

**Devon Energy Production Co LP
Todd 24 Fed 2 Battery
API 30-015-27691
Delineation Report and Work Plan**

**Unit Letter B, Section 24, T23S, R31E
Eddy County, New Mexico
2RP-3051
2RP-1686
2RP-1391**

July 13, 2015



Prepared for:

**Devon Energy Production Co., LP
PO Box 250
Artesia, New Mexico 88211**

By:

**Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240
(575) 397-0510**

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I. Company Contacts

Representative	Company	Telephone	E-mail
Brett Fulks	Devon Energy Prod.	575-748-1844	Brett.Fulks@dvn.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

II. Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was engaged by Alfredo's Trucking to perform site delineation on the Todd 24 Fed 2 Battery, concerning a spill of produced water measuring approximately 80 bbls in volume. Lobo Trucking recovered approximately 75 bbls. The impacted area was contained inside the bermed area of the battery and encompassed approximately 1,720.09 sq. ft. This site is situated in Eddy County, Section 24, Township 23S, and Range 31E.

According to the C-141: the cause of impact was as the result of a compromised transfer pump. The pump was repaired and the battery restored to normal operations. The pump failure resulted in 80 bbls of produced water overflowing inside the containment. A vacuum truck from Lobo trucking recovered approximately 75 bbls of fluid. This was reported on February 23, 2015 and assigned **2RP-3051**. A C-141 for a former produced water spill as a result of a tank overflow and was filed as follows: This resulted in a 35 bbl. release, of which approximately 30 bbls. were recovered by a vacuum truck. This spill was contained inside the bermed area, was reported to the NMCOD on June 17, 2013 and assigned **2RP-1686**. In conclusion, and according to a historical C-141 listed with the NMOCD as outstanding is a 70 bbl. spill that was as a result of a transfer pump malfunction. A vacuum truck was utilized to recover 70 bbls. of fluid. This C-141 was filed with the NMOCD on November 01, 2012 and assigned **2RP-1391**.

III. Surface and Ground Water

There is no record of groundwater in the immediate vicinity of the site location. According to the topography map for Eddy County the depth to ground water for Section 24, Township 23S, Range 31E is approximately 200 bgs. Further research of the New Mexico Office of the State Engineer records indicate the average depth to groundwater for the area to be 232' bgs. Thereby, posing no eminent threat or danger to life forms in the area.

IV. Characterization

The target cleanup levels are determined using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). Based on the ranking criteria presented below, the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethyl benzene, and total xylenes (BTEX), and 5,000 ppm Total Petroleum Hydrocarbons (TPH). Characterization of vertical extent of chloride concentration to a level of 1000 mg/kg (PPM) is also required.

Depth to Ground Water:			
(Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	20 points	
	50 feet to 99 feet	10 points	
	>100 feet	0 points	X
Wellhead Protection Area:			
(Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources)	Yes	20 points	
	No	0 points	X
Distance to Surface Water:			
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	20 points	
	200 feet to 1000 feet	10 points	
	>1000 feet	0 points	X
RANKING SCORE (TOTAL POINTS)			0

V. Work Performed

On June 17, 2015, SESI personnel visited the site to conduct a vertical and horizontal delineation of the impacted area. Whereby, it was determined that two (2) sample point positions would be sufficient given the dynamics and outlay of the area i.e. number of lines and tanks. The two sample point positions were hand augured to depths of 4' and 6', respectively. Representative soil samples were properly packaged, preserved and transported to Cardinal Laboratories, Hobbs New Mexico and analyzed for Chloride (Cl⁻) (Method SM 4500Cl-B). The results of the analysis are presented in the table below:

Sample Date 6/03/15	Chloride (mg/kg)
Depth	
AH-1 @Surface	1460
AH-1 @ 1'	1200
AH-1 @ 2'	1700
AH-1 @ 3'	1730
AH-1 @ 4'	720
AH-1 @ 5'	112
AH-2 @ Surface	3280
AH-2 @ 1'	1660
AH-2 @ 2'	1260
AH-2 @ 3'	799
AH-2 @ 4'	944
AH-2 @ 5'	400
AH-2 @ 6'	144

VI. Action Plan

Due to the results listed above the following action plan is proposed:

Due to the spill having been contained inside the bermed area, a decline in chloride constituency, and depth to ground water for this area, a 1' bgs. excavation is proposed. Confirmation samples will be taken from the sides and bottom of the excavation area. The representative soil samples will be taken to a commercial laboratory for final analysis and confirmation. A 30 mil. Liner would be installed, preventing further migration of chlorides, layered with sand, capped with material similar to that presently inside the bermed area. SESI is proposing to remove and transport all impacted soils to an approved NMOCD facility for disposal. The excavated area will be backfilled with material similar to that removed, returning to grade and esthetically restore the pad area. Proper regulatory documentation will be submitted to the NMOCD and BLM respectively.

VII. Figures & Appendices

Figure 1 – Vicinity Map

Figure 2 – Site Plan

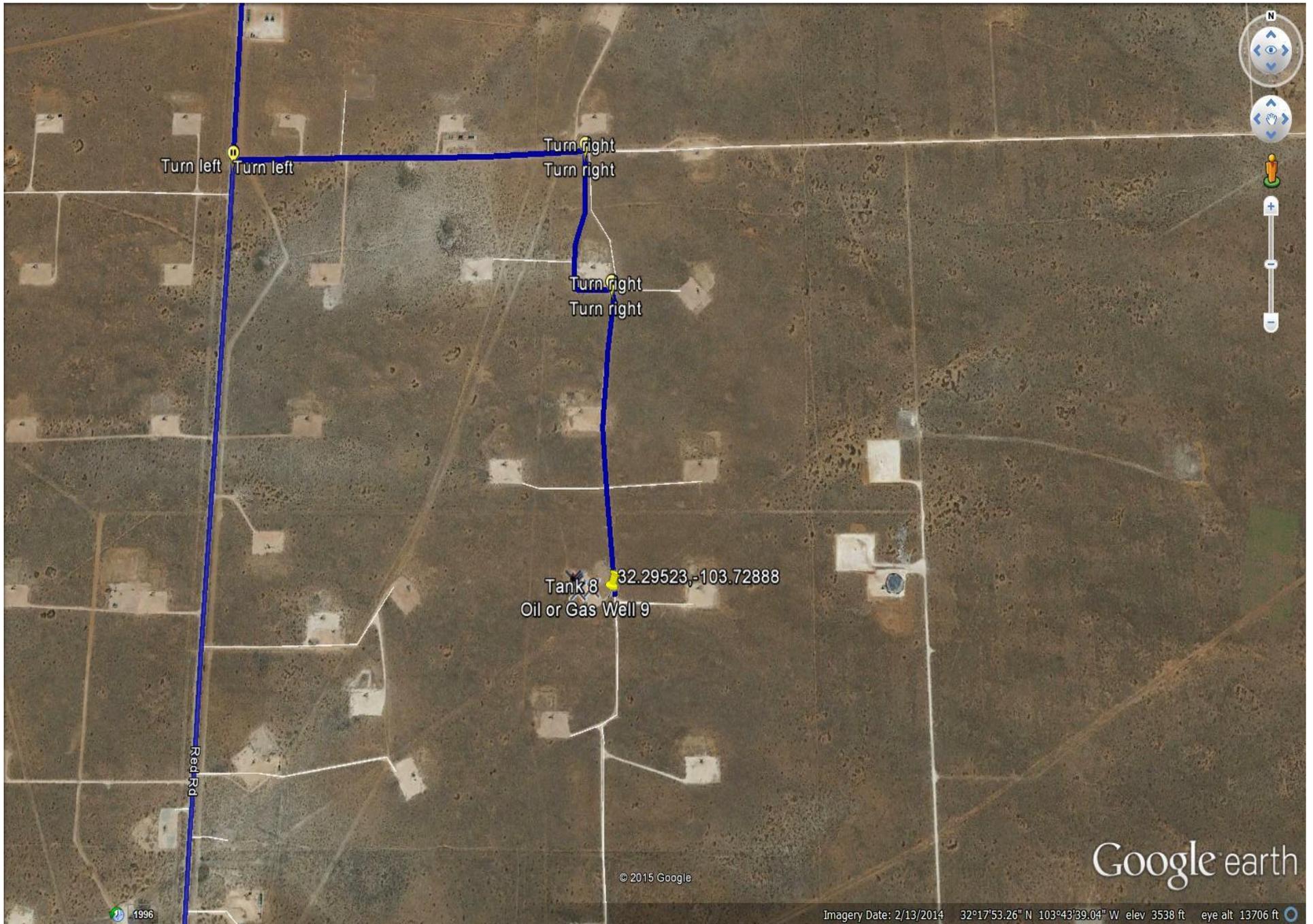
Appendix A – C-141

Appendix B – Photographs

Appendix C – Analytical Results

Appendix D – Groundwater

**Figure 1
Vicinity Map**



**Figure 2
Site Plan**



Tank 5

Tank 6

Tank 7

AH-2

Tank 8

AH-1

Oil or Gas Well 9

© 2015 Google

Google earth

1996

Imagery Date: 2/13/2014 32°17'43.98" N 103°43'47.79" W elev 3537 ft eye alt 3955 ft

Appendix A 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

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 Randy Gladden
Address 6488 Seven Rivers Hwy Artesia, NM 88220	Telephone No. 575.513.9463
Facility Name Todd 24-B Battery 2	Facility Type OIL
Surface Owner BLM	Mineral Owner BLM
API No. 30-015-27691	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	24	23S	31E	660	North	1980	East	EDDY

Latitude: 32.29523 Longitude: -103.72888

NATURE OF RELEASE

Type of Release Spill Produced Water	Volume of Release 80 BBL	Volume Recovered 75 BBL
Source of Release A water transfer pump went down causing water tank to overflow.	Date and Hour of Occurrence 2.23.15 4:00 am	Date and Hour of Discovery 2.23.15 11:10 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jeff Robertson BLM Mike Bratcher OCD	
By Whom? Randy Gladden	Date and Hour 2.23.15 @ 11:20 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.* Result of transfer pump not operating properly approximately 80 barrels of produced water spilled inside containment. Lobo trucking recovered 75 BBLs and the transfer pump was repaired and returned to normal operations.		
Describe Area Affected and Cleanup Action Taken.* Unlined Containment 15x80 all inside containment. Environmental service will be called on.		
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>Jeanette Barron</i>	OIL CONSERVATION DIVISION	
Printed Name: Jeanette Barron	Approved by Environmental Specialist:	
Title: Field Admin Support	Approval Date:	Expiration Date:
E-mail Address: Jeanette.barron@devon.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 2.26.15 Phone: 575.748.1813		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
111 S. First St., Artesia, NM 88210
District III
1000 R-5 Highway Road, Aztec, NM 87410
District IV
1230 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

WTM 11317034502 Energy 6237

Name of Company **DEVON ENERGY** OPERATOR Initial Report Final Report
 Address **PO BOX 250** Contact **DAN SUNIGA**
ARTESIA NM 88211 Telephone No. **575-746-5555**
 Facility Name **TODD 24 FED 2 BATTERY** Facility Type **OIL WELL**
 Surface Owner _____ Mineral Owner _____ API No. **3001527691**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	24	23S	31E	600'	North	1980"	East	Eddy

Latitude: 32.2952956145063 Longitude: -103.7294101096522

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 35bbls	Volume Recovered 30bbls
Source of Release Spill	Date and Hour of Occurrence June 12, 2013	Date and Hour of Discovery June 12, 2013
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher/OCD, Jennifer Van Curen/BLM	
By Whom? Wesley Ryan	Date and Hour: June 13, 2013 8:15am/8:30am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	

RECEIVED
JUN 17 2013
NMOCDD ARTESIA

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

Describe Cause of Problem and Remedial Action Taken.
At the Todd 24 Fed 2 Battery, a transfer pumps discharge line plugged off from a slug of paraffin causing a produced water tank to run over resulting in a spill of 35 bbls of produced water.

Describe Area Affected, and Cleanup Action Taken.
The lease operator arrived to discover the produced water tank running over. The operator discovered that a slug of paraffin had built up in a 90 on the discharge side of the pump. The pump was unable to transfer the produced water off location and the tank filled up and ran over. The spill was estimated to be 35bbls of produced water within the containment around the tanks. A vacuum truck was dispatched and the driver recovered 30bbls. The operator then notified the Asst. Foreman and made arrangements to have the line cleaned, replace the pump and reatove the contaminated soil around the tank. Also, the spill was contained within the unlined containment on the caliche pad.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCDD 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 NMOCDD 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, NMOCDD 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: *Veronica Teel* OIL CONSERVATION DIVISION
Printed Name: **Veronica Teel** Approved by Environmental Specialist: *Mike Bratcher*

Title: **Field Admin Support** Approval Date: **JUN 19 2013** Expiration Date: _____

E-mail Address: **Veronica.Teel@devon.com** Conditions of Approval: Remediation per OCD Rule 8 Guidelines. **SUBMIT REMEDIATION PROPOSAL NO LATER THAN:** Attached

Date: **June 14, 2013** Phone: **575-748-9933** **July 19, 2013**
Attach Additional Sheets If Necessary **ZRP-1686**

District I
1627 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 13, 2009
Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 or back
dated form.

Release Notification and Corrective Action

nJMW/231248032

Name of Company: <u>Devon Energy Production LP</u> <i>6137</i>		OPERATOR	<input checked="" type="checkbox"/> Initial Report	<input type="checkbox"/> Final Report
Address: P.O. Box 250 Artesia, N.M. 88211		Contact: <u>Daniel Sanga</u>		
Facility Name: <u>Todd 24B # 2</u>		Telephone No.: <u>(575)390-5850</u>		
		Facility Type: <u>Oil Well # 30-015-2769</u>		
Surface Owner	Mineral Owner	Lease No. <u>NM153177 A</u>		

LOCATION OF RELEASE

Unit Lease	Section	Township	Range	Fee from the	North/South Line	Fee from the	East/West Line	County
0	24	21S	31E	669'	North	1980'	East	Eddy

NATURE OF RELEASE

Type of Release: <u>Spill</u>	Volume of Release: <u>70 bbls</u>	Volume Recovered: <u>70 bbls</u>
Source of Release: <u>transfer pump malfunction</u>	Date and Hour of Occurrence: <u>5/23/2012, 8:00 AM</u>	Date and Hour of Discovery: <u>5/23/2012, 8:00 AM</u>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, to Whom? <u>Jim Amos, BLM-Eddy County</u>	
By Whom? <u>Daniel Sanga Production Foreman</u>	Date and Hour: <u>10/27/12, 2:55 PM</u>	
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: <u>N/A</u>		

RECEIVED
NOV 01 2012
NMOCD ARTESIA

Describe Cause of Problem and Remedial Action Taken.*
At the Todd 24B # 2 battery, a contractor lease Operator discovered produced water spilling over the tank due to a transfer pump malfunction that caused a 70 bbl produced water spill with 70 bbls recovered.

Describe Area Affected and Cleanup Action Taken.*
The affected location was the Todd 24B # 2 battery. The Lease Operator contacted a vacuum truck to haul the produced water and they contacted his foreman where he was advised to shut in the location. The transfer pump was repaired and put back into service.

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 threaten 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 any 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: <u>Rebecca Raga</u>	OIL CONSERVATION DIVISION	
Printed Name: <u>Rebecca Raga</u>	Approved by District Supervisor:	Signed By: <u>[Signature]</u>
Title: <u>Field Tech</u>	Approval Date: <u>NOV 07 2012</u>	Expiration Date:
E-mail Address: <u>rebecca.raga@devon.com</u>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>10/23/2012</u> Phone: <u>(505) 946-5664</u>		

* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:**
Dec. 7th 2012

2RP-1391

Appendix B Site Photographs



Sign marking location 06-17-15



SW corner looking north east



NW corner looking south



Looking south west



NE corner looking south



AH2 inside bermed area

Appendix C – Analytical Results



June 23, 2015

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: TODD 24 FED #2

Enclosed are the results of analyses for samples received by the laboratory on 06/18/15 15:12.

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,

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

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 Safety & Environmental Solutions
 Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4388

 Received: 06/18/2015
 Reported: 06/23/2015
 Project Name: TODD 24 FED #2
 Project Number: ALF-15-009
 Project Location: EDDY COUNTY NM

 Sampling Date: 06/17/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: AH-1 SURFACE (H501583-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1460	16.0	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-1 1' (H501583-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1200	16.0	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-1 2' (H501583-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1700	16.0	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-1 3' (H501583-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1730	16.0	06/22/2015	ND	416	104	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Safety & Environmental Solutions
 Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4388

 Received: 06/18/2015
 Reported: 06/23/2015
 Project Name: TODD 24 FED #2
 Project Number: ALF-15-009
 Project Location: EDDY COUNTY NM

 Sampling Date: 06/17/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: AH-1 4' (H501583-05)

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	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-1 5' (H501583-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-2 SURFACE (H501583-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3280	16.0	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-2 1' (H501583-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1660	16.0	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-2 2' (H501583-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1260	16.0	06/22/2015	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Safety & Environmental Solutions
 Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4388

 Received: 06/18/2015
 Reported: 06/23/2015
 Project Name: TODD 24 FED #2
 Project Number: ALF-15-009
 Project Location: EDDY COUNTY NM

 Sampling Date: 06/17/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: AH-2 3' (H501583-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	799	16.0	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-2 4' (H501583-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-2 5' (H501583-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	06/22/2015	ND	416	104	400	3.92	

Sample ID: AH-2 6' (H501583-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/22/2015	ND	416	104	400	3.92	

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



Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 2

Page 6 of 7

Company Name: Safety & Environmental Solutions, Inc.		BILL TO	
Project Manager: Bob Allen		P.O. #:	
Address: 703 East Clinton		Company: Same	
City: Hobbs State: NM Zip: 88240		Attn:	
Phone #: 575-397-0510 Fax #: 575-393-4388		Address:	
Project #: AKP-15-009 Project Owner: A776005		City:	
Project Name: TODD 24 FEB 02		State: Zip:	
Project Location: EDDY COUNTY		Phone #:	
Sampler Name: Jose Jerry		Fax #:	

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS	MATRIX						PRESERV.		SAMPLING		DATE	TIME						
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE/COOL	OTHER									
H5011583-1B	AH-1 SURFACE	1			X					X		06/17	1355	X						
2	AH-1 1A	1			X					X		06/17	1400	X						
3	AH-1 2A	1			X					X		06/17	1410	X						
4	AH-1 3A	1			X					X		06/17	1415	X						
5	AH-1 4A	1			X					X		06/17	1445	X						
6	AH-1 5A	1			X					X		06/17	1455	X						
7	AH-2 SURFACE	1			X					X		06/17	1505	X						
8	AH-2 1A	1			X					X		06/17	1515	X						
9	AH-2 2A	1			X					X		06/17	1525	X						
10	AH-2 3A	1			X					X		06/17	1535	X						

Chloride

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

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 analyses. 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 interruptions, 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.

Sampler Relinquished By: Jose Jerry	Date: 06/18/15 Time: 15:00	Received By: Judy Marcia
Relinquished By: Jose Jerry	Date: 6/18/15 Time: 3:12	Received By: Judy Marcia
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Temp. 38c	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No
		CHECKED BY: (Initials) JM

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

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

Appendix D – Groundwater Research



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	Depth Well	Depth Water	Water Column
C 02258	C	ED		3	2	26	23S	31E		618055	3571853*	662		
C 02348	C	ED		1	4	3	26	23S	31E	617648	3571068	700	430	270
C 02492		ED		4	4	4	06	23S	31E	612056	3577320*	135	85	50
C 02492 POD2	C	ED		3	2	2	07	23S	31E	611767	3576996	400	125	275
C 02664		ED		3	3	2	05	23S	31E	613049	3578138*	4291	354	3937
C 02725		ED		1	1	1	05	23S	31E	612240	3578731*	532		
C 02773		ED		4	1	3	03	23S	31E	615668	3577762*	880		
C 02774		ED		3	1	3	04	23S	31E	613857	3577745*	1660		
C 02775		ED		1	1	1	05	23S	31E	612240	3578731*	529		
C 02776		ED		2	1	1	05	23S	31E	612440	3578731*	661		
C 02777		CUB	ED	4	4	4	10	23S	31E	616974	3575662	890		
C 02865		ED		4	4	4	06	23S	31E	612056	3577320*	174		
C 02864 EXPL		ED		3	1	4	20	23S	31E	613114	3572806*	905		
C 03140		ED		4	2	4	04	23S	31E	615266	3577758*	684		
C 03351	C	ED		4	1	4	04	23S	31E	614917	3577861	320	168	152
C 03520 POD1	C	ED		3	1	1	07	23S	31E	610733	3576905	500		

Average Depth to Water: 232 feet
Minimum Depth: 85 feet
Maximum Depth: 430 feet

Record Count: 16

Basin/County Search:

County: Eddy

PLSS Search:

Township: 23S Range: 31E

*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.