

SITE INFORMATION

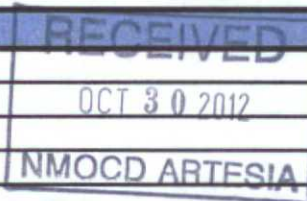
Report Type: Work Plan

General Site Information:

Site:	PDU #506	
Company:	SM Energy Company	
Section, Township and Range	Section 35, T19S, R29E	Unit Letter - J
Lease Number:		
County:	Eddy County	
GPS:	32.61740° N, 104.04565° W	
Surface Owner:	Federal	
Mineral Owner:		
Directions:	From the intersection of US 62 and Hwy 360 (Potash Mines Road), go west on US 62 exactly 1.3 miles. Turn North onto a paved road and continue North for 2 miles until the caliche road starts. Continue North on the Caliche road for approximatly 4 miles. Turn right onto the caliche road to the east and travel approximatly 0.80 miles. Turn North and travel 0.10 miles and turn right traveling 0.10 miles to the location.	

Release Data:

Date Released:	6/29/2012
Type Release:	Produced Water
Source of Contamination:	Injection Line Pin Failure
Fluid Released:	175 bbls
Fluids Recovered:	70 bbls



Official Communication:

Name:	Chad McNeely	Aaron Hale
Company:	SM Energy Company	Tetra Tech
Address:	3300 N A St # 7-200	1910 N. Big Spring
P.O. Box		
City:	Midland, Texas	Midland, Texas
Phone number:	(432) 688-3124	(432) 682-4559
Fax:		
Email:	cmcneely@sm-energy.com	aaron.hale@tetrattech.com

Ranking Criteria

Depth to Groundwater:	Ranking Score	Site Data
<50 ft	20	
50-99 ft	10	
>100 ft.	0	0
Wellhead Protection:	Ranking Score	Site Data
Water Source <1,000 ft., Private <200 ft.	20	
Water Source >1,000 ft., Private >200 ft.	0	0
Surface Body of Water:	Ranking Score	Site Data
<200 ft.	20	
200 ft - 1,000 ft.	10	
>1,000 ft.	0	0
Total Ranking Score:		0

Acceptable Soil RRAL (mg/kg)		
Benzene	Total BTEX	TPH
10	50	5,000



TETRA TECH

October 11, 2012

Mr. Mike Bratcher
Environmental Engineer
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

**Re: Work Plan for the SM Energy Company
Parkway Delaware Unit #506 Well
Injection Line Failure and Release
Unit J, Section 35, Township 19 South, Range 29 East
Eddy County, New Mexico**

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by SM Energy Company (SM Energy) to assess an injection line release at the Parkway Delaware Unit #506 Well (PDU #506) located in Unit J, Section 35, Township 19 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.61740°, W 104.04565°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on June 29, 2012. Approximately 175 barrels of produced water were released from an injection line pin failure. Approximately 70 barrels of produced water were recovered. The spill area was scraped with a backhoe and the impacted soil was hauled to Controlled Recovery Inc. (CRI) for disposal. The initial C-141 is enclosed in Appendix A.

Hydrology

The New Mexico State Engineers Well Report listed one well in Section 35 with an average depth of 110' and wells in Sections 34 and 36 with reported depths of 60' and 115', respectively. The well report is shown in Appendix B.

Previously, Tetra Tech personnel supervised the installation of a temporary well (TMW-1) in Section 35 to establish groundwater quality and depth in this section. During the installation, the well drilled dry. The well was drilled through fine grain sand with gypsum layers and red shale to a total depth of 140', to the top of a black and gray shale formation (blue shale). The well was measured two days later and showed a depth to groundwater of 121 TOC.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

**Regulatory**

A risk-based evaluation was performed for the Site in accordance with the OCD Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Results

On July 10, 2012, Tetra Tech personnel collected soils samples from depths ranging from 1' to 8.5' feet below ground surface (bgs), utilizing a hand auger at six locations within the spill area (identified as AH-1, AH-2, AH-3, AH-4, AH-5 and AH-6). Soil sampling stopped in each location when auger refusal occurred. Soil samples were submitted for laboratory analysis of TPH by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. The results of the sampling are summarized in Table 1.

All of the samples analyzed were below the RRAL for both BTEX and TPH. Additionally, results indicate the maximum extent of chloride impact greater than 1,000 mg/Kg extending to 1 foot (AH-1 and AH-2) on the well pad. The remainder of the impact was centered on the reserve pit, where chloride levels were reported greater than 1,000 mg/Kg (AH-4, AH-5 and AH-6) down to 3.5 feet bgs. All sample locations had chloride concentrations that decreased with depth, with the exception of AH-4, which is located in the center of the reserve pit. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The auger-hole locations are shown on Figure 4.

Work Plan

The proposed excavation plan is intended to remove chloride impacted soils from the well pad while minimizing disruption to the reserve pit area. The areas around AH-2 and AH-3 will be excavated to approximately 1 foot bgs. The areas around AH-4 and AH-5 will be excavated to approximately 2 feet bgs and the areas AH-6 will be excavated to approximately 3 foot bgs. The excavation activities in the vicinity of the former reserve pit will not go as deep as planned if drilling mud or plastic liner is encountered. All excavated areas will be backfilled with clean soils. Soils excavated from all areas will be transported under manifest to a proper disposal facility.



TETRA TECH

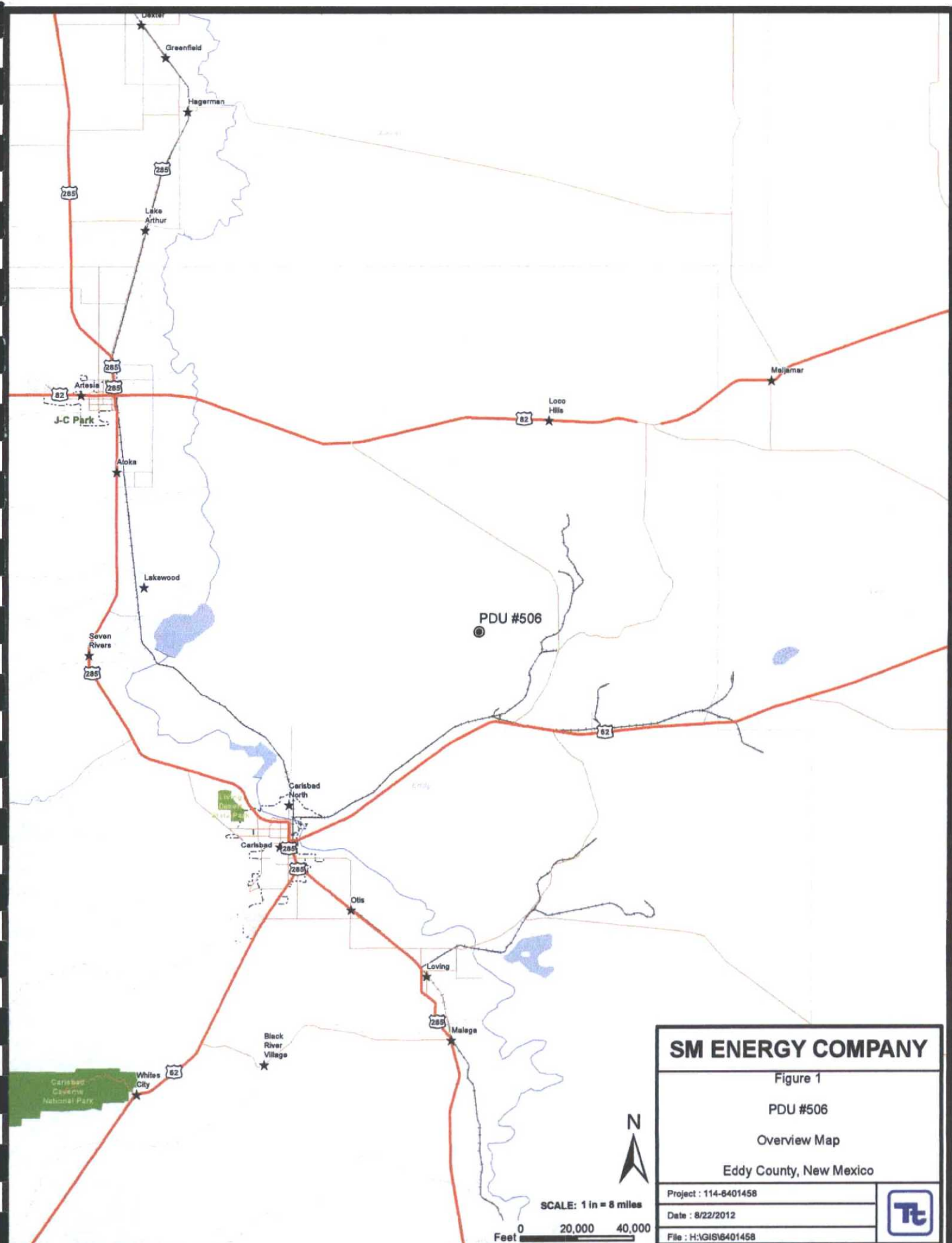
Once the remedial activities are performed a closure report with a final C-141 will be submitted for the soils at the site. If you require any additional information or have any questions or comments concerning this work plan, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH, INC.

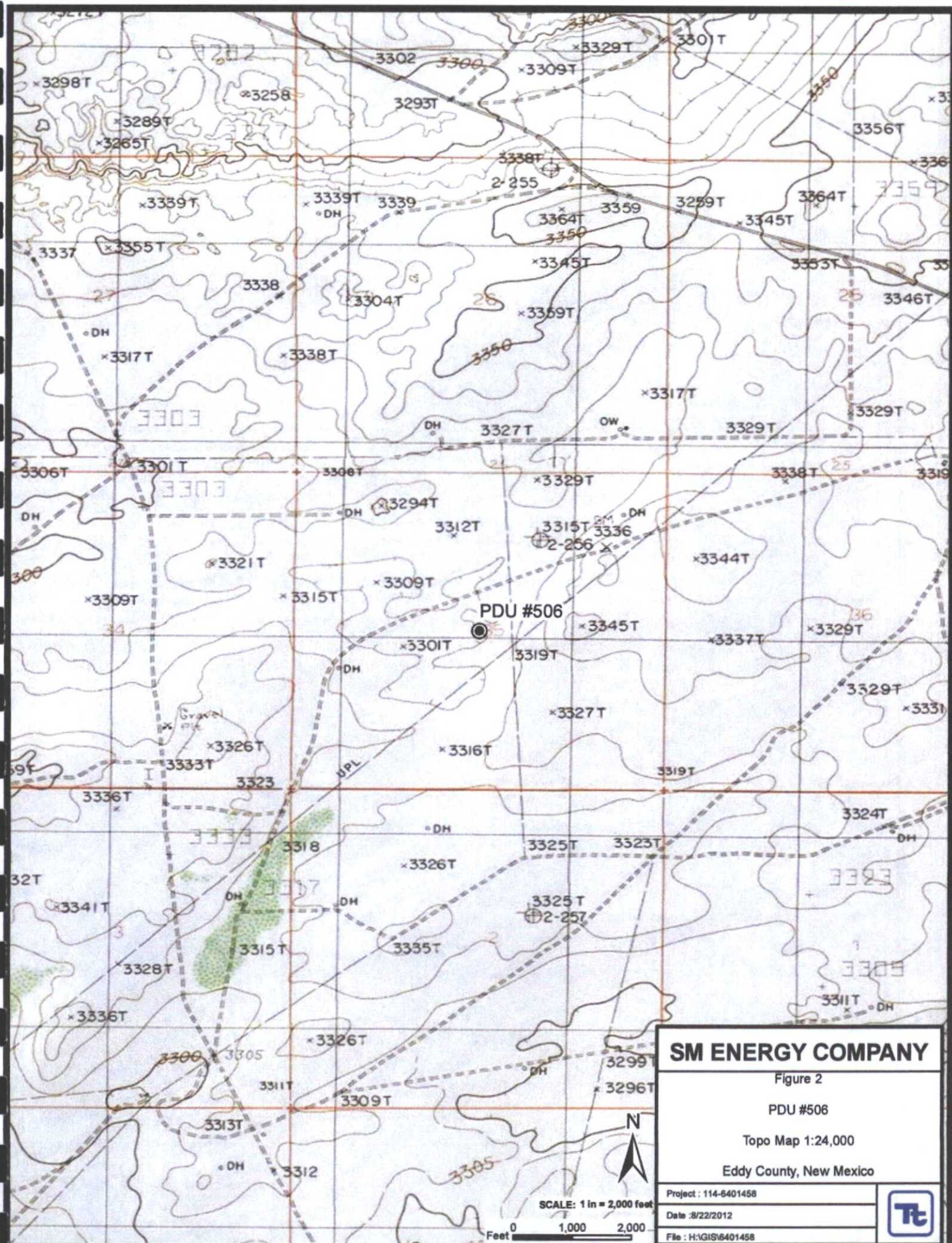
Tom Elliott
Staff Scientist

cc: SM Energy Company – File Copy
BLM – Jim Amos

FIGURES



SM ENERGY COMPANY	
Figure 1	
PDU #506	
Overview Map	
Eddy County, New Mexico	
Project : 114-8401458	
Date : 8/22/2012	
File : H:\GIS\8401458	
	



SM ENERGY COMPANY

Figure 2

PDU #506

Topo Map 1:24,000

Eddy County, New Mexico

Project : 114-6401458

Date : 8/22/2012

File : H:\GIS\6401458





EXPLANATION

● AUGER HOLE SAMPLE LOCATIONS

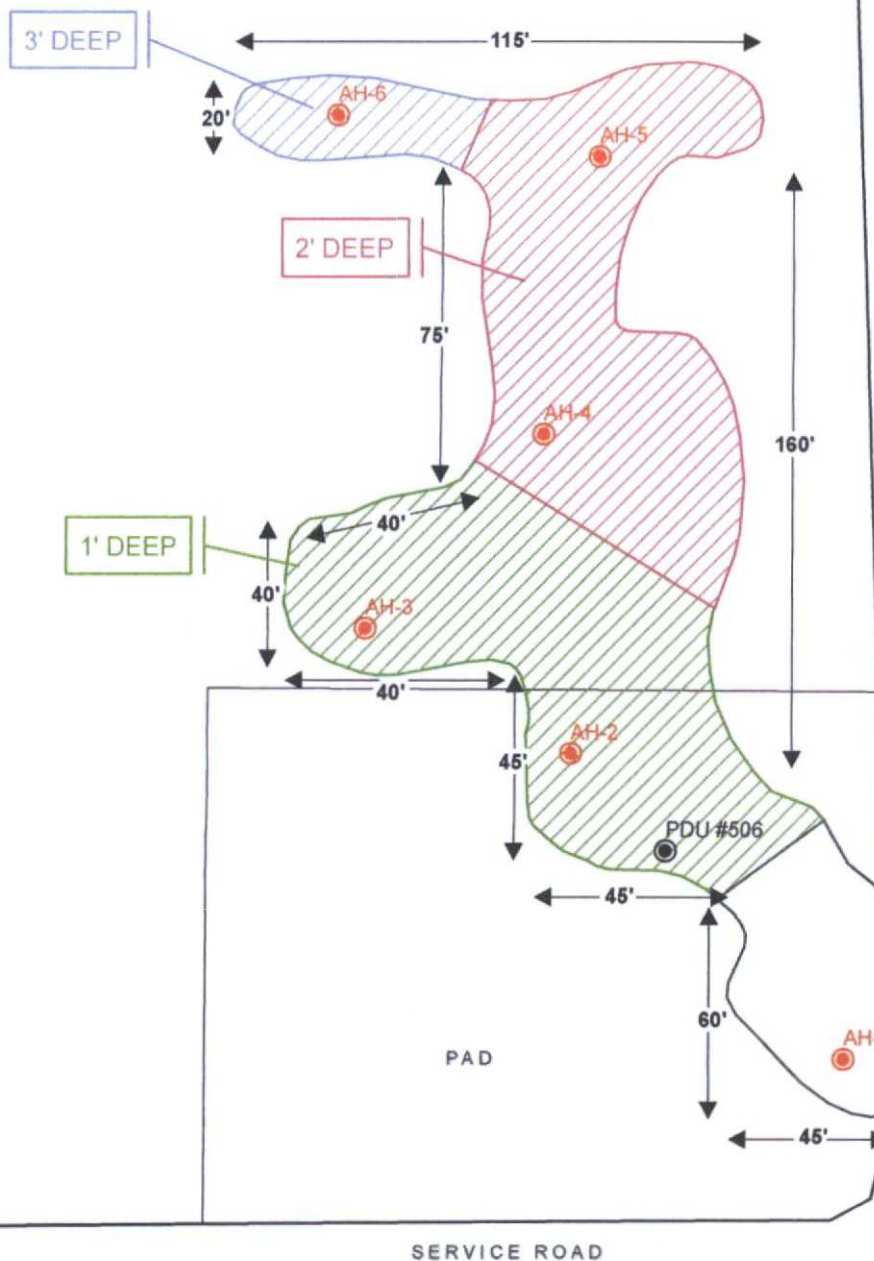
▨ SPILL AREA

SCALE: 1 IN = 51 FEET

Feet 0 20 40

N

SM ENERGY COMPANY	
Figure 3	
PDU #506	
Spill Assessment Map	
Eddy County, New Mexico	
Project : 114-6401458	
Date : 8/22/2012	
File : H:\GIS\6401458	



EXPLANATION

- AUGER HOLE SAMPLE LOCATIONS
- PROPOSED EXCAVATION AREAS



SCALE: 1 IN = 51 FEET

Feet 0 20 40

SM ENERGY COMPANY

Figure 4

PDU #506

Proposed Excavation Areas & Depths Map

Eddy County, New Mexico

Project : 114-6401458

Date : 9/28/2012

File : H:\GIS\6401458



TABLES

Table 1
SM Energy
Parkway Delaware 506
Eddy County, New Mexico

[illegible]

Table 1
SM Energy
Parkway Delaware 506
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-6	7/12/2012	0-1	-	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	6,760
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	6,090
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	3,660
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	290
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	407
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	201
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	299
	"	7-7.5	-	X		-	-	-	-	-	-	-	-	506

BEB Below Excavation Bottom

(--) Not Analyzed

PHOTOGRAPHS

SM Energy Company
Parkway Delaware Unit #506 Well
Eddy County, New Mexico



TETRA TECH



Photo 1. View looking at spill area on well pad.



Photo 2. View looking south from pit area to well.

APPENDIX A

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 SM ENERGY COMPANY	Contact VICKIE MARTINEZ
Address 3300 N "A" ST BLDG 7-200 MIDLAND, TX 79705	Telephone No. (432)688-1709
Facility Name PDU 506	Facility Type WELL

Surface Owner BUREAU OF LAND MANAGEMENT	Mineral Owner BUREAU OF LAND MANAGEMENT	TPI No. 30-015-27464
---	---	----------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	19S	29E	2635	SOUTH	2640	EAST	EDDY

Latitude _____ Longitude _____

NATURE OF RELEASE

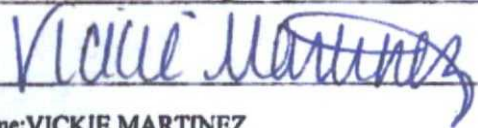
Type of Release PRODUCED WATER	Volume of Release 175 BBLS	Volume Recovered 70 BBLS
Source of Release 1.50" OD CENTRON FG INJ LINE PIN	Date and Hour of Occurrence 6/29/12	Date and Hour of Discovery SAME
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? MIKE BRATCHER AND JIM AMOS	
By Whom? BILL HEARNE	Date and Hour 6/29/12 10:37 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

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

Describe Cause of Problem and Remedial Action Taken.*
1.50" OD CENTRON FG INJ LINE PIN FAILURE. SM ENERGY COMPANY WILL TURN THIS OVER TO TETRA TECH FOR FURTHER EVALUATION.

Describe Area Affected and Cleanup Action Taken.*
AFFECTED AREA: LOC IS 100'X65'=6,500' SQ FT. PASTURE IS 165'X105'=17,325 SQ FT. CLEAN UP ACTION TAKEN IS PICK UP ALL STANDING FLUID ON LOC AND PASTURE. BACKHOE SCRAPPED OFF SPILL AREA AND HAULED CONTAMINATED SOIL TO CRI FOR DISPOSAL. PLUGGED OFF INJ LINE LATERAL TO LOC. WILL LOCATE & INSTALL NEW JT OF 1.50" OD CENTROL FG INJ REPLACEMENT PIPE AND RETURN WELL TO INJ.

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: 		OIL CONSERVATION DIVISION	
Printed Name: VICKIE MARTINEZ		Approved by Environmental Specialist:	
Title: ENGINEER TECH II	Approval Date:	Expiration Date:	
E-mail Address: VMARTINEZ@SM-ENERGY.COM	Conditions of Approval:		Attached ☐
Date: 07/02/2012	Phone: (432)688-1709		

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
SM Energy - Parkway Delaware Unit #506 Well

18 South				28 East			
6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13		
19	20	21	22	23	24		
30	29	28	27	26	25		
31	32	33	34	35	36		

19 South				28 East			
6	5	4	3	2	1		
7	8	9	26.5	10	11	12	
18	17	16		15	14	13	
19	20	21		22	23	24	
30	29	28		27	26	25	
31	32	33	34	35	36		

20 South				28 East			
6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13		
19	20	21	22	23	24		
30	29	28	27	26	25		
31	32	33	34	35	36		

18 South				29 East			
6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13		
19	20	21	22	23	24		
30	29	28	27	26	25		
31	32	33	34	35	36		

19 South				29 East			
6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13	123	
19	20	21	22	23	24	101	
30	29	62.9	27	26	25		
31	32	33	34	62'	35	121	36

20 South				29 East			
6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13		
19	20	21	22	23	24		
30	29	62	27	26	25		
31	32	33	34	35	36		

18 South				30 East			
6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13		
19	20	21	22	23	24		
30	29	28	27	26	25		
31	32	33	34	35	36		

19 South				30 East			
6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13		
19	20	21	22	23	24		
30	29	28	27	26	25		
31	32	33	34	35	36		

20 South				30 East			
6	5	3.5	4	3	2	1	
7	8	9	10	11	12		
18	17	16	15	14	13		
19	20	21	22	23	24		
30	29	29	150	27	26	25	
31	32	33	34	35	36		

- 88 New Mexico State Engineers Well Reports
- 105 USGS Well Reports
- 90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
- Geology and Groundwater Resources of Eddy County, NM (Report 3)
- 34 NMOCD - Groundwater Data
- 123 Field water level - Temporary Wells installed to establish depth to water



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		Q Q Q				Sec	Tws	Rng	X	Depth		
	Code	Subbasin	County	64	16	4					Y	Well	Water Column
CP 00681			ED	1	1	3	34	19S	29E	587230	3609127*		
CP 00703			ED		4	1	36	19S	29E	590945	3609441*	225	115 110
CP 00739			ED	3	4	4	35	19S	29E	589246	3608217	200	110 90
CP 00741			ED	1	3	2	34	19S	29E	588030	3609533*	230	60 170

Average Depth to Water: 95 feet

Minimum Depth: 60 feet

Maximum Depth: 115 feet

Record Count: 4

PLSS Search:

Section(s): 34-36

Township: 19S

Range: 29E

*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.

APPENDIX C



6701 Aberdeen Avenue, Suite 9
200 East Sunset Road, Suite E
5002 Basin Street, Suite A1
(BioAquatic) 2501 Mayes Rd., Suite 100

Lubbock, Texas 79424
El Paso, Texas 79922
Midland, Texas 79703
Carrollton, Texas 75006

800-378-1296

806-794-1296

FAX 806-794-1298

915-585-3443

FAX 915-585-4944

432-689-6301

FAX 432-689-6313

972-242-7750

E-Mail lab@traceanalysis.com WEB www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: July 23, 2012

Work Order: 12071601



Project Location: Eddy Co., NM
Project Name: SME/PDU 506
Project Number: 114-6401458

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
303721	AH-1 0-1'	soil	2012-07-10	00:00	2012-07-13
303722	AH-1 1-1.5'	soil	2012-07-10	00:00	2012-07-13
303723	AH-1 2-2.5'	soil	2012-07-10	00:00	2012-07-13
303724	AH-1 3-3.5'	soil	2012-07-10	00:00	2012-07-13
303725	AH-2 0-1'	soil	2012-07-12	00:00	2012-07-13
303726	AH-2 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303727	AH-2 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303728	AH-2 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303729	AH-2 4-4.5'	soil	2012-07-12	00:00	2012-07-13
303730	AH-2 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303731	AH-2 6-6.5'	soil	2012-07-12	00:00	2012-07-13
303732	AH-3 0-1'	soil	2012-07-12	00:00	2012-07-13
303733	AH-3 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303734	AH-3 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303735	AH-3 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303736	AH-3 4-4.5'	soil	2012-07-12	00:00	2012-07-13
303737	AH-3 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303738	AH-4 0-1'	soil	2012-07-12	00:00	2012-07-13

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
303739	AH-4 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303740	AH-4 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303741	AH-4 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303742	AH-4 4-4.5'	soil	2012-07-12	00:00	2012-07-13
303743	AH-4 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303744	AH-4 6-6.5'	soil	2012-07-12	00:00	2012-07-13
303745	AH-4 7-7.5'	soil	2012-07-12	00:00	2012-07-13
303746	AH-5 0-1'	soil	2012-07-12	00:00	2012-07-13
303747	AH-5 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303748	AH-5 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303749	AH-5 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303750	AH-5 4-4.5'	soil	2012-07-12	00:00	2012-07-13
303751	AH-5 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303752	AH-5 6-6.5'	soil	2012-07-12	00:00	2012-07-13
303753	AH-5 7-7.5'	soil	2012-07-12	00:00	2012-07-13
303754	AH-6 0-1'	soil	2012-07-12	00:00	2012-07-13
303755	AH-6 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303756	AH-6 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303757	AH-6 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303758	AH-6 4-4.5'	soil	2012-07-12	00:00	2012-07-13
303759	AH-6 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303760	AH-6 6-6.5'	soil	2012-07-12	00:00	2012-07-13
303761	AH-6 7-7.5'	soil	2012-07-12	00:00	2012-07-13
303762	AH-5 8-8.5'	soil	2012-07-12	00:00	2012-07-13

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 49 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative	6
Analytical Report	7
Sample 303721 (AH-1 0-1')	7
Sample 303722 (AH-1 1-1.5')	8
Sample 303723 (AH-1 2-2.5')	8
Sample 303724 (AH-1 3-3.5')	9
Sample 303725 (AH-2 0-1')	9
Sample 303726 (AH-2 1-1.5')	10
Sample 303727 (AH-2 2-2.5')	11
Sample 303728 (AH-2 3-3.5')	11
Sample 303729 (AH-2 4-4.5')	11
Sample 303730 (AH-2 5-5.5')	12
Sample 303731 (AH-2 6-6.5')	12
Sample 303732 (AH-3 0-1')	12
Sample 303733 (AH-3 1-1.5')	14
Sample 303734 (AH-3 2-2.5')	14
Sample 303735 (AH-3 3-3.5')	14
Sample 303736 (AH-3 4-4.5')	15
Sample 303737 (AH-3 5-5.5')	15
Sample 303738 (AH-4 0-1')	15
Sample 303739 (AH-4 1-1.5')	17
Sample 303740 (AH-4 2-2.5')	17
Sample 303741 (AH-4 3-3.5')	17
Sample 303742 (AH-4 4-4.5')	18
Sample 303743 (AH-4 5-5.5')	18
Sample 303744 (AH-4 6-6.5')	18
Sample 303745 (AH-4 7-7.5')	18
Sample 303746 (AH-5 0-1')	19
Sample 303747 (AH-5 1-1.5')	20
Sample 303748 (AH-5 2-2.5')	20
Sample 303749 (AH-5 3-3.5')	21
Sample 303750 (AH-5 4-4.5')	21
Sample 303751 (AH-5 5-5.5')	21
Sample 303752 (AH-5 6-6.5')	22
Sample 303753 (AH-5 7-7.5')	22
Sample 303754 (AH-6 0-1')	22
Sample 303755 (AH-6 1-1.5')	24
Sample 303756 (AH-6 2-2.5')	24
Sample 303757 (AH-6 3-3.5')	24
Sample 303758 (AH-6 4-4.5')	25
Sample 303759 (AH-6 5-5.5')	25
Sample 303760 (AH-6 6-6.5')	25
Sample 303761 (AH-6 7-7.5')	25
Sample 303762 (AH-5 8-8.5')	26

Method Blanks	27
QC Batch 93123 - Method Blank (1)	27
QC Batch 93124 - Method Blank (1)	27
QC Batch 93140 - Method Blank (1)	27
QC Batch 93166 - Method Blank (1)	28
QC Batch 93167 - Method Blank (1)	28
QC Batch 93168 - Method Blank (1)	28
QC Batch 93244 - Method Blank (1)	28
QC Batch 93245 - Method Blank (1)	29
QC Batch 93257 - Method Blank (1)	29
QC Batch 93258 - Method Blank (1)	29
Laboratory Control Spikes	31
QC Batch 93123 - LCS (1)	31
QC Batch 93124 - LCS (1)	31
QC Batch 93140 - LCS (1)	32
QC Batch 93166 - LCS (1)	32
QC Batch 93167 - LCS (1)	33
QC Batch 93168 - LCS (1)	33
QC Batch 93244 - LCS (1)	33
QC Batch 93245 - LCS (1)	34
QC Batch 93257 - LCS (1)	35
QC Batch 93258 - LCS (1)	35
QC Batch 93123 - MS (1)	35
QC Batch 93124 - MS (1)	36
QC Batch 93140 - MS (1)	37
QC Batch 93166 - MS (1)	37
QC Batch 93167 - MS (1)	38
QC Batch 93168 - MS (1)	38
QC Batch 93244 - MS (1)	38
QC Batch 93245 - MS (1)	39
QC Batch 93257 - MS (1)	39
QC Batch 93258 - MS (1)	40
Calibration Standards	41
QC Batch 93123 - CCV (1)	41
QC Batch 93123 - CCV (2)	41
QC Batch 93123 - CCV (3)	41
QC Batch 93124 - CCV (1)	41
QC Batch 93124 - CCV (2)	42
QC Batch 93124 - CCV (3)	42
QC Batch 93140 - CCV (1)	42
QC Batch 93140 - CCV (2)	42
QC Batch 93140 - CCV (3)	43
QC Batch 93140 - CCV (4)	43
QC Batch 93166 - CCV (1)	43
QC Batch 93166 - CCV (2)	43
QC Batch 93167 - CCV (1)	44

QC Batch 93167 - CCV (2)	44
QC Batch 93168 - CCV (1)	44
QC Batch 93168 - CCV (2)	44
QC Batch 93244 - CCV (1)	45
QC Batch 93244 - CCV (2)	45
QC Batch 93244 - CCV (3)	45
QC Batch 93245 - CCV (1)	45
QC Batch 93245 - CCV (2)	46
QC Batch 93245 - CCV (3)	46
QC Batch 93257 - CCV (1)	46
QC Batch 93257 - CCV (2)	47
QC Batch 93258 - CCV (1)	47
QC Batch 93258 - CCV (2)	47
Appendix	48
Report Definitions	48
Laboratory Certifications	48
Standard Flags	48
Result Comments	48
Attachments	48

Case Narrative

Samples for project SME/PDU 506 were received by TraceAnalysis, Inc. on 2012-07-13 and assigned to work order 12071601. Samples for work order 12071601 were received intact at a temperature of 4.8 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	78957	2012-07-17 at 14:57	93123	2012-07-17 at 14:57
BTEX	S 8021B	79057	2012-07-20 at 16:07	93245	2012-07-20 at 16:07
Chloride (Titration)	SM 4500-Cl B	78955	2012-07-17 at 12:43	93166	2012-07-18 at 16:04
Chloride (Titration)	SM 4500-Cl B	78955	2012-07-17 at 12:43	93167	2012-07-18 at 16:05
Chloride (Titration)	SM 4500-Cl B	78955	2012-07-17 at 12:43	93168	2012-07-18 at 16:05
Chloride (Titration)	SM 4500-Cl B	78994	2012-07-18 at 08:58	93257	2012-07-19 at 16:36
Chloride (Titration)	SM 4500-Cl B	78994	2012-07-18 at 08:58	93258	2012-07-19 at 16:37
TPH DRO - NEW	S 8015 D	78968	2012-07-17 at 16:30	93140	2012-07-18 at 19:00
TPH GRO	S 8015 D	78957	2012-07-17 at 14:57	93124	2012-07-17 at 14:57
TPH GRO	S 8015 D	79057	2012-07-20 at 16:07	93244	2012-07-20 at 16:07

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 12071601 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 7 of 49
Eddy Co., NM

Analytical Report

Sample: 303721 - AH-1 0-1'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93123
Prep Batch: 78957

Analytical Method: S 8021B
Date Analyzed: 2012-07-17
Sample Preparation: 2012-07-17

Prep Method: S 5035
Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene		1	0.0282	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.74	mg/Kg	1	2.00	87	70 - 130

Sample: 303721 - AH-1 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93166
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			791	mg/Kg	5	4.00

Sample: 303721 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 93140
Prep Batch: 78968

Analytical Method: S 8015 D
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	2	<50.0	mg/Kg	1	50.0

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 8 of 49
Eddy Co., NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			155	mg/Kg	1	100	155	49.3 - 157.5

Sample: 303721 - AH-1 0-1'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 93124
Prep Batch: 78957

Analytical Method: S 8015 D
Date Analyzed: 2012-07-17
Sample Preparation: 2012-07-17

Prep Method: S 5035
Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL	
GRO	1	B	1	6.88	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 303722 - AH-1 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93166
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 303723 - AH-1 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93166
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

continued ...

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 9 of 49
Eddy Co., NM

sample 303723 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			<20.0	mg/Kg	5	4.00

Sample: 303724 - AH-1 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93166
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 303725 - AH-2 0-1'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93245
Prep Batch: 79057

Analytical Method: S 8021B
Date Analyzed: 2012-07-20
Sample Preparation: 2012-07-20

Prep Method: S 5035
Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70 - 130

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 10 of 49
Eddy Co., NM

Sample: 303725 - AH-2 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93166
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9830	mg/Kg	10	4.00

Sample: 303725 - AH-2 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 93140
Prep Batch: 78968

Analytical Method: S 8015 D
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	218	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	168	mg/Kg	1	100	168	49.3 - 157.5

Sample: 303725 - AH-2 0-1'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 93244
Prep Batch: 79057

Analytical Method: S 8015 D
Date Analyzed: 2012-07-20
Sample Preparation: 2012-07-20

Prep Method: S 5035
Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	70 - 130

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 11 of 49
Eddy Co., NM

Sample: 303726 - AH-2 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93166
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 303727 - AH-2 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93167
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			43.8	mg/Kg	5	4.00

Sample: 303728 - AH-2 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93167
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 303729 - AH-2 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93167
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 12 of 49
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 303730 - AH-2 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 93167 Date Analyzed: 2012-07-18 Analyzed By: AR
Prep Batch: 78955 Sample Preparation: 2012-07-17 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 303731 - AH-2 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 93167 Date Analyzed: 2012-07-18 Analyzed By: AR
Prep Batch: 78955 Sample Preparation: 2012-07-17 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			24.3	mg/Kg	5	4.00

Sample: 303732 - AH-3 0-1'

Laboratory: Lubbock
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 93245 Date Analyzed: 2012-07-20 Analyzed By: MT
Prep Batch: 79057 Sample Preparation: 2012-07-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.100	mg/Kg	5	0.0200
Toluene	u	1	<0.100	mg/Kg	5	0.0200
Ethylbenzene	u	1	<0.100	mg/Kg	5	0.0200

continued ...

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 13 of 49
Eddy Co., NM

sample 303732 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Xylene	B	1	0.112	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	5	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	5	2.00	99	70 - 130

Sample: 303732 - AH-3 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 93167

Prep Batch: 78955

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-07-18

Sample Preparation: 2012-07-17

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8040	mg/Kg	10	4.00

Sample: 303732 - AH-3 0-1'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 93140

Prep Batch: 78968

Analytical Method: S 8015 D

Date Analyzed: 2012-07-18

Sample Preparation: 2012-07-17

Prep Method: N/A

Analyzed By: CW

Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	427	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	167	mg/Kg	1	100	167	49.3 - 157.5

Sample: 303732 - AH-3 0-1'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93244

Prep Batch: 79057

Analytical Method: S 8015 D

Date Analyzed: 2012-07-20

Sample Preparation: 2012-07-20

Prep Method: S 5035

Analyzed By: MT

Prepared By: MT

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 14 of 49
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	42.7	mg/Kg	5	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.56	mg/Kg	5	2.00	78	70 - 130
4-Bromofluorobenzene (4-BFB)			2.18	mg/Kg	5	2.00	109	70 - 130

Sample: 303733 - AH-3 1-1.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	93167	Date Analyzed:	2012-07-18	Analyzed By: AR
Prep Batch:	78955	Sample Preparation:	2012-07-17	Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			127	mg/Kg	5	4.00

Sample: 303734 - AH-3 2-2.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	93167	Date Analyzed:	2012-07-18	Analyzed By: AR
Prep Batch:	78955	Sample Preparation:	2012-07-17	Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			92.5	mg/Kg	5	4.00

Sample: 303735 - AH-3 3-3.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	93167	Date Analyzed:	2012-07-18	Analyzed By: AR
Prep Batch:	78955	Sample Preparation:	2012-07-17	Prepared By: AR

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 15 of 49
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			278	mg/Kg	5	4.00

Sample: 303736 - AH-3 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 93167 Date Analyzed: 2012-07-18 Analyzed By: AR
Prep Batch: 78955 Sample Preparation: 2012-07-17 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 303737 - AH-3 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 93168 Date Analyzed: 2012-07-18 Analyzed By: AR
Prep Batch: 78955 Sample Preparation: 2012-07-17 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			58.2	mg/Kg	5	4.00

Sample: 303738 - AH-4 0-1'

Laboratory: Lubbock
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 93245 Date Analyzed: 2012-07-20 Analyzed By: MT
Prep Batch: 79057 Sample Preparation: 2012-07-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200

continued ...

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 16 of 49
Eddy Co., NM

sample 303738 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.09	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.03	mg/Kg	1	2.00	102	70 - 130

Sample: 303738 - AH-4 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-07-18	Analyzed By:	AR
QC Batch:	93168	Sample Preparation:	2012-07-17	Prepared By:	AR
Prep Batch:	78955				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3480	mg/Kg	10	4.00

Sample: 303738 - AH-4 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2012-07-18	Analyzed By:	CW
QC Batch:	93140	Sample Preparation:	2012-07-17	Prepared By:	CW
Prep Batch:	78968				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	109	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			157	mg/Kg	1	100	157	49.3 - 157.5

Sample: 303738 - AH-4 0-1'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2012-07-20	Analyzed By:	MT
QC Batch:	93244	Sample Preparation:	2012-07-20	Prepared By:	MT
Prep Batch:	79057				

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 17 of 49
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.17	mg/Kg	1	2.00	108	70 - 130

Sample: 303739 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93168	Date Analyzed:	2012-07-18	Analyzed By:	AR
Prep Batch:	78955	Sample Preparation:	2012-07-17	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3140	mg/Kg	10	4.00

Sample: 303740 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93168	Date Analyzed:	2012-07-18	Analyzed By:	AR
Prep Batch:	78955	Sample Preparation:	2012-07-17	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1740	mg/Kg	10	4.00

Sample: 303741 - AH-4 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93168	Date Analyzed:	2012-07-18	Analyzed By:	AR
Prep Batch:	78955	Sample Preparation:	2012-07-17	Prepared By:	AR

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 18 of 49
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1460	mg/Kg	10	4.00

Sample: 303742 - AH-4 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93168	Date Analyzed:	2012-07-18	Analyzed By:	AR
Prep Batch:	78955	Sample Preparation:	2012-07-17	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			945	mg/Kg	5	4.00

Sample: 303743 - AH-4 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93168	Date Analyzed:	2012-07-18	Analyzed By:	AR
Prep Batch:	78955	Sample Preparation:	2012-07-17	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2340	mg/Kg	10	4.00

Sample: 303744 - AH-4 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93168	Date Analyzed:	2012-07-18	Analyzed By:	AR
Prep Batch:	78955	Sample Preparation:	2012-07-17	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1140	mg/Kg	10	4.00

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 19 of 49
Eddy Co., NM

Sample: 303745 - AH-4 7-7.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93168
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2060	mg/Kg	10	4.00

Sample: 303746 - AH-5 0-1'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93245
Prep Batch: 79057

Analytical Method: S 8021B
Date Analyzed: 2012-07-20
Sample Preparation: 2012-07-20

Prep Method: S 5035
Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.01	mg/Kg	1	2.00	100	70 - 130

Sample: 303746 - AH-5 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93168
Prep Batch: 78955

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5390	mg/Kg	10	4.00

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 20 of 49
Eddy Co., NM

Sample: 303746 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 93140
Prep Batch: 78968

Analytical Method: S 8015 D
Date Analyzed: 2012-07-18
Sample Preparation: 2012-07-17

Prep Method: N/A
Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	2	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	169	mg/Kg	1	100	169	49.3 - 157.5

Sample: 303746 - AH-5 0-1'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 93244
Prep Batch: 79057

Analytical Method: S 8015 D
Date Analyzed: 2012-07-20
Sample Preparation: 2012-07-20

Prep Method: S 5035
Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.93	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	70 - 130

Sample: 303747 - AH-5 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93257
Prep Batch: 78994

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-07-19
Sample Preparation: 2012-07-18

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1640	mg/Kg	10	4.00

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 21 of 49
Eddy Co., NM

Sample: 303748 - AH-5 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-07-19	Analyzed By:	AR
QC Batch:	93257	Sample Preparation:	2012-07-18	Prepared By:	AR
Prep Batch:	78994				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 303749 - AH-5 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-07-19	Analyzed By:	AR
QC Batch:	93257	Sample Preparation:	2012-07-18	Prepared By:	AR
Prep Batch:	78994				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 303750 - AH-5 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-07-19	Analyzed By:	AR
QC Batch:	93257	Sample Preparation:	2012-07-18	Prepared By:	AR
Prep Batch:	78994				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			92.4	mg/Kg	5	4.00

Sample: 303751 - AH-5 5-5.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-07-19	Analyzed By:	AR
QC Batch:	93257	Sample Preparation:	2012-07-18	Prepared By:	AR
Prep Batch:	78994				

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 22 of 49
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			107	mg/Kg	5	4.00

Sample: 303752 - AH-5 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93257	Date Analyzed:	2012-07-19	Analyzed By:	AR
Prep Batch:	78994	Sample Preparation:	2012-07-18	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			136	mg/Kg	5	4.00

Sample: 303753 - AH-5 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93257	Date Analyzed:	2012-07-19	Analyzed By:	AR
Prep Batch:	78994	Sample Preparation:	2012-07-18	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			38.9	mg/Kg	5	4.00

Sample: 303754 - AH-6 0-1'

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	93245	Date Analyzed:	2012-07-20	Analyzed By:	MT
Prep Batch:	79057	Sample Preparation:	2012-07-20	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200

continued ...

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 23 of 49
Eddy Co., NM

sample 303754 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.07	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	70 - 130

Sample: 303754 - AH-6 0-1'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2012-07-19	Analyzed By: AR
QC Batch: 93257	Sample Preparation: 2012-07-18	Prepared By: AR
Prep Batch: 78994		

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6760	mg/Kg	10	4.00

Sample: 303754 - AH-6 0-1'

Laboratory: Midland	Analytical Method: S 8015 D	Prep Method: N/A
Analysis: TPH DRO - NEW	Date Analyzed: 2012-07-18	Analyzed By: CW
QC Batch: 93140	Sample Preparation: 2012-07-17	Prepared By: CW
Prep Batch: 78968		

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	161	mg/Kg	1	100	161	49.3 - 157.5

Sample: 303754 - AH-6 0-1'

Laboratory: Lubbock	Analytical Method: S 8015 D	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2012-07-20	Analyzed By: MT
QC Batch: 93244	Sample Preparation: 2012-07-20	Prepared By: MT
Prep Batch: 79057		

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 24 of 49
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	70 - 130

Sample: 303755 - AH-6 1-1.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	93257	Date Analyzed:	2012-07-19	Analyzed By: AR
Prep Batch:	78994	Sample Preparation:	2012-07-18	Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6090	mg/Kg	10	4.00

Sample: 303756 - AH-6 2-2.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	93257	Date Analyzed:	2012-07-19	Analyzed By: AR
Prep Batch:	78994	Sample Preparation:	2012-07-18	Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3660	mg/Kg	10	4.00

Sample: 303757 - AH-6 3-3.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	93258	Date Analyzed:	2012-07-19	Analyzed By: AR
Prep Batch:	78994	Sample Preparation:	2012-07-18	Prepared By: AR

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 25 of 49
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			290	mg/Kg	5	4.00

Sample: 303758 - AH-6 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-07-19	Analyzed By:	AR
QC Batch:	93258	Sample Preparation:	2012-07-18	Prepared By:	AR
Prep Batch:	78994				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			407	mg/Kg	5	4.00

Sample: 303759 - AH-6 5-5.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-07-19	Analyzed By:	AR
QC Batch:	93258	Sample Preparation:	2012-07-18	Prepared By:	AR
Prep Batch:	78994				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			201	mg/Kg	5	4.00

Sample: 303760 - AH-6 6-6.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-07-19	Analyzed By:	AR
QC Batch:	93258	Sample Preparation:	2012-07-18	Prepared By:	AR
Prep Batch:	78994				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			299	mg/Kg	5	4.00

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 26 of 49
Eddy Co., NM

Sample: 303761 - AH-6 7-7.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 93258

Prep Batch: 78994

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-07-19

Sample Preparation: 2012-07-18

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			506	mg/Kg	5	4.00

Sample: 303762 - AH-5 8-8.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 93258

Prep Batch: 78994

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-07-19

Sample Preparation: 2012-07-18

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			54.0	mg/Kg	5	4.00

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 27 of 49
Eddy Co., NM

Method Blanks

Method Blank (1) QC Batch: 93123

QC Batch: 93123
Prep Batch: 78957

Date Analyzed: 2012-07-17
QC Preparation: 2012-07-17

Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00365	mg/Kg	0.02
Toluene		1	<0.00816	mg/Kg	0.02
Ethylbenzene		1	<0.00560	mg/Kg	0.02
Xylene		1	<0.00460	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.93	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

Method Blank (1) QC Batch: 93124

QC Batch: 93124
Prep Batch: 78957

Date Analyzed: 2012-07-17
QC Preparation: 2012-07-17

Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	1.21	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.79	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	70 - 130

Method Blank (1) QC Batch: 93140

QC Batch: 93140
Prep Batch: 78968

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: CW
Prepared By: CW

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 28 of 49
Eddy Co., NM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		2	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			107	mg/Kg	1	100	107	52 - 160.8

Method Blank (1) QC Batch: 93166

QC Batch: 93166
Prep Batch: 78955

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 93167

QC Batch: 93167
Prep Batch: 78955

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 93168

QC Batch: 93168
Prep Batch: 78955

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 29 of 49
Eddy Co., NM

Method Blank (1) QC Batch: 93244

QC Batch: 93244
Prep Batch: 79057

Date Analyzed: 2012-07-20
QC Preparation: 2012-07-20

Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.359	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.55	mg/Kg	1	2.00	78	70 - 130
4-Bromofluorobenzene (4-BFB)			1.83	mg/Kg	1	2.00	92	70 - 130

Method Blank (1) QC Batch: 93245

QC Batch: 93245
Prep Batch: 79057

Date Analyzed: 2012-07-20
QC Preparation: 2012-07-20

Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00365	mg/Kg	0.02
Toluene		1	<0.00816	mg/Kg	0.02
Ethylbenzene		1	<0.00560	mg/Kg	0.02
Xylene		1	0.0121	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.63	mg/Kg	1	2.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)			1.74	mg/Kg	1	2.00	87	70 - 130

Method Blank (1) QC Batch: 93257

QC Batch: 93257
Prep Batch: 78994

Date Analyzed: 2012-07-19
QC Preparation: 2012-07-18

Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 30 of 49
Eddy Co., NM

Method Blank (1) QC Batch: 93258

QC Batch: 93258
Prep Batch: 78994

Date Analyzed: 2012-07-19
QC Preparation: 2012-07-18

Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 31 of 49
Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 93123
Prep Batch: 78957

Date Analyzed: 2012-07-17
QC Preparation: 2012-07-17

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.91	mg/Kg	1	2.00	<0.00365	96	75.4 - 120
Toluene		1	1.88	mg/Kg	1	2.00	<0.00816	94	74.9 - 120
Ethylbenzene		1	1.90	mg/Kg	1	2.00	<0.00560	95	78.1 - 120
Xylene		1	5.73	mg/Kg	1	6.00	<0.00460	96	77.3 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.89	mg/Kg	1	2.00	<0.00365	94	75.4 - 120	1	20
Toluene		1	1.88	mg/Kg	1	2.00	<0.00816	94	74.9 - 120	0	20
Ethylbenzene		1	1.89	mg/Kg	1	2.00	<0.00560	94	78.1 - 120	0	20
Xylene		1	5.67	mg/Kg	1	6.00	<0.00460	94	77.3 - 120	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.90	1.88	mg/Kg	1	2.00	95	94	70 - 130
4-Bromofluorobenzene (4-BFB)	1.89	1.86	mg/Kg	1	2.00	94	93	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 93124
Prep Batch: 78957

Date Analyzed: 2012-07-17
QC Preparation: 2012-07-17

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	20.1	mg/Kg	1	20.0	1.21	100	68.9 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 32 of 49
Eddy Co., NM

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	20.3	mg/Kg	1	20.0	1.21	102	68.9 - 120	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.74	1.74	mg/Kg	1	2.00	87	87	70 - 130
4-Bromofluorobenzene (4-BFB)	2.08	2.07	mg/Kg	1	2.00	104	104	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 93140
Prep Batch: 78968

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		2	213	mg/Kg	1	250	<14.5	85	62 - 128.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		2	224	mg/Kg	1	250	<14.5	90	62 - 128.3	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	122	126	mg/Kg	1	100	122	126	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 93166
Prep Batch: 78955

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2580	mg/Kg	1	2500	<3.85	103	85 - 115

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 33 of 49
Eddy Co., NM

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2680	mg/Kg	1	2500	<3.85	107	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 93167
Prep Batch: 78955

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2490	mg/Kg	1	2500	<3.85	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2590	mg/Kg	1	2500	<3.85	104	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 93168
Prep Batch: 78955

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2470	mg/Kg	1	2500	<3.85	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2560	mg/Kg	1	2500	<3.85	102	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 34 of 49
Eddy Co., NM

Laboratory Control Spike (LCS-1)

QC Batch: 93244
Prep Batch: 79057

Date Analyzed: 2012-07-20
QC Preparation: 2012-07-20

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.4	mg/Kg	1	20.0	<0.359	82	68.9 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	16.0	mg/Kg	1	20.0	<0.359	80	68.9 - 120	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.68	1.49	mg/Kg	1	2.00	84	74	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.89	mg/Kg	1	2.00	97	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 93245
Prep Batch: 79057

Date Analyzed: 2012-07-20
QC Preparation: 2012-07-20

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.82	mg/Kg	1	2.00	<0.00365	91	75.4 - 120
Toluene		1	1.76	mg/Kg	1	2.00	<0.00816	88	74.9 - 120
Ethylbenzene		1	1.74	mg/Kg	1	2.00	<0.00560	87	78.1 - 120
Xylene		1	5.25	mg/Kg	1	6.00	0.0121	88	77.3 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.78	mg/Kg	1	2.00	<0.00365	89	75.4 - 120	2	20
Toluene		1	1.77	mg/Kg	1	2.00	<0.00816	88	74.9 - 120	1	20
Ethylbenzene		1	1.76	mg/Kg	1	2.00	<0.00560	88	78.1 - 120	1	20
Xylene		1	5.26	mg/Kg	1	6.00	0.0121	88	77.3 - 120	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 35 of 49
Eddy Co., NM

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.71	1.58	mg/Kg	1	2.00	86	79	70 - 130
4-Bromofluorobenzene (4-BFB)	1.79	1.75	mg/Kg	1	2.00	90	88	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 93257
Prep Batch: 78994

Date Analyzed: 2012-07-19
QC Preparation: 2012-07-18

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	1	2500	<3.85	104	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2520	mg/Kg	1	2500	<3.85	101	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 93258
Prep Batch: 78994

Date Analyzed: 2012-07-19
QC Preparation: 2012-07-18

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2580	mg/Kg	1	2500	<3.85	103	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2700	mg/Kg	1	2500	<3.85	108	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 36 of 49
Eddy Co., NM

Matrix Spike (MS-1) Spiked Sample: 303336

QC Batch: 93123
Prep Batch: 78957

Date Analyzed: 2012-07-17
QC Preparation: 2012-07-17

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.71	mg/Kg	1	2.00	<0.00365	86	37.6 - 142
Toluene		1	1.83	mg/Kg	1	2.00	<0.00816	92	38.6 - 153
Ethylbenzene		1	1.95	mg/Kg	1	2.00	<0.00560	98	36.7 - 172
Xylene		1	5.89	mg/Kg	1	6.00	<0.00460	98	36.7 - 173

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.70	mg/Kg	1	2.00	<0.00365	85	37.6 - 142	1	20
Toluene		1	1.80	mg/Kg	1	2.00	<0.00816	90	38.6 - 153	2	20
Ethylbenzene		1	1.92	mg/Kg	1	2.00	<0.00560	96	36.7 - 172	2	20
Xylene		1	5.79	mg/Kg	1	6.00	<0.00460	96	36.7 - 173	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.87	1.90	mg/Kg	1	2	94	95	70 - 130
4-Bromofluorobenzene (4-BFB)	1.84	1.85	mg/Kg	1	2	92	92	70 - 130

Matrix Spike (MS-1) Spiked Sample: 303336

QC Batch: 93124
Prep Batch: 78957

Date Analyzed: 2012-07-17
QC Preparation: 2012-07-17

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.7	mg/Kg	1	20.0	<0.359	84	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	17.2	mg/Kg	1	20.0	<0.359	86	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 37 of 49
Eddy Co., NM

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.65	1.62	mg/Kg	1	2	82	81	70 - 130
4-Bromofluorobenzene (4-BFB)	2.12	2.10	mg/Kg	1	2	106	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 303708

QC Batch: 93140
Prep Batch: 78968

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		2	236	mg/Kg	1	250	<14.5	94	45.5 - 127

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		2	240	mg/Kg	1	250	<14.5	96	45.5 - 127	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	120	115	mg/Kg	1	100	120	115	45.4 - 145.8

Matrix Spike (MS-1) Spiked Sample: 303726

QC Batch: 93166
Prep Batch: 78955

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2640	mg/Kg	5	2500	<19.2	106	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2770	mg/Kg	5	2500	<19.2	111	79.4 - 120.6	5	20

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 38 of 49
Eddy Co., NM

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 303736

QC Batch: 93167
Prep Batch: 78955

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2590	mg/Kg	5	2500	<19.2	104	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2710	mg/Kg	5	2500	<19.2	108	79.4 - 120.6	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 303746

QC Batch: 93168
Prep Batch: 78955

Date Analyzed: 2012-07-18
QC Preparation: 2012-07-17

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			8270	mg/Kg	10	2500	5390	115	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			8360	mg/Kg	10	2500	5390	119	79.4 - 120.6	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 303804

QC Batch: 93244
Prep Batch: 79057

Date Analyzed: 2012-07-20
QC Preparation: 2012-07-20

Analyzed By: MT
Prepared By: MT

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 39 of 49
Eddy Co., NM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.3	mg/Kg	1	20.0	<0.359	82	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	16.5	mg/Kg	1	20.0	<0.359	82	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.64	1.63	mg/Kg	1	2	82	82	70 - 130
4-Bromofluorobenzene (4-BFB)	2.09	2.11	mg/Kg	1	2	104	106	70 - 130

Matrix Spike (MS-1) Spiked Sample: 303804

QC Batch: 93245
Prep Batch: 79057

Date Analyzed: 2012-07-20
QC Preparation: 2012-07-20

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.71	mg/Kg	1	2.00	<0.00365	86	37.6 - 142
Toluene		1	1.83	mg/Kg	1	2.00	<0.00816	92	38.6 - 153
Ethylbenzene		1	1.94	mg/Kg	1	2.00	<0.00560	97	36.7 - 172
Xylene		1	5.87	mg/Kg	1	6.00	<0.00460	98	36.7 - 173

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.68	mg/Kg	1	2.00	<0.00365	84	37.6 - 142	2	20
Toluene		1	1.81	mg/Kg	1	2.00	<0.00816	90	38.6 - 153	1	20
Ethylbenzene		1	1.92	mg/Kg	1	2.00	<0.00560	96	36.7 - 172	1	20
Xylene		1	5.81	mg/Kg	1	6.00	<0.00460	97	36.7 - 173	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.90	1.90	mg/Kg	1	2	95	95	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.89	mg/Kg	1	2	97	94	70 - 130

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 40 of 49
Eddy Co., NM

Matrix Spike (MS-1) Spiked Sample: 303756

QC Batch: 93257
Prep Batch: 78994

Date Analyzed: 2012-07-19
QC Preparation: 2012-07-18

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			6440	mg/Kg	10	2500	3660	111	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			6600	mg/Kg	10	2500	3660	118	79.4 - 120.6	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 303766

QC Batch: 93258
Prep Batch: 78994

Date Analyzed: 2012-07-19
QC Preparation: 2012-07-18

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3030	mg/Kg	5	2500	123	116	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3130	mg/Kg	5	2500	123	120	79.4 - 120.6	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (CCV-1)

QC Batch: 93123

Date Analyzed: 2012-07-17

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0946	95	80 - 120	2012-07-17
Toluene		1	mg/kg	0.100	0.0934	93	80 - 120	2012-07-17
Ethylbenzene		1	mg/kg	0.100	0.0957	96	80 - 120	2012-07-17
Xylene		1	mg/kg	0.300	0.288	96	80 - 120	2012-07-17

Standard (CCV-2)

QC Batch: 93123

Date Analyzed: 2012-07-17

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0936	94	80 - 120	2012-07-17
Toluene		1	mg/kg	0.100	0.0926	93	80 - 120	2012-07-17
Ethylbenzene		1	mg/kg	0.100	0.0930	93	80 - 120	2012-07-17
Xylene		1	mg/kg	0.300	0.277	92	80 - 120	2012-07-17

Standard (CCV-3)

QC Batch: 93123

Date Analyzed: 2012-07-17

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0927	93	80 - 120	2012-07-17
Toluene		1	mg/kg	0.100	0.0914	91	80 - 120	2012-07-17
Ethylbenzene		1	mg/kg	0.100	0.0916	92	80 - 120	2012-07-17
Xylene		1	mg/kg	0.300	0.274	91	80 - 120	2012-07-17

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 42 of 49
Eddy Co., NM

Standard (CCV-1)

QC Batch: 93124

Date Analyzed: 2012-07-17

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.11	111	80 - 120	2012-07-17

Standard (CCV-2)

QC Batch: 93124

Date Analyzed: 2012-07-17

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.900	90	80 - 120	2012-07-17

Standard (CCV-3)

QC Batch: 93124

Date Analyzed: 2012-07-17

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.975	98	80 - 120	2012-07-17

Standard (CCV-1)

QC Batch: 93140

Date Analyzed: 2012-07-18

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	212	85	80 - 120	2012-07-18

Standard (CCV-2)

QC Batch: 93140

Date Analyzed: 2012-07-18

Analyzed By: CW

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 43 of 49
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	262	105	80 - 120	2012-07-18

Standard (CCV-3)

QC Batch: 93140

Date Analyzed: 2012-07-18

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	266	106	80 - 120	2012-07-18

Standard (CCV-4)

QC Batch: 93140

Date Analyzed: 2012-07-18

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	253	101	80 - 120	2012-07-18

Standard (CCV-1)

QC Batch: 93166

Date Analyzed: 2012-07-18

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-07-18

Standard (CCV-2)

QC Batch: 93166

Date Analyzed: 2012-07-18

Analyzed By: AR

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 44 of 49
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2012-07-18

Standard (CCV-1)

QC Batch: 93167

Date Analyzed: 2012-07-18

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.2	99	85 - 115	2012-07-18

Standard (CCV-2)

QC Batch: 93167

Date Analyzed: 2012-07-18

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-07-18

Standard (CCV-1)

QC Batch: 93168

Date Analyzed: 2012-07-18

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-07-18

Standard (CCV-2)

QC Batch: 93168

Date Analyzed: 2012-07-18

Analyzed By: AR

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 45 of 49
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.3	99	85 - 115	2012-07-18

Standard (CCV-1)

QC Batch: 93244

Date Analyzed: 2012-07-20

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.850	85	80 - 120	2012-07-20

Standard (CCV-2)

QC Batch: 93244

Date Analyzed: 2012-07-20

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.810	81	80 - 120	2012-07-20

Standard (CCV-3)

QC Batch: 93244

Date Analyzed: 2012-07-20

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.805	80	80 - 120	2012-07-20

Standard (CCV-1)

QC Batch: 93245

Date Analyzed: 2012-07-20

Analyzed By: MT

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 46 of 49
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0913	91	80 - 120	2012-07-20
Toluene		1	mg/kg	0.100	0.0895	90	80 - 120	2012-07-20
Ethylbenzene		1	mg/kg	0.100	0.0888	89	80 - 120	2012-07-20
Xylene		1	mg/kg	0.300	0.267	89	80 - 120	2012-07-20

Standard (CCV-2)

QC Batch: 93245

Date Analyzed: 2012-07-20

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0868	87	80 - 120	2012-07-20
Toluene		1	mg/kg	0.100	0.0849	85	80 - 120	2012-07-20
Ethylbenzene		1	mg/kg	0.100	0.0838	84	80 - 120	2012-07-20
Xylene		1	mg/kg	0.300	0.251	84	80 - 120	2012-07-20

Standard (CCV-3)

QC Batch: 93245

Date Analyzed: 2012-07-20

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0845	84	80 - 120	2012-07-20
Toluene		1	mg/kg	0.100	0.0811	81	80 - 120	2012-07-20
Ethylbenzene		1	mg/kg	0.100	0.0808	81	80 - 120	2012-07-20
Xylene		1	mg/kg	0.300	0.243	81	80 - 120	2012-07-20

Standard (CCV-1)

QC Batch: 93257

Date Analyzed: 2012-07-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-07-19

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 47 of 49
Eddy Co., NM

Standard (CCV-2)

QC Batch: 93257

Date Analyzed: 2012-07-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2012-07-19

Standard (CCV-1)

QC Batch: 93258

Date Analyzed: 2012-07-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-07-19

Standard (CCV-2)

QC Batch: 93258

Date Analyzed: 2012-07-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.3	99	85 - 115	2012-07-19

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-12-8	Lubbock
2	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

- 1 Sample weighed out of 48-hr preservation time.
- 2 Dilution due to hydrocarbons.

Report Date: July 23, 2012
114-6401458

Work Order: 12071601
SME/PDU 506

Page Number: 49 of 49
Eddy Co., NM

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

Analysis Request of Chain of Custody Record

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3333

CLIENT NAME:		SITE MANAGER:		PROJECT NAME:		PROJECT NO.:	
LAB I.D. NUMBER		DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION
731	7/12/12			S		X	AH-2 (6'-6.5')
732							AH-3 (0'-1')
733							AH-3 (1'-1.5')
734							AH-3 (2'-2.5')
735							AH-3 (3'-3.5')
736							AH-3 (4'-4.5')
737							AH-3 (5'-5.5')
738							AH-4 (0'-1')
739							AH-4 (1'-1.5')
740							AH-4 (2'-2.5')
RELINQUISHED BY: (Signature)		Date:	Time:	RECEIVED BY: (Signature)		Date:	Time:
RELINQUISHED BY: (Signature)		Date:	Time:	RECEIVED BY: (Signature)		Date:	Time:
RELINQUISHED BY: (Signature)		Date:	Time:	RECEIVED BY: (Signature)		Date:	Time:
RECEIVING LABORATORY:		REMARKS:					
ADDRESS:		SAMPLE CONDITION WHEN RECEIVED:					
CITY:		STATE:					
CONTACT:		PHONE:					
		DATE:					
		ZIP:					
		DATE:					
		TIME:					
		REMARKS:					

ANALYSIS REQUEST
(Circle or Specify Method No.)

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

CLIENT NAME: SM Energy		SITE MANAGER: Dee Tarrice	
PROJECT NO.: 114-6401488		PROJECT NAME: PDU 506	
LAB I.D. NUMBER	DATE	TIME	MATRIX
741	7/12/12		S
742			
743			
744			
745			
746			
747			
748			
749			
750			

SAMPLE IDENTIFICATION		GRAB	COMPR	NUMBER OF CONTAINERS	PRELIMINARY METHOD
741	741-4 (3-3.5')	X		1	XX
742	742-4 (4-4.5')				
743	743-4 (5-5.5')				
744	744-4 (6-6.5')				
745	745-4 (7-7.5')				
746	746-5 (0-1')				
747	747-5 (1-1.5')				
748	748-5 (2-2.5')				
749	749-5 (3-3.5')				
750	750-5 (4-4.5')				

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: 7/25/12	Time: 1200	Date: 7/25/12	Time: 1500
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: 7/25/12	Time: 1200	Date: 7/25/12	Time: 1500
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: 7/25/12	Time: 1200	Date: 7/25/12	Time: 1500
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: 7/25/12	Time: 1200	Date: 7/25/12	Time: 1500
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	

RECEIVING LABORATORY:		ADDRESS:	
CITY:	STATE:	PHONE:	ZIP:
DATE:		TIME:	

REMARKS: SAMPLE CONDITION WHEN RECEIVED:

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: SM Energy		SITE MANAGER: The Tower	
PROJECT NO.: 14-6401458		PROJECT NAME: Pou 50x 5' Lay w. NM	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
751	7/12/12		XX AH-5 (5'-5.5')
752			AH-5 (6'-6.5')
753			AH-5 (7'-7.5')
754			AH-6 (0'-1')
755			AH-6 (1'-1.5')
756			AH-6 (2'-2.5')
757			AH-6 (3'-3.5')
758			AH-6 (4'-4.5')
759			AH-6 (5'-5.5')
760			XX AH-6 (6'-6.5')

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
Date: 7/22/12	Date: 7/22/12
Time: 2:30 PM	Time: 3:00 PM
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
Date: 7/22/12	Date: 7/22/12
Time: 3:00 PM	Time: 3:00 PM
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
Date: 7/22/12	Date: 7/22/12
Time: 3:00 PM	Time: 3:00 PM
RECEIVING LABORATORY: PTM	RECEIVED BY: (Signature)
ADDRESS:	
CITY:	
STATE:	
PHONE:	
ZIP:	
DATE: TIME:	

PRESERVATIVE METHOD	
HCL	
HNO3	
ICE	
NONE	XX
NUMBER OF CONTAINERS	
1	
FILTERED (Y/N)	
N	
TCLP Volatiles	
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
RCRA Metals Ag As Ba Cd Cr Pb Hg Se	
PAH 8270	
TPH 8015 M.O.C. TX1005 (Ext. to C35)	
BTX 8021B	
PCB's 8080/608	
GC/MS Semi. Vol. 8270/625	
GC/MS Vol. 8240/8260/624	
PCB's 8080/608	
Post. 808/608	
Chloride	
Gamma Spec.	
Alpha Beta (Air)	
PLM (Asbestos)	
Major Anions/Cations, PH, TDS	
SAMPLED BY: (Print & Initial)	
Date: Time:	
SAMPLE SHIPPED BY: (Circle)	
FEDEX BUS	
HAND DELIVERED UPS	
TETRA TECH CONTACT PERSON:	
Results by:	
RUSH Charges Authorized:	
Yes	No

PAGE: 1 OF: 5

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

CLIENT NAME:	SM Energy	SITE MANAGER:	The Tower
--------------	-----------	---------------	-----------

PROJECT NO.:	114-640 1458	PROJECT NAME:	POW SOG
--------------	--------------	---------------	---------

Edley c.w. lhm
SAMPLE IDENTIFICATION

CLIENT NAME:	SM Energy		SITE MANAGER:	The Tovariz	
PROJECT NO.:	114-640 H58		PROJECT NAME:	POU SOG	
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB
30321	7/10/12		S	X	AH-1 (0-1')
722					AH-1 (1'-1.5')
723					AH-1 (2'-2.5')
724					AH-1 (3-3.5')
725	7/12/12		S	X	AH-2 (0-1')
726					AH-2 (1'-1.5')
727					AH-2 (2'-2.5')
728					AH-2 (3-3.5')
729					AH-2 (4-4.5')
730					AH-2 (5'-5.5')

RELINQUISHED BY: (Signature) _____
 Date: 5/13/20
 RECEIVED BY: (Signature) _____

Time: 7:50

REI INDIAN HIGHWAY, /S/ (signature)

Date: 11/16/15

RECEIVED BY: /S/ (signature)

NEC (signature) p.1. (signature)
Date: 11/18/15
Time: 12:15

	TIME: 70.00
--	-------------

RELINQUISHED BY: (Signature) _____
 Date: _____
 RECEIVED BY: (Signature) _____

Time: _____

RECEIVED BY: (Signature) _____
RECEIVING LABORATORY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____ 7/17/12

CONTACT: _____
PHONE: _____
DATE: 11/11/12

REMARKS:	201-2
SAMPLE CONDITION WHEN RECEIVED:	

087-1000-1000

2	Washed with	run deeper & longer
---	-------------	---------------------

277 Please fill out all copies - Laboratory retains Yellow copy - Return Original

Did you know?

James C. Denzere

[illegible]

SAMPLED BY: (Print & Initial) Date: / /

March 15, 1906

[illegible]

SAMPLE SHIPPED BY: (Circle)
 ECEV
 DIS
 AIRBILL #: 2N9020

[illegible]

HAND DELIVERED	UPS	OTHER: _____
----------------	-----	--------------

TETRA TECH CONTACT PERSON:

1000

RUSH Charges

Authorized: _____

	Yes	No
1. Ke-Covered		

AL-85-37A

111 30 1.2 02 Rev

Ball 11611 11/6/11

Pink copy - Accounting receives Gold copy.

16717

7-21-2017 7:55 AM 2017

2012

PAGE: 2 OF: 5

ANALYSIS REQUEST

(Circle or Specify Method No.)



TETRA TECH

1910 N. Big Spring St.

Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:		PRESERVATIVE METHOD	
PROJECT NO.:		DATE		TIME		NUMBER OF CONTAINERS	
LAB I.D. NUMBER		DATE		TIME		FILTERED (Y/N)	
LAB I.D. NUMBER		DATE		TIME		HCL	
LAB I.D. NUMBER		DATE		TIME		HNO3	
LAB I.D. NUMBER		DATE		TIME		ICE	
LAB I.D. NUMBER		DATE		TIME		NONE	
731	7/12/12						
732							
733							
734							
735							
736							
737							
738							
739							
740							

RELINQUISHED BY: (Signature) _____

RELINQUISHED BY: (Signature) _____

RELINQUISHED BY: (Signature) _____

RECEIVED BY: (Signature) _____

RECEIVED BY: (Signature) _____

RECEIVED BY: (Signature) _____

DATE: 7/12/12

DATE: 7/12/12

DATE: 7/12/12

DATE: 7/12/12

DATE: 7/12/12

DATE: 7/12/12

TIME: 2:52

TIME: 1:15

TIME: 1:15

TIME: 1:15

TIME: 1:15

TIME: 1:15

RECEIVING LABORATORY: _____

CITY: _____

CONTACT: _____

STATE: _____

PHONE: _____

ZIP: _____

SAMPLE CONDITION WHEN RECEIVED: _____

REMARKS: _____

DATE: 7/17/12

TIME: 9:05

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

PAGE: 5 OF: 5

ANALYSIS REQUEST

(Circle or Specify Method No.)



TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

[illegible]

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Summary Report

Ike Tavaréz
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: July 23, 2012

Work Order: 12071601



Project Location: Eddy Co., NM
Project Name: SME/PDU 506
Project Number: 114-6401458

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
303721	AH-1 0-1'	soil	2012-07-10	00:00	2012-07-13
303722	AH-1 1-1.5'	soil	2012-07-10	00:00	2012-07-13
303723	AH-1 2-2.5'	soil	2012-07-10	00:00	2012-07-13
303724	AH-1 3-3.5'	soil	2012-07-10	00:00	2012-07-13
303725	AH-2 0-1'	soil	2012-07-12	00:00	2012-07-13
303726	AH-2 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303727	AH-2 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303728	AH-2 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303729	AH-2 4-4.5'	soil	2012-07-12	00:00	2012-07-13
303730	AH-2 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303731	AH-2 6-6.5'	soil	2012-07-12	00:00	2012-07-13
303732	AH-3 0-1'	soil	2012-07-12	00:00	2012-07-13
303733	AH-3 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303734	AH-3 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303735	AH-3 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303736	AH-3 4-4.5'	soil	2012-07-12	00:00	2012-07-13
303737	AH-3 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303738	AH-4 0-1'	soil	2012-07-12	00:00	2012-07-13
303739	AH-4 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303740	AH-4 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303741	AH-4 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303742	AH-4 4-4.5'	soil	2012-07-12	00:00	2012-07-13
303743	AH-4 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303744	AH-4 6-6.5'	soil	2012-07-12	00:00	2012-07-13
303745	AH-4 7-7.5'	soil	2012-07-12	00:00	2012-07-13
303746	AH-5 0-1'	soil	2012-07-12	00:00	2012-07-13
303747	AH-5 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303748	AH-5 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303749	AH-5 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303750	AH-5 4-4.5'	soil	2012-07-12	00:00	2012-07-13

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
303751	AH-5 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303752	AH-5 6-6.5'	soil	2012-07-12	00:00	2012-07-13
303753	AH-5 7-7.5'	soil	2012-07-12	00:00	2012-07-13
303754	AH-6 0-1'	soil	2012-07-12	00:00	2012-07-13
303755	AH-6 1-1.5'	soil	2012-07-12	00:00	2012-07-13
303756	AH-6 2-2.5'	soil	2012-07-12	00:00	2012-07-13
303757	AH-6 3-3.5'	soil	2012-07-12	00:00	2012-07-13
303758	AH-6 4-4.5'	soil	2012-07-12	00:00	2012-07-13
303759	AH-6 5-5.5'	soil	2012-07-12	00:00	2012-07-13
303760	AH-6 6-6.5'	soil	2012-07-12	00:00	2012-07-13
303761	AH-6 7-7.5'	soil	2012-07-12	00:00	2012-07-13
303762	AH-5 8-8.5'	soil	2012-07-12	00:00	2012-07-13

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
303721 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	0.0282	<50.0	6.88 ¹
303725 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	218	<2.00
303732 - AH-3 0-1'	<0.100 ²	<0.100	<0.100	0.112	427	42.7
303738 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	109	<2.00
303746 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
303754 - AH-6 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 303721 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		791	mg/Kg	4

Sample: 303722 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303723 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303724 - AH-1 3-3.5'

¹Sample weighed out of 48-hr preservation time.²Dilution due to hydrocarbons.

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303725 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		9830	mg/Kg	4

Sample: 303726 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303727 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		43.8	mg/Kg	4

Sample: 303728 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303729 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303730 - AH-2 5-5.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303731 - AH-2 6-6.5'

Param	Flag	Result	Units	RL
Chloride		24.3	mg/Kg	4

Sample: 303732 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		8040	mg/Kg	4

Sample: 303733 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		127	mg/Kg	4

Sample: 303734 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		92.5	mg/Kg	4

Sample: 303735 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		278	mg/Kg	4

Sample: 303736 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303737 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		58.2	mg/Kg	4

Sample: 303738 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		3480	mg/Kg	4

Sample: 303739 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		3140	mg/Kg	4

Sample: 303740 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		1740	mg/Kg	4

Sample: 303741 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride		1460	mg/Kg	4

Sample: 303742 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride		945	mg/Kg	4

Sample: 303743 - AH-4 5-5.5'

Param	Flag	Result	Units	RL
Chloride		2340	mg/Kg	4

Sample: 303744 - AH-4 6-6.5'

Param	Flag	Result	Units	RL
Chloride		1140	mg/Kg	4

Sample: 303745 - AH-4 7-7.5'

Param	Flag	Result	Units	RL
Chloride		2060	mg/Kg	4

Sample: 303746 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		5390	mg/Kg	4

Sample: 303747 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1640	mg/Kg	4

Sample: 303748 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303749 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 303750 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		92.4	mg/Kg	4

Sample: 303751 - AH-5 5-5.5'

Param	Flag	Result	Units	RL
Chloride		107	mg/Kg	4

Sample: 303752 - AH-5 6-6.5'

Param	Flag	Result	Units	RL
Chloride		136	mg/Kg	4

Sample: 303753 - AH-5 7-7.5'

Param	Flag	Result	Units	RL
Chloride		38.9	mg/Kg	4

Sample: 303754 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		6760	mg/Kg	4

Sample: 303755 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		6090	mg/Kg	4

Sample: 303756 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		3660	mg/Kg	4

Sample: 303757 - AH-6 3-3.5'

Param	Flag	Result	Units	RL
Chloride		290	mg/Kg	4

Sample: 303758 - AH-6 4-4.5'

Param	Flag	Result	Units	RL
Chloride		407	mg/Kg	4

Sample: 303759 - AH-6 5-5.5'

Param	Flag	Result	Units	RL
Chloride		201	mg/Kg	4

Sample: 303760 - AH-6 6-6.5'

Param	Flag	Result	Units	RL
Chloride		299	mg/Kg	4

Sample: 303761 - AH-6 7-7.5'

Param	Flag	Result	Units	RL
Chloride		506	mg/Kg	4

Sample: 303762 - AH-5 8-8.5'

Param	Flag	Result	Units	RL
Chloride		54.0	mg/Kg	4