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Remediation and Closure Report

Daisy Duke 31 State Com #3H * 30-015-* 2RP-2649
Talon Project No. 700794.228.01

Prepared For:

Devon Energy Production
6488 Seven Rivers Hwy
Artesia, New Mexico 88210

Prepared By:

Kimberly M. Wilson
Talon/LPE
408 West Texas
Artesia, New Mexico 88210

July 13, 2017

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

Subject: **Remediation and Closure Report**
 Daisy Duke 31 State Com #3H
 30-015-42224 * 2RP-2649

Dear Mr. Bratcher,

Devon Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The incident description, soil sampling results, remediation activities and closure request are submitted herein.

Incident Date

The date of release was December 4, 2014.

Background Information

The Daisy Duke 31 State Com #3H is located approximately forty-five (45) miles southwest of Artesia, New Mexico. The legal location for this site is Unit Letter I, Section 31, Township 22 South and Range 26 East in Eddy County, New Mexico. More Specifically the latitude and longitude for the release are 32.346 North and - 104.324 West. The site plan is presented in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Upton gravelly loam with 0 to 9 percent slopes. Drainage courses in this area are normally dry. Ground water in the project vicinity is approximately 367-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:

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

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, and 5,000 mg/kg for TPH and the recommended guidelines for total chlorides is 1,000 mg/kg.

Incident Description

On December 4, 2014 Crossfire was changing a valve around the on the heater treated and caused a release of 5 to 7 barrels of produced water. All fluids remained on location as depicted on the site map. A vac truck was immediately called to the location and recovered an unknown amount of standing fluids.

Remedial Actions Taken

On July 3, 2017 Talon mobilized personnel to the location and began remediation activities.

The impacted area surrounding S-1 was excavated between depths of 0.5-feet to 1.0-feet deep. The area around S-2 and S-3 were excavated to a depth of 0.5' deep. Field titration testing for chlorides was used to guide the excavation. Once field results indicated that the impacted soil was below NMOCD Recommended Remedial Action Level's (RRAL's), confirmation soil samples were obtained to insure all the impacted material was removed. The confirmation samples were submitted to Cardinal Laboratory for analysis. The results of our sampling activities are summarized in the table below.

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

June 14, 2016

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	1'	--	512	--	--
S-2	0.5'	--	384	--	--
S-3	0.5'	--	32.0	--	--

--Analyte Not Tested

All of the impacted material was hauled to Lea Land LLC, a NMOCD approved disposal facility.

Permission to backfill the excavated area was granted by Mike Bratcher with the NMOCD, on July 11, 2017.

On July 12, 2017 the excavated area was watered, backfilled with clean caliche backhauled from Lea Land, LLC, contoured and compacted to help prevent the location from turning into a mud pit upon the arrival of the monsoon season.

Closure

On behalf of Devon Energy, we respectfully request that no further actions be required and that closure with respect to these releases be granted. A Final C-141 is also attached.

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 Regulatory Stipulations
Appendix III Laboratory Results
Appendix IV Final C-141

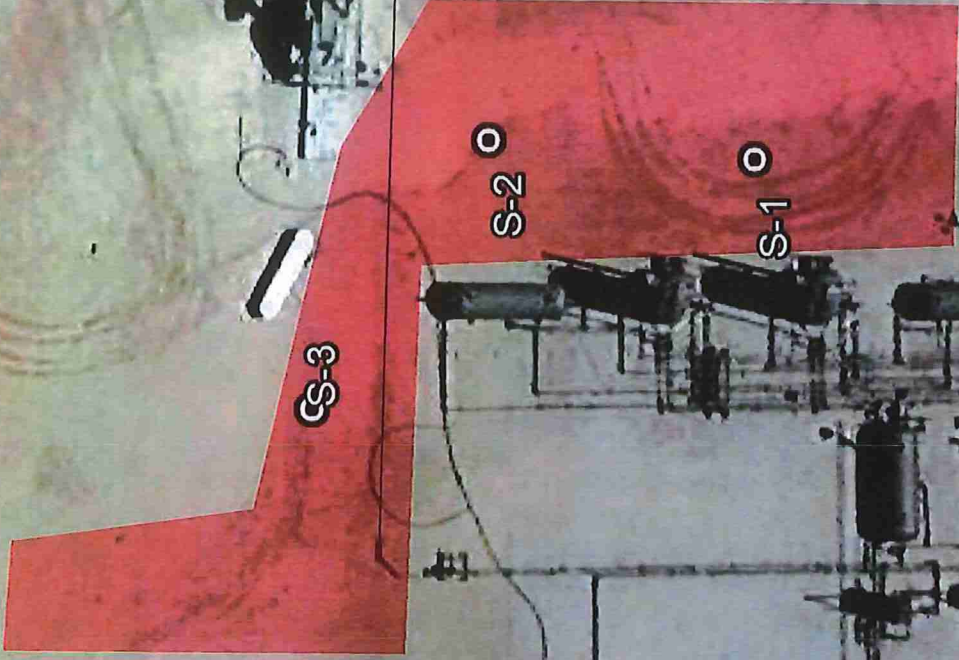
APPENDIX I

SITE MAP

Legend

- Devon-Daisy Duke 31 St. Com #3
- Sample points
- Impacted Area
- burried line

Devon-Daisy Duke 31 St. Com #3



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 Code	Sub-basin	County	Q 6	Q 4	Q 1	Q 3	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C 01445	C	ED	4	1	3	31	22S	26E	562356	3578903*	1192	389	367	22		
C 02855	CUB	ED	1	1	2	32	22S	26E	564529	3579996*	1609	127				
C 01788	C	ED	4	2	4	30	22S	26E	563521	3580571*	1842	170	150	20		

Average Depth to Water: **258 feet**
 Minimum Depth: **150 feet**
 Maximum Depth: **367 feet**

Record Count:3

UTMNAD83 Radius Search (in meters):

Easting (X): 563536

Northing (Y): 3578729

Radius: 2000

*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.

5/17/17 1:37 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

APPENDIX III
LABORATORY RESULTS



July 07, 2017

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: DAISY DUKE 31 ST COM #3

Enclosed are the results of analyses for samples received by the laboratory on 07/07/17 14:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	07/07/2017	Sampling Date:	07/07/2017
Reported:	07/07/2017	Sampling Type:	Soil
Project Name:	DAISY DUKE 31 ST COM #3	Sampling Condition:	** (See Notes)
Project Number:	700794.228.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON / EDDY CO.		

Sample ID: S-1 (H701760-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	07/07/2017	ND	384	96.0	400	18.9		

Sample ID: S-2 (H701760-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	07/07/2017	ND	384	96.0	400	18.9		

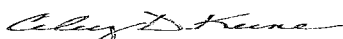
Sample ID: S-3 (H701760-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	07/07/2017	ND	384	96.0	400	18.9		

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

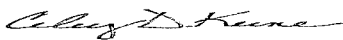
Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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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

Page 1 of 1

BILL TO

ANALYSIS REQUEST

Company Name: Falson WPE

Project Manager: David Perkins

Address: 408 W Texas

City: Altoia State: NM zip: 88210

Phone #: 575-746-8768 Fax #:

Project #: 700794 288.01 Project Owner: Debra

Project Name: Debra Duke 31 St Com #3

Project Location: Seddy, CT

Sampler Name: Kim Isler

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H101260 1 S-1 (G)RAB OR (C)OMP.

2 S-2 3 S-3 # CONTAINERS

1 1 GROUNDWATER

1 1 WASTEWATER

1 1 SOIL

1 1 OIL

1 1 SLUDGE

1 1 OTHER:

1 1 ACID/BASE:

P.O. #:

Company: Falson

Attn:

Address:

City:

State: Zip:

Phone #:

Fax #:

PRESERV

SAMPLING

DATE

TIME

7/7/17 1 1 Chlorides

1 1

1 1

1 1

1 1

1 1

1 1

1 1

Relinquished By: Kim Isler

Date: 7-7-17 Time: 2:30pm

Received By: Melissa Black

Date: 7-7-17 Time: 3:05

Delivered By: Paul Medina

Sample - UPS - Bus - Other: Printed 35652

Relinquished By: Kim Isler

Date: 7-7-17 Time: 2:30pm

Received By: Melissa Black

Date: 7-7-17 Time: 3:05

Delivered By: Paul Medina

Sample - UPS - Bus - Other: Printed 35652

Relinquished By: Kim Isler

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Date: 7-7-17 Time: 3:05

Delivered By: Paul Medina

Sample - UPS - Bus - Other: Printed 35652

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

APPENDIX IV

FINAL C-141