DIVISION

Signature: <i>Nicole Wedman</i>	Approved by Environmental Specialist:		
Printed Name: Nicole Wedman			
Title: Field Admin Support	Approval Date:	Expiration Date:	
E-mail Address: Nicole.Wedman@dvn.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 3.10.15 Phone: 575-748-1820			

* Attach Additional Sheets If Necessary

LABORATORY RESULTS

March 05, 2015

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: MONK 21 STATE COM #1

Enclosed are the results of analyses for samples received by the laboratory on 03/04/15 14:40.

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

 Received: 03/04/2015
 Reported: 03/05/2015
 Project Name: MONK 21 STATE COM #1
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 03/04/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-1 0' (H500606-01)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/05/2015	ND	1.55	77.6	2.00	10.8	
Toluene*	<0.050	0.050	03/05/2015	ND	1.37	68.4	2.00	10.5	
Ethylbenzene*	<0.050	0.050	03/05/2015	ND	1.50	75.2	2.00	12.1	
Total Xylenes*	<0.150	0.150	03/05/2015	ND	3.88	64.6	6.00	13.4	
Total BTX	<0.300	0.300	03/05/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 78.2 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	03/05/2015	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/05/2015	ND	191	95.6	200	0.733	
DRO >C10-C28	<10.0	10.0	03/05/2015	ND	205	103	200	4.15	

Surrogate: 1-Chlorooctane 88.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 88.2 % 52.1-176

Sample ID: S-1 0.5' (H500606-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4400	16.0	03/05/2015	ND	416	104	400	3.92	

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 03/04/2015
 Reported: 03/05/2015
 Project Name: MONK 21 STATE COM #1
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 03/04/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-2 0' (H500606-03)

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	03/05/2015	ND	1.55	77.6	2.00	10.8	
Toluene*	<0.050	0.050	03/05/2015	ND	1.37	68.4	2.00	10.5	
Ethylbenzene*	<0.050	0.050	03/05/2015	ND	1.50	75.2	2.00	12.1	
Total Xylenes*	<0.150	0.150	03/05/2015	ND	3.88	64.6	6.00	13.4	
Total BTX	<0.300	0.300	03/05/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 77.2 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1220	16.0	03/05/2015	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	03/05/2015	ND	191	95.6	200	0.733		
DRO >C10-C28	<10.0	10.0	03/05/2015	ND	205	103	200	4.15		

Surrogate: 1-Chlorooctane 88.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 95.8 % 52.1-176

Sample ID: S-2 0.5' (H500606-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3640	16.0	03/05/2015	ND	400	100	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



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: Talon/LPE
Project Manager: S. Hitchcock
Address: 408 W. Texas Ave.
City: Artesia
State: NM Zip: 88210
Phone #: 575-746-8768 Fax #: 575-746-8905
Project #:
Project Name: Monk 21 St. Cem #1
Project Location:
Sample Name: S. Hitchcock
FOR LAB USE ONLY

P.O. #:
Company: Talon/LPE
Attn:
Address:
City:
State: Zip:
Phone #:
Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME										
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :												
1	5-10'		1							7/4/15											
2	5-10.5'		1																		
3	5-20'		1																		
4	5-20.5'		1																		

PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy, for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:
Received By:
Date:
Time:
Relinquished By:
Received By:
Date:
Time:
Delivered By: (Circle One)
Sampler - UPS - Bus - Other:
4.22

Phone Result: ☐ Yes ☐ No
Fax Result: ☐ Yes ☐ No
Add'l Phone #:
Add'l Fax #:
REMARKS:
CHECKED BY:
Cool Impact: ☐ Yes ☐ No
Yes No