

**Devon Energy Production Co LP**  
Todd 36 State 1  
**Delineation Report and Work Plan**

**Unit Letter K, Section 36, T23S, R31E**  
**Eddy County, New Mexico**

**30-015-20341**

**October 20, 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 Devon Energy to perform site delineation on the Todd 36 State 1, concerning a Seventy Five (75) bbl. release comprising of produced water. This site is situated in Eddy County, Section 36, Township 23S, and Range 31E.

According to the C-141: The lease operator noticed a hole approximately 5' from the bottom of the tank. The containment was overflowing onto the location. SB Transportation was dispatched to the location in order to vacuum the spill area. Approximately Fifty (50 bbl.) of fluid were removed.

**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 36, Township 23S, Range 31E is approximately 300' 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 250 mg/kg (PPM) is also required.

<b>Depth to Ground Water:</b>			
(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	<b>X</b>
<b>Wellhead Protection Area:</b>			
(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	<b>X</b>
<b>Distance to Surface Water:</b>			
(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	<b>X</b>
<b>RANKING SCORE (TOTAL POINTS)</b>			<b>0</b>

**V. Work Performed**

On October 12, 2015, SESI was onsite to photograph, assess and map the spill area.

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. The Two Bore Holes were augured to depths of 6' and 7' bgs., 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 10/12/2015	Chloride (mg/kg)
Depth	
BH-1 1'	64.0
BH-1 3'	976
BH-1 4'	5200
BH-1 6'	672
BH-1 7'	480
BH-2 2'	1400
BH-2 4'	2560
BH-2 5'	3880
BH-2 6'	3680

**VI. Action Plan**

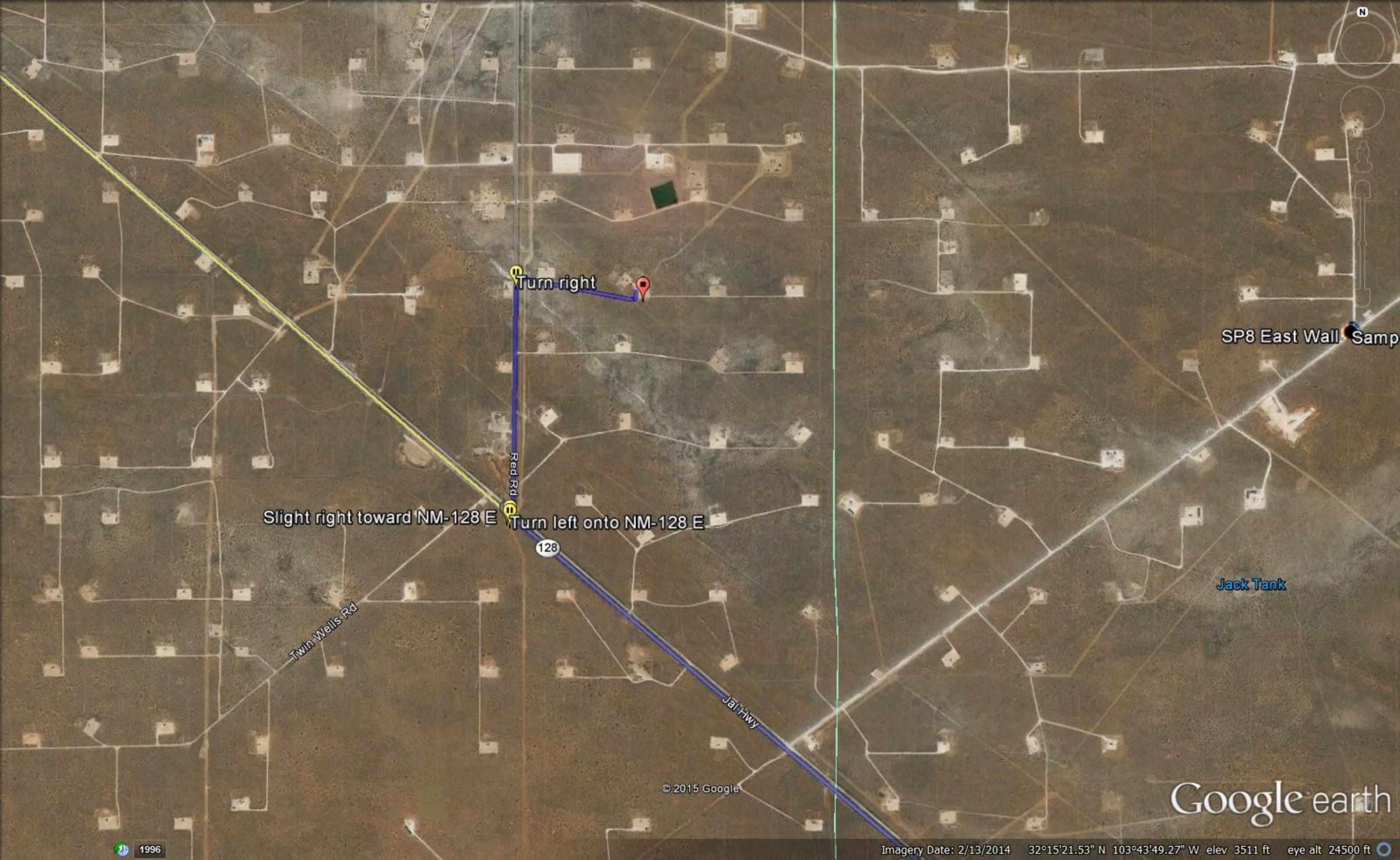
Due to the results listed above the following action plan is proposed:

Excavate and remove 2' bgs., excavating contaminated soils and transporting to an approved NMOCD facility for disposal. Composite 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. The excavated area will be backfilled with material similar to that removed, returning to grade and esthetically restoring the area.

**VII. Figures & Appendices**

- Figure 1 – Vicinity Map
- Figure 2 – Site Plan
- Appendix A – C-141
- Appendix B – Photographs
- Appendix C – Analytical Results

**Figure 1  
Vicinity Map**



SP8 East Wall Samp

Jack Tank

Slight right toward NM-128 E

Turn left onto NM-128 E

Turn right

Red Rd

Twin Wells Rd

Jal Hwy

128

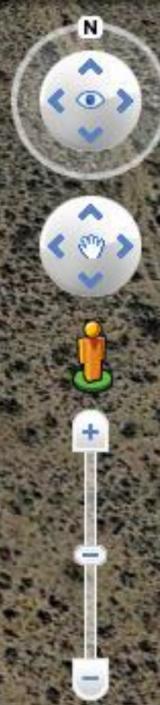
© 2015 Google

Google earth

1996

Imagery Date: 2/13/2014 32°15'21.53" N 103°43'49.27" W elev 3511 ft eye alt 24500 ft

**Figure 2  
Site Plan**



© 2015 Google

Google earth

1996

Imagery Date: 2/13/2014 32°15'45.48" N 103°44'00.99" W elev 3512 ft eye alt 4265 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

Form C-141  
Revised August 8, 2011

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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 <b>Devon Energy</b>	Contact <b>Kevin Phillips</b>
Address <b>PO Box 250 Artesia, NM 88211</b>	Telephone No. <b>575- 748-3371</b>
Facility Name <b>Todd 36 1</b>	Facility Type <b>SWD</b>

Surface Owner State	Mineral Owner State	API No. <b>30-015-20341</b>
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**LOCATION OF RELEASE**

Unit Letter <b>K</b>	Section <b>36</b>	Township <b>23S</b>	Range <b>31E</b>	Feet from the <b>1980</b>	North/South Line <b>WEST</b>	Feet from the <b>1980</b>	East/West Line <b>NORTH</b>	County <b>EDDY</b>
-------------------------	----------------------	------------------------	---------------------	------------------------------	---------------------------------	------------------------------	--------------------------------	-----------------------

Latitude: 32.2626871870239 Longitude: 103.733599857938

**NATURE OF RELEASE**

Type of Release Produced Water	Volume of Release 75 BBL	Volume Recovered 50 BBL
Source of Release Water tank leak	Date and Hour of Occurrence 1/21/15 2:00PM	Date and Hour of Discovery 1/21/15 2:00 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? BLM- Jeff Robertson OCD- Mike Bratcher	
By Whom? Kevin Phillips	Date and Hour 1/22/15 10:15 PM BLM 1/22/15 1:00 PM OCD	
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.\*  
Hole in water tank.

Describe Area Affected and Cleanup Action Taken.\*  
Lease operator noticed a hole about 5' from the bottom of the tank. The containment was full and overflowing onto the location. 75 BBL total spill with 50 BBL recovered. Called SB Transportation for a vacuum truck to pick up water. Planning the cleanup with Enviro Clean.

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>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Jeanette Barron</b>	Approved by Environmental Specialist:	
Title: <b>Field Admin Support</b>	Approval Date:	Expiration Date:
E-mail Address: <b>Jeanette.barron@dvn.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 1.23.15 Phone: <b>575-748-1813</b>		

\* Attach Additional Sheets If Necessary

# **Appendix B Site Photographs**

**Devon Energy  
Todd 36 State 1  
API 30-015-20341**



Sign marking location 10-14-15



Looking Northeast



## **Appendix C – Analytical Results**



October 16, 2015

Bob Allen  
Safety & Environmental Solutions  
703 East Clinton  
Hobbs, NM 88240

RE: TODD 36 STATE-01

Enclosed are the results of analyses for samples received by the laboratory on 10/13/15 8:00.

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](http://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". The signature is written in a cursive style with a large, flowing "C" and "K".

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:	10/13/2015	Sampling Date:	10/12/2015
Reported:	10/16/2015	Sampling Type:	Soil
Project Name:	TODD 36 STATE-01	Sampling Condition:	Cool & Intact
Project Number:	DEV-15-002	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY		

**Sample ID: BH-1 1' (H502672-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	10/14/2015	ND	416	104	400	3.77	

**Sample ID: BH-1 3' (H502672-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>976</b>	16.0	10/14/2015	ND	416	104	400	3.77	

**Sample ID: BH-1 4' (H502672-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>5200</b>	16.0	10/14/2015	ND	416	104	400	3.77	

**Sample ID: BH-1 6' (H502672-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>672</b>	16.0	10/14/2015	ND	416	104	400	3.77	

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: 10/13/2015  
 Reported: 10/16/2015  
 Project Name: TODD 36 STATE-01  
 Project Number: DEV-15-002  
 Project Location: LEA COUNTY

 Sampling Date: 10/12/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: BH-1 7' (H502672-05)**

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	10/14/2015	ND	416	104	400	3.77	

**Sample ID: BH-2 2' (H502672-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1400	16.0	10/14/2015	ND	416	104	400	3.77	

**Sample ID: BH-2 3' (H502672-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	10/14/2015	ND	416	104	400	3.77	

**Sample ID: BH-2 4' (H502672-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2560	16.0	10/14/2015	ND	416	104	400	3.77	

**Sample ID: BH-2 5' (H502672-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3880	16.0	10/14/2015	ND	416	104	400	3.77	

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\*=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: 10/13/2015  
 Reported: 10/16/2015  
 Project Name: TODD 36 STATE-01  
 Project Number: DEV-15-002  
 Project Location: LEA COUNTY

 Sampling Date: 10/12/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: BH-2 6' (H502672-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3680</b>	16.0	10/14/2015	ND	416	104	400	3.77	

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\*=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



ARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page \_\_\_\_ of \_\_\_\_

BILL TO

ANALYSIS REQUEST

Company Name: Safety & Environmental Solutions, Inc.

Project Manager: Bob Allen

Address: 703 East Clinton

City: Hobbs State: NM zip: 88240

Phone #: 575-397-0510 Fax #: 575-393-4388

Project #: DEV-15-002 Project Owner: Deven

Project Name: TODD 36 State-01

Project Location: Lee County

Sampler Name: Sara Jerry

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX								DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE /COOL			
H502678	BH-1	1R	1			X						10/12		Chlorides
	BH-1	3C	3			X						10/12		
	BH-1	4R	4			X						10/12		
	BH-1	6R	6			X						10/12		
	BH-1	7C	7			X						10/12		
	BH-2	2R	2			X						10/12		
	BH-2	3R	3			X						10/12		
	BH-2	4C	4			X						10/12		
	BH-2	5C	5			X						10/12		
	BH-2	6C	6			X						10/12		
	BH-2	7C	7			X						10/12		

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Terms and Conditions: Invoiced 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.

Sample Requisitioned By: Sara Jerry

Date: 10/15/15

Received By: Sara Jerry

Date: 10/12

Phone Result: Yes No

Fax Result: Yes No

Add'l Phone #: Add'l Fax #:

REMARKS:

Relinquished By: Sara Jerry

Date: 10/15/15

Received By: Sara Jerry

Date: 10/12

Phone Result: Yes No

Fax Result: Yes No

Add'l Phone #: Add'l Fax #:

REMARKS:

Delivered By: (Circle One) UPS - Bus - Other: 5C

Temp. 5C

Sample Condition: Cool Intact Yes No

CHECKED BY: Sara Jerry

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

#54