

REVIEWED

By Kellie Jones at 1:53 pm, Feb 04, 2016

APPROVED

By Kellie Jones at 1:53 pm, Feb 04, 2016

1. No further action required.

Devon Energy Production Co LP

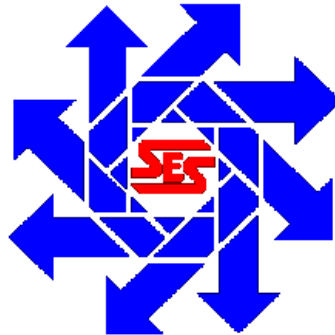
Tomcat 16 State 13

Delineation Report and Work Plan

**Unit Letter A, Section 16, T23S, R32E
Lea County, New Mexico**

30-025-35411

**January 28, 2016
(Revised February 1, 2016)**



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 Tomcat 16 State #013, concerning a Seventy Five (75) bbl. release comprising of produced water. This site is situated in Eddy County, Section 16, Township 23S, and Range 32E.

According to the C-141: A cap detached from the stuffing box causing the unit to continually run. This resulted in a combined fluid loss of 87 Bbl. The fluid impacted the well pad, as well at the pasture area. The well was shut in, and the rod blow out preventer was screwed in, so that further release would be prevented. A vacuum truck was utilized to recover and remove more than half of the fluid. SESI was contacted to assess the site, whereby a Trimble Juno device was utilized to map the spill area. The total area of impact is estimated to be 13,462 sq. ft. The NMOCD was notified on January 11, 2016 and the C-141 filed and stamped by the same on January 14, 2016 assigning this event number **1RP-1405** (Appendix A).

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 Lea County the depth to ground water for Section 16, Township 23S, Range 32E is approximately 450' bgs. Further research of the New Mexico Office of the State Engineer records indicate the average depth to groundwater for the area to be 519' 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.

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 January 14, 2016 SESI was onsite to photograph, assess and map the spill area.

On January 21, 2016 SESI personnel returned to the site, in order to conduct a vertical and horizontal delineation of the impacted area. Whereby, it was determined that Four (4) Test Trenches should be excavated in order to properly ascertain the vertical extent of the impact. Representative soil samples were properly packaged, preserved and transported to Cardinal Laboratories, Hobbs New Mexico and analyzed for BTEX (Method H600154-07), Chloride (Cl⁻) (Method SM 4500Cl-B), and TPH (GRO DRO) (Method 8015M). The results of the analysis are presented in the table below:

Sample Date 01/21/2016	BTEX	Chloride (mg/kg)	GRO	DRO
Depth				
TT-1 2'	<0.300	144	<10.0	<10.0
TT-1 3'	<0.300	128	<10.0	<10.0
TT-1 5'	<0.300	160	<10.0	<10.0
TT-2 5'	<0.300	672	<10.0	23.6
TT-3 5'	<0.300	624	<10.0	<10.0
TT-4 3'	<0.300	384	<10.0	<10.0
TT-4 5'	<0.300	144	<10.0	<10.0

Due to livestock presence in the area: Custom Welding of Hobbs removed oily surface residue as a preventative measure. There was approximately 40 yards of impacted soil stockpile that will be removed to an NMOCD approved facility.

VI. Action Plan

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

Excavate and treat impacted soil 2' bgs., utilizing RX soil amendment. Discrete 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 lined with 20 mil. Liner, for in place treatment of impacted soil.

Upon completion of all approved remediation activity SESI will submit complete final closure documentation regarding this incident, on behalf of Devon Energy to all parties of concern.

VII. Figures & Appendices

Figure 1 – Vicinity Map

Figure 2 – Site Plan

Appendix A – C-141

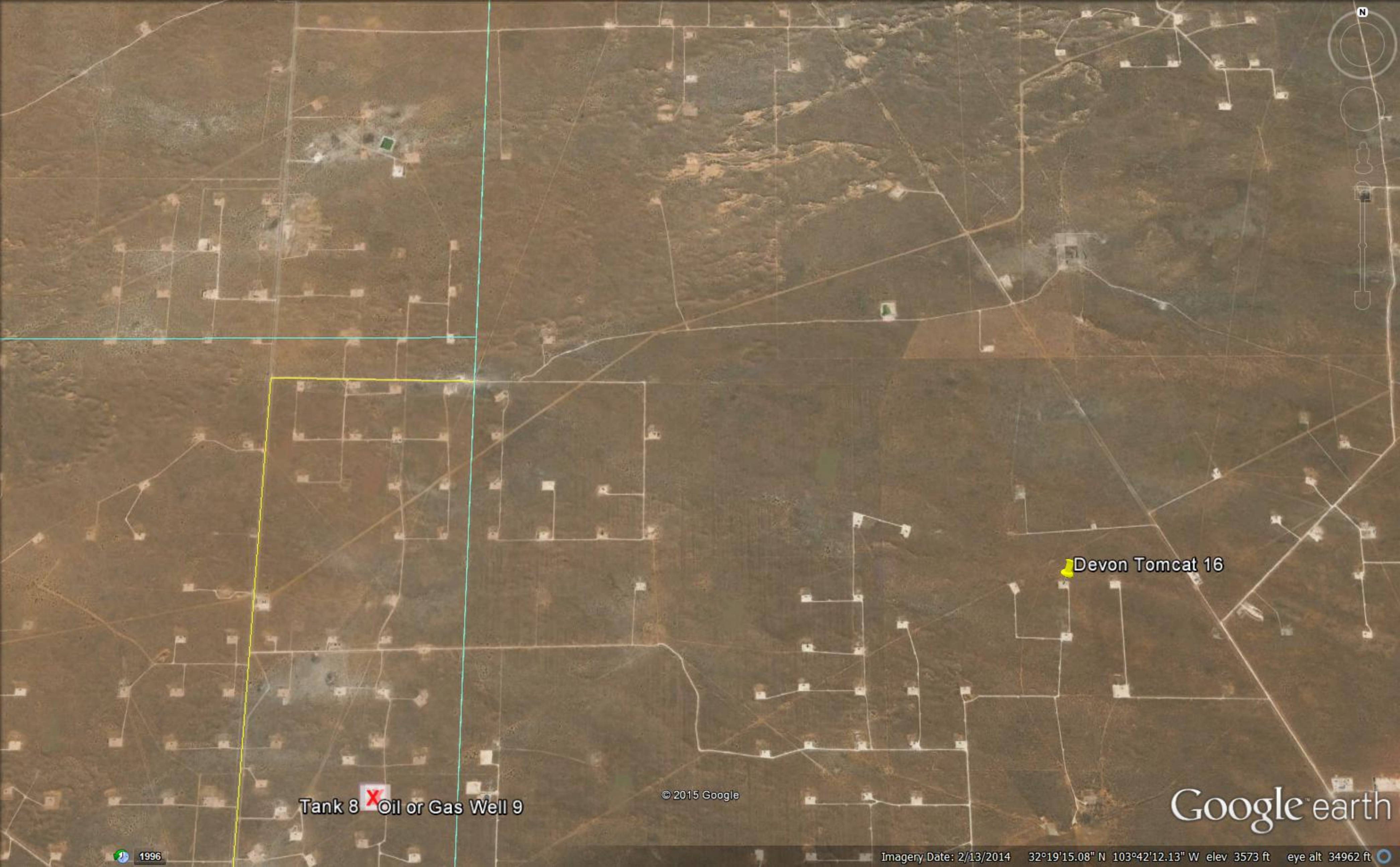
Appendix B – Groundwater


Appendix C – Analytical Results


Appendix D – Photo Documentation

Figure 1

Vicinity Map




 Devon Tomcat 16

Tank 8  Oil or Gas Well 9

© 2015 Google

Google earth

 1996


Imagery Date: 2/13/2014 32°19'15.08" N 103°42'12.13" W elev 3573 ft eye alt 34962 ft 

Figure 2
Site Plan



Google earth

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 Ruben Garcia Production Assistant Foreman	
Address 6488 Seven Rivers Hwy Artesia, NM 88220	Telephone No. 575.748.5209	
Facility Name Tomcat 16 State 13	Facility Type Oil	
Surface Owner State	Mineral Owner State	API No. 30-025-35411

LOCATION OF RELEASE

Unit Letter A	Section 16	Township 23S	Range 32E	Feet from the 660	North/South Line FNL	Feet from the 660	East/West Line FEL	County Lea
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Latitude: 32.302652 Longitude: -103.685551

NATURE OF RELEASE

Type of Release Spill Produced water & Oil	Volume of Release 50 BBL Produced water & 37 BBL Oil	Volume Recovered 42 BBL Produced water & 33 BBL Oil
Source of Release Stuffing box leak	Date and Hour of Occurrence 1/11/16 @ 11:30 am	Date and Hour of Discovery 1/11/16 @ 11:30 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? OCD Thomas Oberdin OCD - Kellie Jones	
By Whom? Ruben Garcia Production Assistant Foreman	Date and Hour 1/11/16 @ 2:16 pm 1/13/16 @ 1:00 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.*

The cap off the stuffing box broke off and unit continued to run. The well was shut in and rod blow out preventer was screwed in to prevent further release.

Describe Area Affected and Cleanup Action Taken.*

An approximant total of 50 BBL of produced water was released and an approximant total of 37 BBL of oil was released. Approximately 42 BBL produced water recovered and approximately 33 BBL oil recovered. This incident is both on pad and off pad.
On pad on a 189 x 93 area 6 BBL of produced water & 4 BBL of oil was released. 4 BBL produced water recovered and 3 BBL oil recovered. This took place on the east and west side of stuffing box.
Off the pad on the north side on a 54 x 36 area 4 BBL of produced water & 3 BBL of oil was released. 2 BBL produced water recovered and 2 BBL oil recovered.
Off the pad on the west side on a 138 x 180 area 40 BBL of produced water & 30 BBL of oil was released. 36 BBL produced water was recovered and 28 BBL of oil was recovered. A vacuum truck was called out for recovery 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.

OIL CONSERVATION DIVISION

Signature: *Jeanette Barron*

Printed Name: Jeanette Barron

Approved by Environmental Specialist:

Title: Field Admin Support

Approval Date: 01/14/2016

Expiration Date: 03/14/2016

E-mail Address: Jeanette.barron@dvn.com

Conditions of Approval:
Site samples required. Delineate and remediate as per MNOCD guides. Geotag photographs of remediation recommended.

Attached ☐
1RP-1405

Date: 1/13/16 Phone: 575.748.1813

nKJ1601426766 pKJ1601427103

Appendix B

Site Photographs

Devon Energy
Tomcat 16 State 13
API 30-025-35411



Leak Source location 01-14-16



View looking North of pad area



View of pad looking Northwest



Spill run exiting West side of pad to pasture



Close up of soil impact



Pasture impact traversing west of pad area

Appendix C – Analytical Results

January 27, 2016

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: TOMCAT 16 STATE #13

Enclosed are the results of analyses for samples received by the laboratory on 01/22/16 11:46.

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/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:

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

Received: 01/22/2016
Reported: 01/27/2016
Project Name: TOMCAT 16 STATE #13
Project Number: DEV-16-001
Project Location: LEA COUNTY, NM

Sampling Date: 01/21/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-1, 2' (H600154-01)

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	01/26/2016	ND	1.99	99.7	2.00	0.268	
Toluene*	<0.050	0.050	01/26/2016	ND	1.93	96.7	2.00	1.66	
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	1.77	88.5	2.00	2.28	
Total Xylenes*	<0.150	0.150	01/26/2016	ND	5.43	90.5	6.00	2.12	
Total BTX	<0.300	0.300	01/26/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 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	144	16.0	01/25/2016	ND	432	108	400	3.77	

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	01/25/2016	ND	201	101	200	0.838	
DRO >C10-C28	<10.0	10.0	01/25/2016	ND	187	93.6	200	1.58	

Surrogate: 1-Chlorooctane 84.5 % 35-147

Surrogate: 1-Chlorooctadecane 83.3 % 28-171

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: 01/22/2016
 Reported: 01/27/2016
 Project Name: TOMCAT 16 STATE #13
 Project Number: DEV-16-001
 Project Location: LEA COUNTY, NM

Sampling Date: 01/21/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: TT-1, 3' (H600154-02)

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	01/26/2016	ND	1.99	99.7	2.00	0.268		
Toluene*	<0.050	0.050	01/26/2016	ND	1.93	96.7	2.00	1.66		
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	1.77	88.5	2.00	2.28		
Total Xylenes*	<0.150	0.150	01/26/2016	ND	5.43	90.5	6.00	2.12		
Total BTEx	<0.300	0.300	01/26/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	01/25/2016	ND	432	108	400	3.77	

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	01/25/2016	ND	201	101	200	0.838	
DRO >C10-C28	<10.0	10.0	01/25/2016	ND	187	93.6	200	1.58	

Surrogate: 1-Chlorooctane 77.5 % 35-147

Surrogate: 1-Chlorooctadecane 78.2 % 28-171

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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:	01/22/2016	Sampling Date:	01/21/2016
Reported:	01/27/2016	Sampling Type:	Soil
Project Name:	TOMCAT 16 STATE #13	Sampling Condition:	Cool & Intact
Project Number:	DEV-16-001	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: TT-1, 5' (H600154-03)

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	01/26/2016	ND	1.99	99.7	2.00	0.268		
Toluene*	<0.050	0.050	01/26/2016	ND	1.93	96.7	2.00	1.66		
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	1.77	88.5	2.00	2.28		
Total Xylenes*	<0.150	0.150	01/26/2016	ND	5.43	90.5	6.00	2.12		
Total BTEx	<0.300	0.300	01/26/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 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	160	16.0	01/25/2016	ND	432	108	400	3.77	

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	01/25/2016	ND	201	101	200	0.838	
DRO >C10-C28	<10.0	10.0	01/25/2016	ND	187	93.6	200	1.58	

Surrogate: 1-Chlorooctane 82.8 % 35-147

Surrogate: 1-Chlorooctadecane 85.1 % 28-171

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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:	01/22/2016	Sampling Date:	01/21/2016
Reported:	01/27/2016	Sampling Type:	Soil
Project Name:	TOMCAT 16 STATE #13	Sampling Condition:	Cool & Intact
Project Number:	DEV-16-001	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: TT-2, 5' (H600154-04)

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	01/26/2016	ND	1.99	99.7	2.00	0.268		
Toluene*	<0.050	0.050	01/26/2016	ND	1.93	96.7	2.00	1.66		
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	1.77	88.5	2.00	2.28		
Total Xylenes*	<0.150	0.150	01/26/2016	ND	5.43	90.5	6.00	2.12		
Total BTEx	<0.300	0.300	01/26/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	01/25/2016	ND	432	108	400	3.77	

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	01/25/2016	ND	201	101	200	0.838	
DRO >C10-C28	23.6	10.0	01/25/2016	ND	187	93.6	200	1.58	

Surrogate: 1-Chlorooctane 81.6 % 35-147

Surrogate: 1-Chlorooctadecane 77.2 % 28-171

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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: 01/22/2016
Reported: 01/27/2016
Project Name: TOMCAT 16 STATE #13
Project Number: DEV-16-001
Project Location: LEA COUNTY, NM

Sampling Date: 01/21/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-3, 5' (H600154-05)

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	01/26/2016	ND	1.99	99.7	2.00	0.268		
Toluene*	<0.050	0.050	01/26/2016	ND	1.93	96.7	2.00	1.66		
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	1.77	88.5	2.00	2.28		
Total Xylenes*	<0.150	0.150	01/26/2016	ND	5.43	90.5	6.00	2.12		
Total BTEx	<0.300	0.300	01/26/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	01/25/2016	ND	432	108	400	3.77	

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	01/25/2016	ND	201	101	200	0.838	
DRO >C10-C28	<10.0	10.0	01/25/2016	ND	187	93.6	200	1.58	

Surrogate: 1-Chlorooctane 80.3 % 35-147

Surrogate: 1-Chlorooctadecane 81.0 % 28-171

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:	01/22/2016	Sampling Date:	01/21/2016
Reported:	01/27/2016	Sampling Type:	Soil
Project Name:	TOMCAT 16 STATE #13	Sampling Condition:	Cool & Intact
Project Number:	DEV-16-001	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: TT-4, 3' (H600154-06)

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	01/26/2016	ND	1.99	99.7	2.00	0.268		
Toluene*	<0.050	0.050	01/26/2016	ND	1.93	96.7	2.00	1.66		
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	1.77	88.5	2.00	2.28		
Total Xylenes*	<0.150	0.150	01/26/2016	ND	5.43	90.5	6.00	2.12		
Total BTEx	<0.300	0.300	01/26/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	01/25/2016	ND	432	108	400	3.77	

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	01/25/2016	ND	201	101	200	0.838	
DRO >C10-C28	<10.0	10.0	01/25/2016	ND	187	93.6	200	1.58	

Surrogate: 1-Chlorooctane 81.0 % 35-147

Surrogate: 1-Chlorooctadecane 80.0 % 28-171

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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:	01/22/2016	Sampling Date:	01/21/2016
Reported:	01/27/2016	Sampling Type:	Soil
Project Name:	TOMCAT 16 STATE #13	Sampling Condition:	Cool & Intact
Project Number:	DEV-16-001	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: TT-4, 5' (H600154-07)

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	01/26/2016	ND	1.99	99.7	2.00	0.268		
Toluene*	<0.050	0.050	01/26/2016	ND	1.93	96.7	2.00	1.66		
Ethylbenzene*	<0.050	0.050	01/26/2016	ND	1.77	88.5	2.00	2.28		
Total Xylenes*	<0.150	0.150	01/26/2016	ND	5.43	90.5	6.00	2.12		
Total BTEx	<0.300	0.300	01/26/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	01/25/2016	ND	432	108	400	3.77	

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	01/25/2016	ND	201	101	200	0.838	
DRO >C10-C28	<10.0	10.0	01/25/2016	ND	187	93.6	200	1.58	

Surrogate: 1-Chlorooctane 80.3 % 35-147

Surrogate: 1-Chlorooctadecane 78.9 % 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

