

SITE INFORMATION

Report Type: Work Plan

General Site Information:

Site:	Federal S #6					
Company:	Alamo					
Section, Township and Range	Unit E	Sec 28	T17S	R30E		
Lease Number:	(API#) 30-015-20147					
County:	Eddy County					
GPS:	32.803738° N			-103.979094° W		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	From Loco Hills travel south on Haggerman Cutoff Road approx.0.42 miles to lease road. Turn east and travel for approx. 0.78 miles. Location will be on the right.					

Release Data:

Date Released:	1/8/2014	RECEIVED APR 24 2014 INMOCD ARTESIA
Type Release:	Oil	
Source of Contamination:	Transition in poly line	
Fluid Released:	10 bbls	
Fluids Recovered:	0 bbls	

Official Communication:

Name:	Carie Stoker		Tom Elliott
Company:	Alamo Permian Resources		Tetra Tech
Address:	907 Woodland Park Ave.		4000 North Big Spring Suite 401
City:	Midland, Texas 79705		Midland, Texas
Phone number:	432-685-3599		(432) 682-4559
Fax:	432-685-3577		
Email:	carie@stokeroilfield.com		tom.elliott@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:		20

Acceptable Soil RRAL (mg/kg)

Benzene	Total BTEX	TPH
10	50	5,000



TETRA TECH

March 5, 2014

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

Re: Work Plan for the Alamo Permian Resources, LLC., Federal S #6 site, Unit E, Section 28, Township 17 South, Range 30 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by Alamo Permian Resources, LLC (Alamo) to assess a spill location at the Federal S #6 Site located Unit E, Section 28, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.803738°, W 104.979094°. 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 January 8, 2014, and released approximately ten (10) barrels of oil from a leak in the transition of a poly line. None of the oil was recovered. The majority of the fluids remained on the pad measuring approximately 70' x 80' and 2' x 100'. An area approximately 20' x 40' impacted an area off the pad. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 13. The NMOCD groundwater map shows an average depth to groundwater ranging from 250' to 300' in this area. The groundwater data is shown in Appendix B.

Tetra Tech

4000 North Big Spring Suite 401, Midland, TX 79705

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com



Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) 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

On February 5, 2014, Tetra Tech personnel inspected and sampled the spill area. Six (6) auger holes (AH-1 through AH-6) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, AH-1 and AH-6 were above the RRAL for BTEX at 153 mg/kg in AH-1 at 0-1.0' and 215 mg/kg in AH-6 at 0-1.0' below ground surface (bgs). Auger hole AH-1 and AH-6 declined to below the RRAL at 0.719 mg/kg and 0.179 at 1.0-1.5' bgs. Auger holes (AH-1, AH-2, AH-3, AH-4 and AH-6) were all above the RRAL for TPH at 0-1.0' bgs of 5,384 mg/kg, 9,039 mg/kg, 8,250 mg/kg, 9,420 mg/kg and 9,290 mg/kg respectively. All auger holes TPH concentrations declined with depth and were vertically defined at 1-1.5' bgs.

Elevated chloride concentrations were detected in AH-1, AH-2 and AH-5 at a depth of approximately 1.0' bgs with chloride levels of 1,510 mg/kg, 2,080 mg/kg and 1,820 mg/kg, respectively. The chloride concentrations declined with depth and were vertically defined at a depth of 1-1.5' bgs.



Work Plan

Alamo proposes remove impacted material as highlighted (green) in Table 1 and shown on Figure 4. The areas of AH-1 through AH-6 will be excavated to a depth of approximately 1.0' below surface and once excavated the excavated areas will be backfilled with clean backfilled material to grade. The excavated material will be transported to proper disposal.

If deeper impact is encountered, the proposed excavation depths may not be reached due to wall cave ins and safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safety concerns for onsite personnel. As such, Tetra Tech will excavate the impacted soils to the maximum extent practicable. If the excavation depth is not achieved Alamo proposes to install a liner to cap the remaining impact.

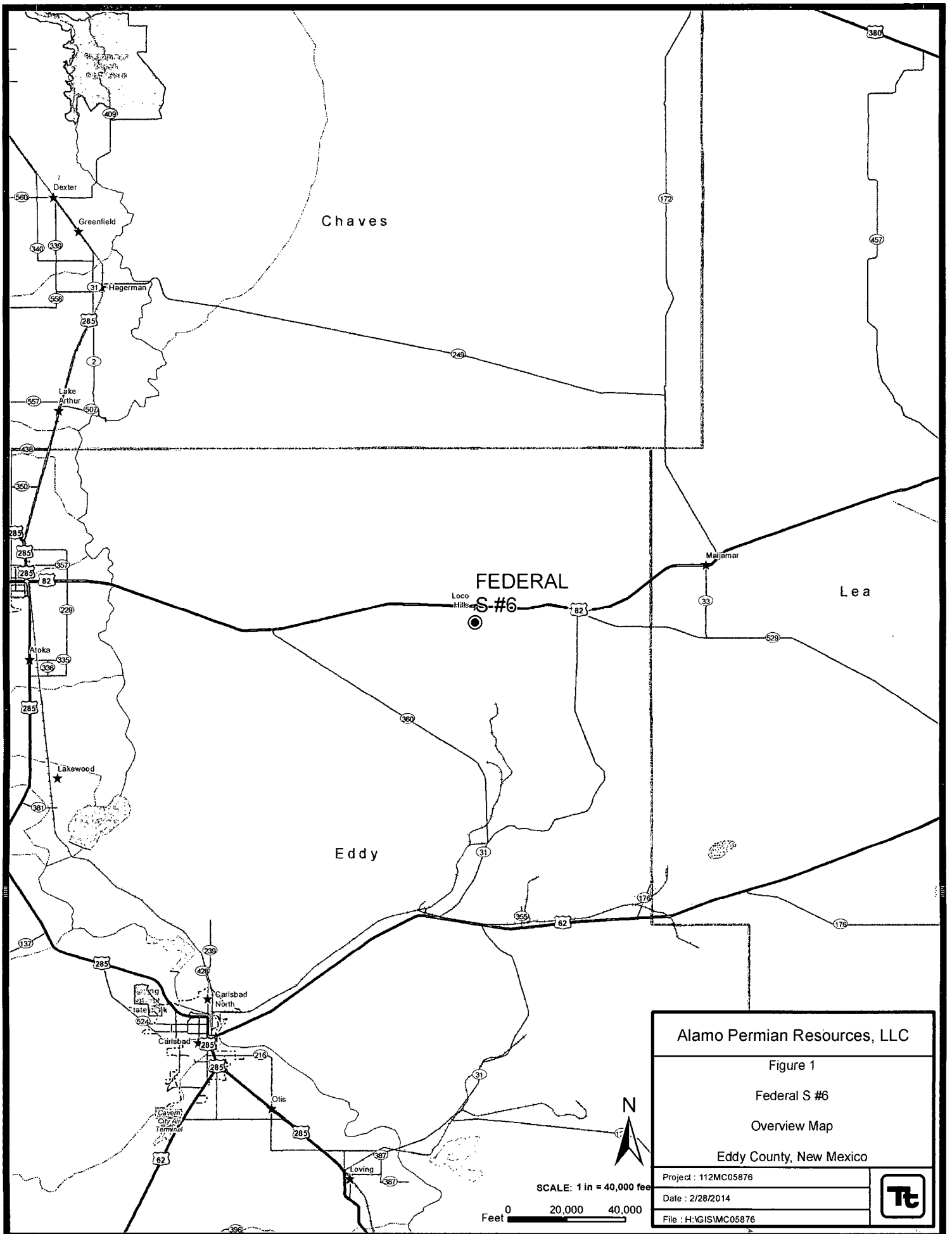
Upon completion, a final report will be submitted to the NMOCD and the BLM. If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Tom Elliott
Project Manager

cc: Stoker Oilfield Services – Carie Stoker
BLM – James Amos

FIGURES



Alamo Permian Resources, LLC

Figure 1

Federal S #6

Overview Map

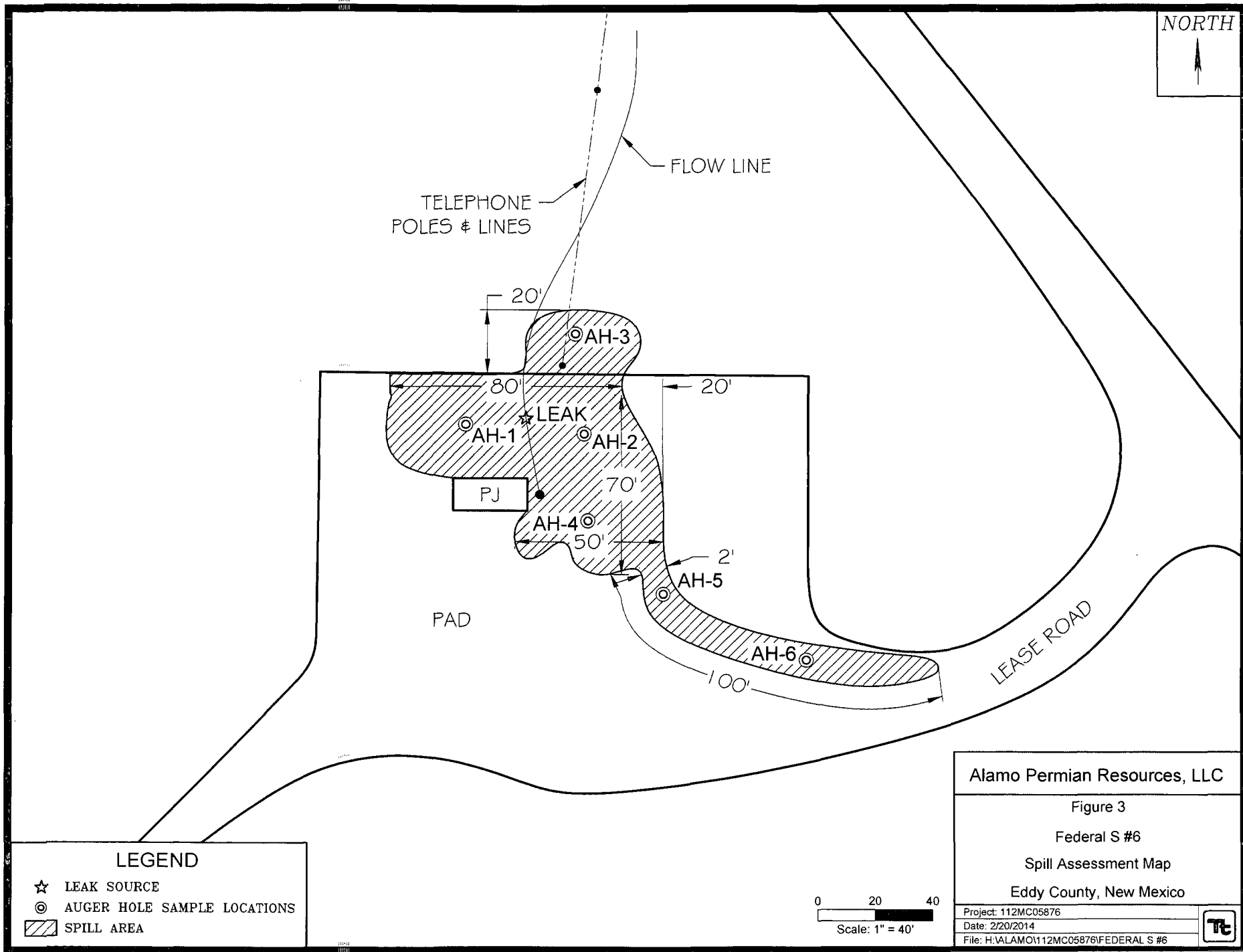
Eddy County, New Mexico

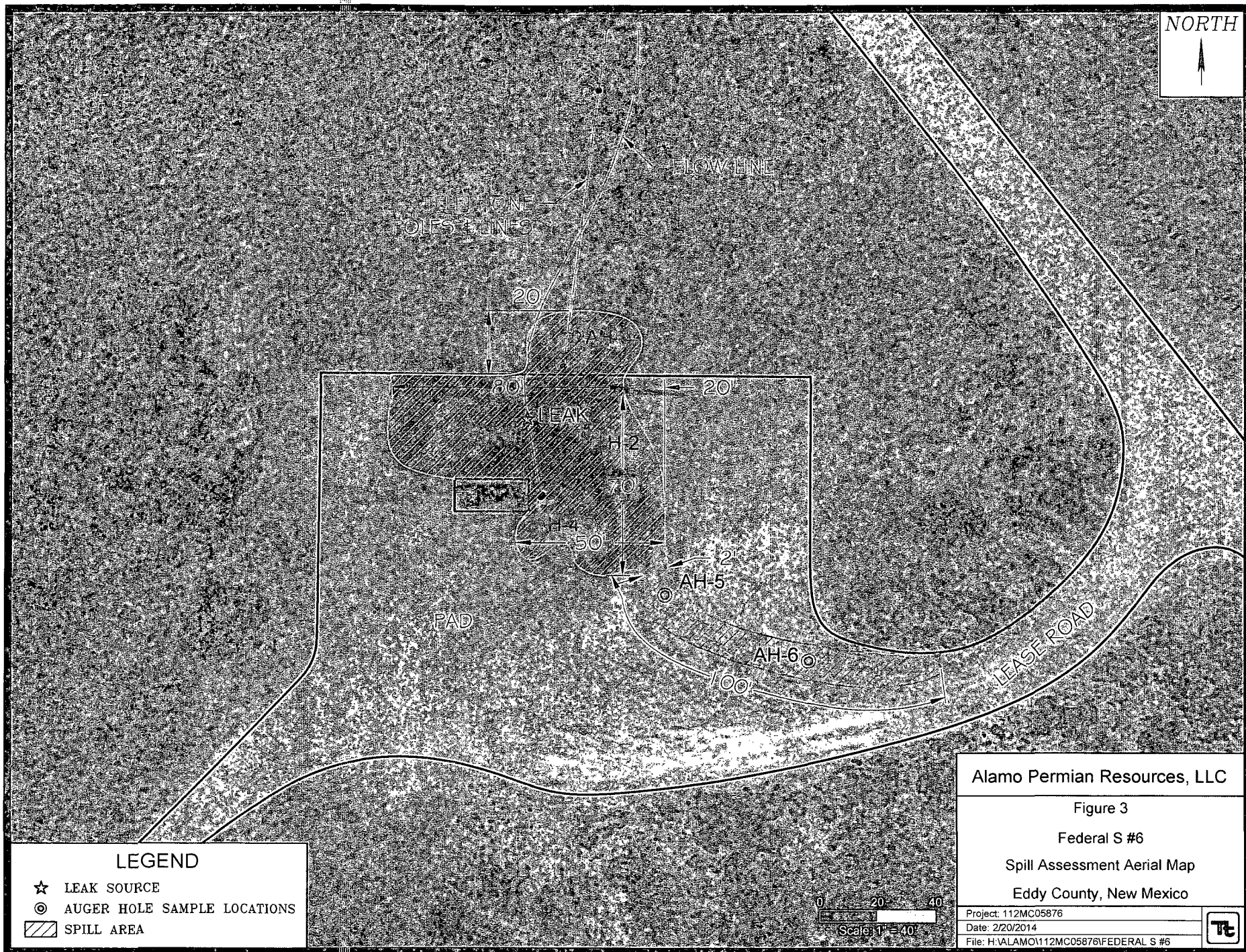
Project : 112MC05876

Date : 2/28/2014

File : H:\GIS\MC05876



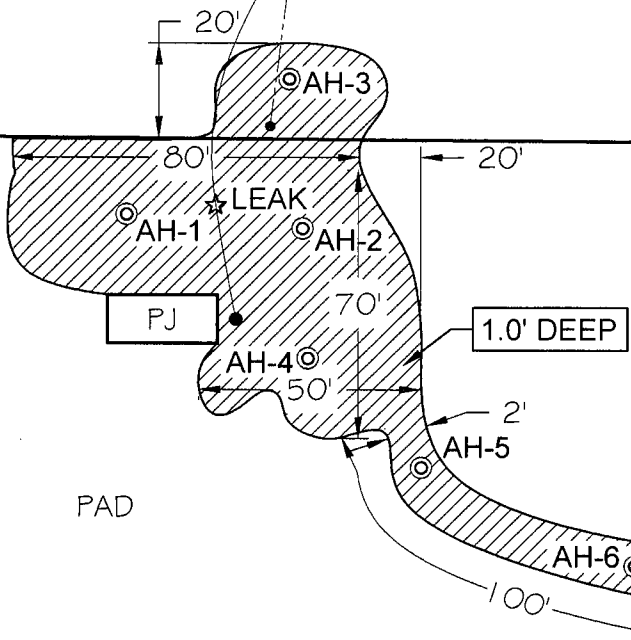






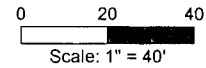
TELEPHONE
POLES & LINES

FLOW LINE



LEGEND

- ☆ LEAK SOURCE
- ⊙ AUGER HOLE SAMPLE LOCATIONS
- ▨ PROPOSED EXCAVATION AREAS & DEPTHS



Alamo Permian Resources, LLC

Figure 4

Federal S #6

Proposed Excavation Map

Eddy County, New Mexico

Project: 112MC05876

Date: 2/20/2014

File: H:\ALAMO\112MC05876\FEDERAL S #6



PHOTOGRAPHS

PHOTOGRAPHIC DOCUMENTATION

Alamo Permian Resources, LLC

Federal S #6

Eddy County, New Mexico

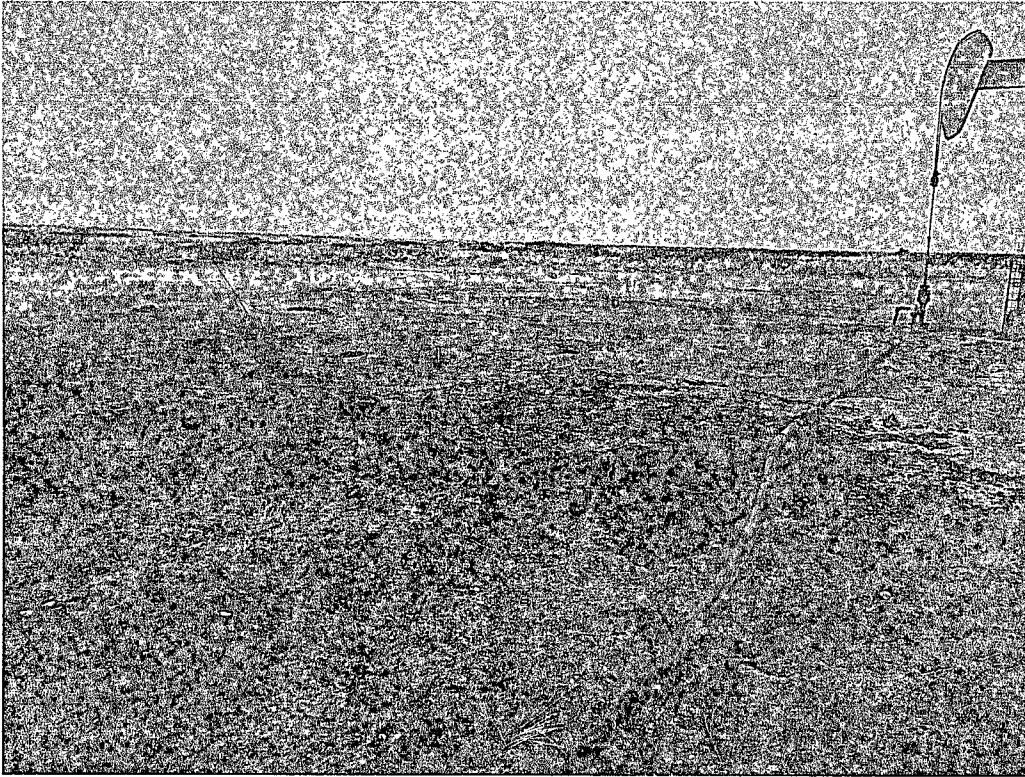


Photo 1. View of AH-2 and AH-4.

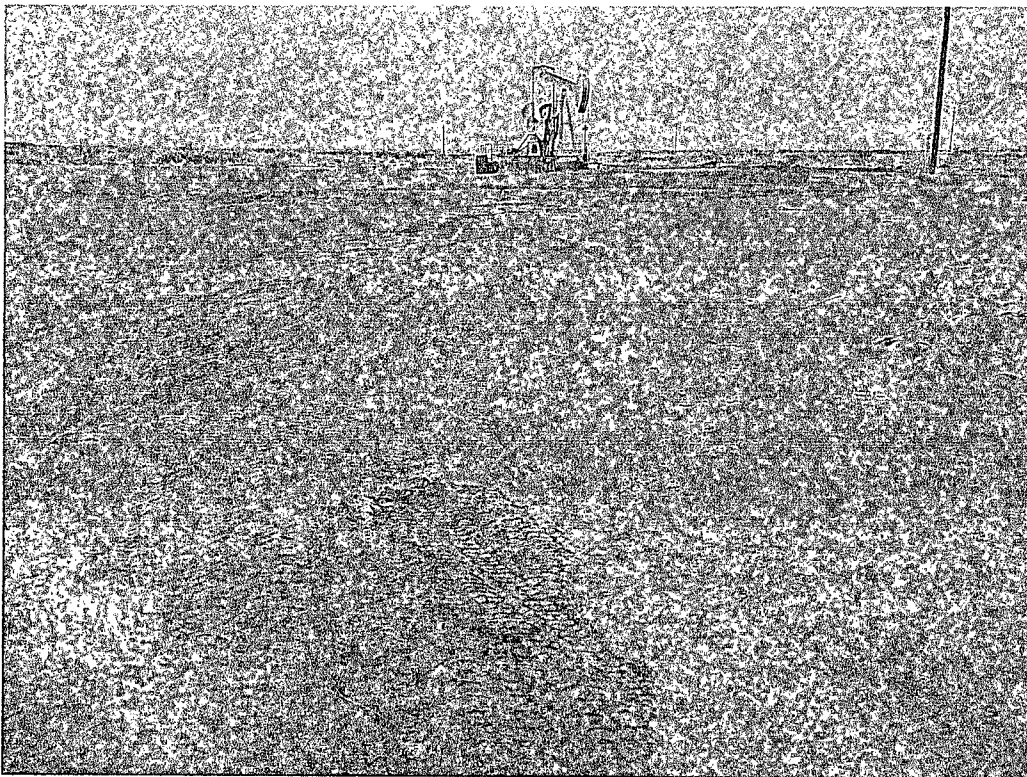


Photo 2. View of AH-5 and AH-6.

TABLES

Table 1
Alamo
Federal S #6
Eddy County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom 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-1	2/5/2014	0-1	0	X		684	4,700	5,384	1.37	17.1	12.8	21.7	53.0	1,510
	"	1-1.5	0	X		<20.0	667	667	<0.100	0.149	0.167	0.403	0.719	663
AH-2	2/5/2014	0-1	0	X		439	8,600	9,039	0.177	8.37	9.18	15.3	33.0	2,080
	"	1-1.5	0	X		<4.00	79.1	79.1	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	33.4
	"	2-2.5	0	X		-	-	-	-	-	-	-	-	81.6
	"	3-3.5	0	X		-	-	-	-	-	-	-	-	495
AH-3	2/5/2014	0-1	0	X		<20.0	8,250	8,250	<0.100	<0.100	<0.100	<0.100	<0.100	490
	"	1-1.5	0	X		<20.0	859	859	-	-	-	-	-	539
AH-4	2/5/2014	0-1	0	X		<20.0	9,420	9,420	<0.100	<0.100	<0.100	<0.100	<0.100	452
	"	1-1.5	0	X		<4.00	<50.0	<50.0	-	-	-	-	-	76.2
	"	2-2.5	0	X		-	-	-	-	-	-	-	-	386
AH-5	2/5/2014	0-1	0	X		501	1,030	1,531	0.199	8.20	9.24	16.5	34.1	1,820
	"	1-1.5	0	X		<4.00	<50.0	<50.0	-	-	-	-	-	479
	"	2-2.5	0	X		-	-	-	-	-	-	-	-	310
	"	3-3.5	0	X		-	-	-	-	-	-	-	-	460
AH-6	2/5/2014	0-1	0	X		2,190	7,100	9,290	<1.00	48.4	62.5	104	215	287
	"	1-1.5	0	X		4.43	75.1	79.5	<0.0200	0.0396	0.0463	0.0927	0.179	460

(-) Not Analyzed

(BEB) Below Excavation Bottom

 Proposed Excavation Depths

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 ALAMO PERMIAN RESOURCES, LLC	Contact RICKY RODRIGUEZ
Address 415 W. WALL ST. SUITE 500	Telephone No. 575 703 6425
Facility Name: FEDERAL S 6	Facility Type: WELL

Surface Owner FEDERAL	Mineral Owner	API No. 30-15-20147
-----------------------	---------------	---------------------

LOCATION OF RELEASE

Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
28	17S	30E	1980	S	1980	W	EDDY

Latitude 32°48'13.46"N
Longitude -103°58'44.74"W

NATURE OF RELEASE

Type of Release: OIL	Volume of Release: 10 BBLS	Volume Recovered: NONE
Source of Release: TRANSITION IN POLY LINE	Date and Hour of Occurrence: JAN 08, 2014	Date and Hour of Discovery JAN 08, 2014; 11:00 A.M.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? MIKE BRATCHER via phone call; JIM AMOS via phone call	
By Whom? Carie Stoker	Date and Hour JAN 08, 2014, 12:00 P.M.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

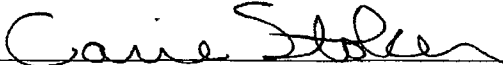
Cause of Problem: A transition in a section of the poly line busted.
Remedial Action Taken: Dispatched backhoe to scrape up leak affected area; spread fresh earth

Describe Area Affected and Cleanup Action Taken.*

Area Affected: Leak affected area is on well site pad
Clean up action: Scraping and removal of the leak affected area; laid fresh earth; scheduled sampling of leak affected area

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

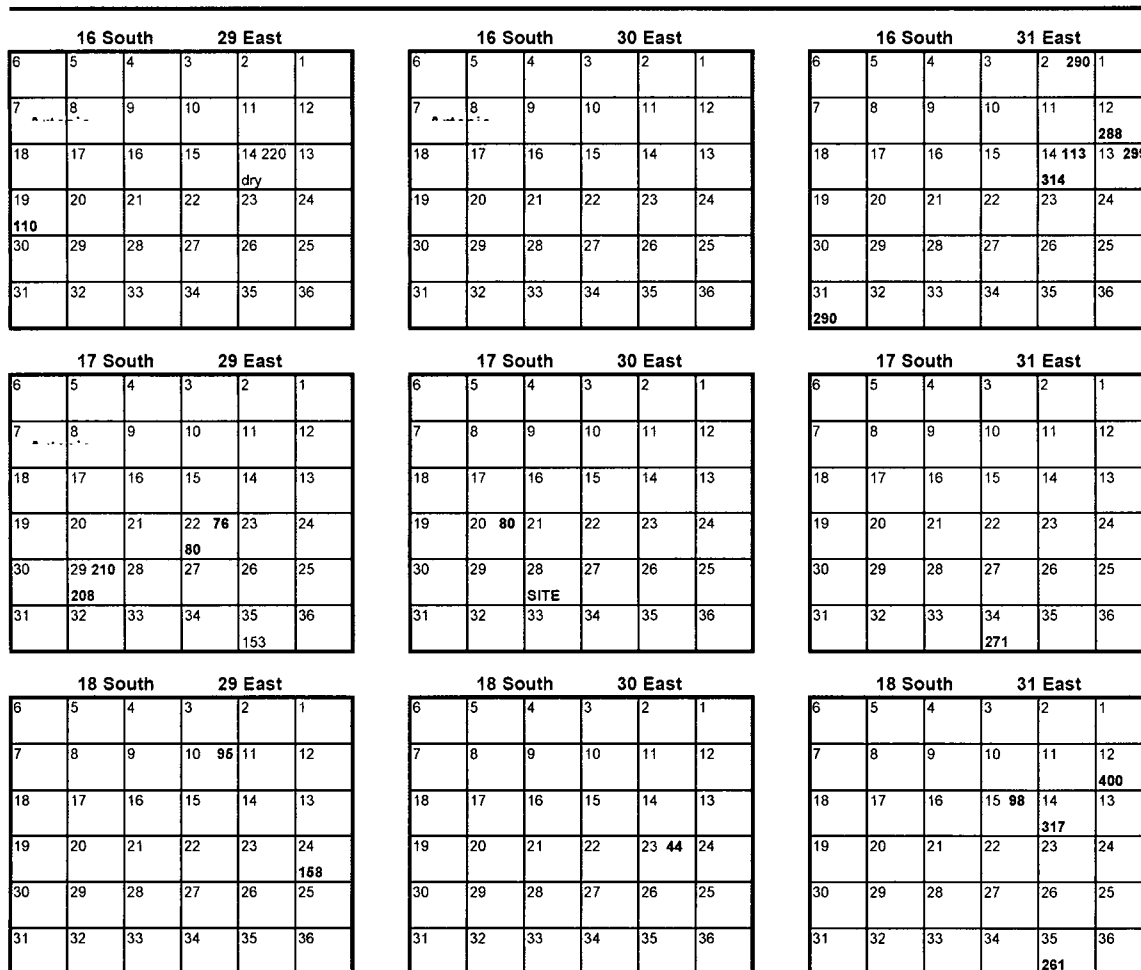
OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist:		
Printed Name: CARIE STOKER			
Title: REGULATORY AFFAIRS COORDINATOR	Approval Date:	Expiration Date:	
E-mail Address: carie@stokeroilfield.com	Conditions of Approval:		Attached ☐
Date: 1/10/2014	Phone: 432 664 7659		

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
Alamo - Federal S 6
Eddy County, New Mexico



-  New Mexico State Engineers Well Reports
-  USGS Well Reports
-  Geology and Groundwater Conditions in Southern Eddy, County, NM
-  NMOCD - Groundwater Data
-  Field water level
-  New Mexico Water and Infrastructure Data System

APPENDIX C

Summary Report

Tom Elliott
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: February 19, 2014

Work Order: 14021001



Project Location: Eddy Co, NM
Project Name: Alamo/Fed S #6
Project Number: 112MC05876

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
354194	AH-1 0-1'	soil	2014-02-05	00:00	2014-02-07
354195	AH-1 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354196	AH-2 0-1'	soil	2014-02-05	00:00	2014-02-07
354197	AH-2 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354198	AH-2 2-2.5'	soil	2014-02-05	00:00	2014-02-07
354199	AH-2 3-3.5'	soil	2014-02-05	00:00	2014-02-07
354200	AH-3 0-1'	soil	2014-02-05	00:00	2014-02-07
354201	AH-3 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354202	AH-4 0-1'	soil	2014-02-05	00:00	2014-02-07
354203	AH-4 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354204	AH-4 2-2.5'	soil	2014-02-05	00:00	2014-02-07
354205	AH-5 0-1'	soil	2014-02-05	00:00	2014-02-07
354206	AH-5 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354207	AH-5 2-2.5'	soil	2014-02-05	00:00	2014-02-07
354208	AH-5 3-3.5'	soil	2014-02-05	00:00	2014-02-07
354209	AH-6 0-1'	soil	2014-02-05	00:00	2014-02-07
354210	AH-6 1-1.5'	soil	2014-02-05	00:00	2014-02-07

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)
354194 - AH-1 0-1'	1.37	17.1	12.8	21.7	4700	684
354195 - AH-1 1-1.5'	<0.100 ¹	0.149	0.167	0.403	667 _{Qr, Qs}	<20.0 ²
354196 - AH-2 0-1'	0.177	8.37	9.18	15.3	8600 _{Qs}	439
354197 - AH-2 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	79.1 _{Qr, Qs}	<4.00

continued ...

¹Dilution due to surfactants.²Dilution due to excessive hydrocarbons.

... continued

Sample - Field Code	BTEX				TPH DRO - NEW DRO	TPH GRO GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)		
354200 - AH-3 0-1'	<0.100 ³	<0.100	<0.100	<0.100	8250 _{Qs}	<20.0 ⁴
354201 - AH-3 1-1.5'					859 _{Qr, Qs}	<20.0 ⁵
354202 - AH-4 0-1'	<0.100 ⁶	<0.100	<0.100	<0.100	9420	<20.0 ⁷
354203 - AH-4 1-1.5'					<50.0 _{Qr, Qs}	<4.00
354205 - AH-5 0-1'	0.199	8.20	9.24	16.5	1030	501
354206 - AH-5 1-1.5'					<50.0 _{Qr, Qs}	<4.00
354209 - AH-6 0-1'	<1.00 ⁸	48.4	62.5	104	7100	2190
354210 - AH-6 1-1.5'	<0.0200	0.0396	0.0463	0.0927	75.1 _{Qr, Qs}	4.43

Sample: 354194 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		1510	mg/Kg	4

Sample: 354195 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		663	mg/Kg	4

Sample: 354196 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		2080	mg/Kg	4

Sample: 354197 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		33.4	mg/Kg	4

Sample: 354198 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		81.6	mg/Kg	4

³Dilution due to turbidity.⁴Dilution due to excessive hydrocarbons.⁵Dilution due to excessive hydrocarbons.⁶Dilution due to turbidity.⁷Dilution due to excessive hydrocarbons.⁸Dilution due to hydrocarbons.

Sample: 354199 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		495	mg/Kg	4

Sample: 354200 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		490	mg/Kg	4

Sample: 354201 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		539	mg/Kg	4

Sample: 354202 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		452	mg/Kg	4

Sample: 354203 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		76.2	mg/Kg	4

Sample: 354204 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		386	mg/Kg	4

Sample: 354205 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		1820	mg/Kg	4

Sample: 354206 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		479	mg/Kg	4

Sample: 354207 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		310	mg/Kg	4

Sample: 354208 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		460	mg/Kg	4

Sample: 354209 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		287	mg/Kg	4

Sample: 354210 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		460	mg/Kg	4



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1296
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 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

Tom Elliott
Tetra Tech
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: February 19, 2014

Work Order: 14021001



Project Location: Eddy Co, NM
Project Name: Alamo/Fed S #6
Project Number: 112MC05876

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
354194	AH-1 0-1'	soil	2014-02-05	00:00	2014-02-07
354195	AH-1 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354196	AH-2 0-1'	soil	2014-02-05	00:00	2014-02-07
354197	AH-2 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354198	AH-2 2-2.5'	soil	2014-02-05	00:00	2014-02-07
354199	AH-2 3-3.5'	soil	2014-02-05	00:00	2014-02-07
354200	AH-3 0-1'	soil	2014-02-05	00:00	2014-02-07
354201	AH-3 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354202	AH-4 0-1'	soil	2014-02-05	00:00	2014-02-07
354203	AH-4 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354204	AH-4 2-2.5'	soil	2014-02-05	00:00	2014-02-07
354205	AH-5 0-1'	soil	2014-02-05	00:00	2014-02-07
354206	AH-5 1-1.5'	soil	2014-02-05	00:00	2014-02-07
354207	AH-5 2-2.5'	soil	2014-02-05	00:00	2014-02-07
354208	AH-5 3-3.5'	soil	2014-02-05	00:00	2014-02-07
354209	AH-6 0-1'	soil	2014-02-05	00:00	2014-02-07
354210	AH-6 1-1.5'	soil	2014-02-05	00:00	2014-02-07

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 42 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink that reads "Michael Abel". The signature is written in a cursive, flowing style.

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

Report Contents

Case Narrative	5
Analytical Report	6
Sample 354194 (AH-1 0-1')	6
Sample 354195 (AH-1 1-1.5')	7
Sample 354196 (AH-2 0-1')	8
Sample 354197 (AH-2 1-1.5')	10
Sample 354198 (AH-2 2-2.5')	11
Sample 354199 (AH-2 3-3.5')	12
Sample 354200 (AH-3 0-1')	12
Sample 354201 (AH-3 1-1.5')	13
Sample 354202 (AH-4 0-1')	14
Sample 354203 (AH-4 1-1.5')	16
Sample 354204 (AH-4 2-2.5')	17
Sample 354205 (AH-5 0-1')	17
Sample 354206 (AH-5 1-1.5')	19
Sample 354207 (AH-5 2-2.5')	20
Sample 354208 (AH-5 3-3.5')	20
Sample 354209 (AH-6 0-1')	20
Sample 354210 (AH-6 1-1.5')	22
Method Blanks	24
QC Batch 109182 - Method Blank (1)	24
QC Batch 109229 - Method Blank (1)	24
QC Batch 109253 - Method Blank (1)	24
QC Batch 109259 - Method Blank (1)	24
QC Batch 109260 - Method Blank (1)	25
QC Batch 109324 - Method Blank (1)	25
QC Batch 109325 - Method Blank (1)	25
QC Batch 109353 - Method Blank (1)	26
Laboratory Control Spikes	27
QC Batch 109182 - LCS (1)	27
QC Batch 109229 - LCS (1)	27
QC Batch 109253 - LCS (1)	27
QC Batch 109259 - LCS (1)	28
QC Batch 109260 - LCS (1)	28
QC Batch 109324 - LCS (1)	29
QC Batch 109325 - LCS (1)	29
QC Batch 109353 - LCS (1)	30
QC Batch 109182 - MS (1)	30
QC Batch 109229 - MS (1)	31
QC Batch 109253 - MS (1)	31
QC Batch 109259 - MS (1)	32
QC Batch 109260 - MS (1)	32
QC Batch 109324 - MS (1)	32

QC Batch 109325 - MS (1)	33
QC Batch 109353 - MS (1)	33
Calibration Standards	35
QC Batch 109182 - CCV (1)	35
QC Batch 109182 - CCV (2)	35
QC Batch 109182 - CCV (3)	35
QC Batch 109229 - CCV (1)	35
QC Batch 109229 - CCV (2)	35
QC Batch 109229 - CCV (3)	36
QC Batch 109253 - CCV (1)	36
QC Batch 109253 - CCV (2)	36
QC Batch 109259 - CCV (1)	36
QC Batch 109259 - CCV (2)	37
QC Batch 109260 - CCV (1)	37
QC Batch 109260 - CCV (2)	37
QC Batch 109324 - CCV (1)	37
QC Batch 109324 - CCV (2)	38
QC Batch 109324 - CCV (3)	38
QC Batch 109325 - CCV (1)	38
QC Batch 109325 - CCV (2)	39
QC Batch 109325 - CCV (3)	39
QC Batch 109353 - CCV (1)	39
QC Batch 109353 - CCV (2)	39
QC Batch 109353 - CCV (3)	39
Appendix	41
Report Definitions	41
Laboratory Certifications	41
Standard Flags	41
Result Comments	41
Attachments	42

Case Narrative

Samples for project Alamo/Fed S #6 were received by TraceAnalysis, Inc. on 2014-02-07 and assigned to work order 14021001. Samples for work order 14021001 were received intact at a temperature of 2.3 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	92348	2014-02-12 at 12:30	109324	2014-02-15 at 10:21
Chloride (Titration)	SM 4500-Cl B	92355	2014-02-12 at 14:36	109253	2014-02-13 at 14:21
Chloride (Titration)	SM 4500-Cl B	92355	2014-02-12 at 14:36	109259	2014-02-13 at 15:08
Chloride (Titration)	SM 4500-Cl B	92355	2014-02-12 at 14:36	109260	2014-02-13 at 15:09
TPH DRO - NEW	S 8015 D	92334	2014-02-11 at 18:00	109182	2014-02-12 at 09:15
TPH DRO - NEW	S 8015 D	92372	2014-02-12 at 14:00	109229	2014-02-13 at 09:12
TPH DRO - NEW	S 8015 D	92474	2014-02-14 at 16:00	109353	2014-02-17 at 09:34
TPH GRO	S 8015 D	92348	2014-02-12 at 12:30	109325	2014-02-15 at 10:24

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 14021001 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: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 6 of 42
Eddy Co, NM

Analytical Report

Sample: 354194 - AH-1 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 109324

Prep Batch: 92348

Analytical Method: S 8021B

Date Analyzed: 2014-02-15

Sample Preparation: 2014-02-12

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	1.37	mg/Kg	5	0.0200
Toluene		1	17.1	mg/Kg	5	0.0200
Ethylbenzene		1	12.8	mg/Kg	5	0.0200
Xylene		1	21.7	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	1.37	mg/Kg	5	2.00	68	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	7.06	mg/Kg	5	2.00	353	70 - 130

Sample: 354194 - AH-1 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 109253

Prep Batch: 92355

Analytical Method: SM 4500-Cl B

Date Analyzed: 2014-02-13

Sample Preparation: 2014-02-12

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1510	mg/Kg	5	4.00

Sample: 354194 - AH-1 0-1'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 109182

Prep Batch: 92334

Analytical Method: S 8015 D

Date Analyzed: 2014-02-12

Sample Preparation: 2014-02-11

Prep Method: N/A

Analyzed By: RG

Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	4700	mg/Kg	5	50.0

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 7 of 42
Eddy Co, NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	QSR	QSR	246	mg/Kg	5	100	246	70 - 130

Sample: 354194 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 109325
Prep Batch: 92348

Analytical Method: S 8015 D
Date Analyzed: 2014-02-15
Sample Preparation: 2014-02-12

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	684	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.78	mg/Kg	5	2.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)	QSR	QSR	16.2	mg/Kg	5	2.00	810	70 - 130

Sample: 354195 - AH-1 1-1.5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 109324
Prep Batch: 92348

Analytical Method: S 8021B
Date Analyzed: 2014-02-15
Sample Preparation: 2014-02-12

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.100	mg/Kg	5	0.0200
Toluene		1	0.149	mg/Kg	5	0.0200
Ethylbenzene		1	0.167	mg/Kg	5	0.0200
Xylene		1	0.403	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.44	mg/Kg	5	2.00	72	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	5	2.00	101	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 8 of 42
Eddy Co, NM

Sample: 354195 - AH-1 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-02-13	Analyzed By:	AR
QC Batch:	109253	Sample Preparation:	2014-02-12	Prepared By:	AR
Prep Batch:	92355				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			663	mg/Kg	5	4.00

Sample: 354195 - AH-1 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2014-02-17	Analyzed By:	RG
QC Batch:	109353	Sample Preparation:	2014-02-14	Prepared By:	RG
Prep Batch:	92474				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qr,Qs	1	667	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			113	mg/Kg	5	100	113	70 - 130

Sample: 354195 - AH-1 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2014-02-15	Analyzed By:	AK
QC Batch:	109325	Sample Preparation:	2014-02-12	Prepared By:	AK
Prep Batch:	92348				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	2	1	<20.0	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.50	mg/Kg	5	2.00	75	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3.71	mg/Kg	5	2.00	186	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 9 of 42
Eddy Co, NM

Sample: 354196 - AH-2 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 109324

Prep Batch: 92348

Analytical Method: S 8021B

Date Analyzed: 2014-02-15

Sample Preparation: 2014-02-12

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.177	mg/Kg	5	0.0200
Toluene		1	8.37	mg/Kg	5	0.0200
Ethylbenzene		1	9.18	mg/Kg	5	0.0200
Xylene		1	15.3	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.46	mg/Kg	5	2.00	73	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	5.28	mg/Kg	5	2.00	264	70 - 130

Sample: 354196 - AH-2 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 109253

Prep Batch: 92355

Analytical Method: SM 4500-Cl B

Date Analyzed: 2014-02-13

Sample Preparation: 2014-02-12

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2080	mg/Kg	10	4.00

Sample: 354196 - AH-2 0-1'

Laboratory: Midland

Analysis: TPH/DRO - NEW

QC Batch: 109229

Prep Batch: 92372

Analytical Method: S 8015D

Date Analyzed: 2014-02-13

Sample Preparation: 2014-02-12

Prep Method: N/A

Analyzed By: RG

Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	8600	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	307	mg/Kg	5	100	307	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 10 of 42
Eddy Co, NM

Sample: 354196 - AH-2 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 109325
Prep Batch: 92348

Analytical Method: S 8015 D
Date Analyzed: 2014-02-15
Sample Preparation: 2014-02-12

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	439	mg/Kg	5	4.00

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)	Qsr	Qsr	12.3	mg/Kg	5	2.00	615	70 - 130

Sample: 354197 - AH-2 1-1.5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 109324
Prep Batch: 92348

Analytical Method: S 8021B
Date Analyzed: 2014-02-15
Sample Preparation: 2014-02-12

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

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)			1.66	mg/Kg	1	2.00	83	70 - 130
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	70 - 130

Sample: 354197 - AH-2 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 109253
Prep Batch: 92355

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-02-13
Sample Preparation: 2014-02-12

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

continued ...

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 11 of 42
Eddy Co, NM

sample 354197 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			33.4	mg/Kg	5	4.00

Sample: 354197 - AH-2 1-1.5'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 109353

Prep Batch: 92474

Analytical Method: S 8015 D

Date Analyzed: 2014-02-17

Sample Preparation: 2014-02-14

Prep Method: N/A

Analyzed By: RG

Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qr,Qs	1	79.1	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			87.0	mg/Kg	1	100	87	70 - 130

Sample: 354197 - AH-2 1-1.5'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 109325

Prep Batch: 92348

Analytical Method: S 8015 D

Date Analyzed: 2014-02-15

Sample Preparation: 2014-02-12

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.83	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 12 of 42
Eddy Co, NM

Sample: 354198 - AH-2 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 109259 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 Sample Preparation: 2014-02-12 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			81.6	mg/Kg	5	4.00

Sample: 354199 - AH-2 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 109259 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 Sample Preparation: 2014-02-12 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			495	mg/Kg	5	4.00

Sample: 354200 - AH-3 0-1'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 109324 Date Analyzed: 2014-02-15 Analyzed By: AK
Prep Batch: 92348 Sample Preparation: 2014-02-12 Prepared By: AK

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
Xylene	u	1	<0.100	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	5	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	5	2.00	101	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 13 of 42
Eddy Co, NM

Sample: 354200 - AH-3 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 109259 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 Sample Preparation: 2014-02-12 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			490	mg/Kg	5	4.00

Sample: 354200 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 109229 Date Analyzed: 2014-02-13 Analyzed By: RG
Prep Batch: 92372 Sample Preparation: 2014-02-12 Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	8250	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	341	mg/Kg	5	100	341	70 - 130

Sample: 354200 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 109325 Date Analyzed: 2014-02-15 Analyzed By: AK
Prep Batch: 92348 Sample Preparation: 2014-02-12 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL	
GRO	4	u	1	<20.0	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.73	mg/Kg	5	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3.02	mg/Kg	5	2.00	151	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 14 of 42
Eddy Co, NM

Sample: 354201 - AH-3 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-02-13	Analyzed By:	AR
QC Batch:	109259	Sample Preparation:	2014-02-12	Prepared By:	AR
Prep Batch:	92355				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			539	mg/Kg	5	4.00

Sample: 354201 - AH-3 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2014-02-17	Analyzed By:	RG
QC Batch:	109353	Sample Preparation:	2014-02-14	Prepared By:	RG
Prep Batch:	92474				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qr,Qs	1	859	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			107	mg/Kg	1	100	107	70 - 130

Sample: 354201 - AH-3 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2014-02-15	Analyzed By:	AK
QC Batch:	109325	Sample Preparation:	2014-02-12	Prepared By:	AK
Prep Batch:	92348				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL	
GRO	5	u	1	<20.0	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.819	mg/Kg	5	0.800	102	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	1.56	mg/Kg	5	0.800	195	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 15 of 42
Eddy Co, NM

Sample: 354202 - AH-4 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 109324

Prep Batch: 92348

Analytical Method: S 8021B

Date Analyzed: 2014-02-15

Sample Preparation: 2014-02-12

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

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
Xylene	U	1	<0.100	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.58	mg/Kg	5	2.00	79	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	5	2.00	98	70 - 130

Sample: 354202 - AH-4 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 109259

Prep Batch: 92355

Analytical Method: SM 4500-Cl B

Date Analyzed: 2014-02-13

Sample Preparation: 2014-02-12

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			452	mg/Kg	5	4.00

Sample: 354202 - AH-4 0-1'

Laboratory: Midland

Analysis: TPH/DRO - NEW

QC Batch: 109182

Prep Batch: 92334

Analytical Method: S 8015D

Date Analyzed: 2014-02-12

Sample Preparation: 2014-02-11

Prep Method: N/A

Analyzed By: RG

Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	9420	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	469	mg/Kg	5	100	469	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 16 of 42
Eddy Co, NM

Sample: 354202 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 109325
Prep Batch: 92348

Analytical Method: S 8015 D
Date Analyzed: 2014-02-15
Sample Preparation: 2014-02-12

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL	
GRO	7	U	1	<20.0	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.72	mg/Kg	5	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			2.59	mg/Kg	5	2.00	130	70 - 130

Sample: 354203 - AH-4 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 109259
Prep Batch: 92355

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-02-13
Sample Preparation: 2014-02-12

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			76.2	mg/Kg	5	4.00

Sample: 354203 - AH-4 1-1.5'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 109353
Prep Batch: 92474

Analytical Method: S 8015 D
Date Analyzed: 2014-02-17
Sample Preparation: 2014-02-14

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qr, Qs	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			94.6	mg/Kg	1	100	95	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 17 of 42
Eddy Co, NM

Sample: 354203 - AH-4 1-1.5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 109325
Prep Batch: 92348

Analytical Method: S 8015 D
Date Analyzed: 2014-02-15
Sample Preparation: 2014-02-12

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	8		0.683	mg/Kg	1	0.800	85	70 - 130
4-Bromofluorobenzene (4-BFB)			0.721	mg/Kg	1	0.800	90	70 - 130

Sample: 354204 - AH-4 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 109259
Prep Batch: 92355

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-02-13
Sample Preparation: 2014-02-12

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			386	mg/Kg	5	4.00

Sample: 354205 - AH-5 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 109324
Prep Batch: 92348

Analytical Method: S 8021B
Date Analyzed: 2014-02-15
Sample Preparation: 2014-02-12

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.199	mg/Kg	5	0.0200
Toluene		1	8.20	mg/Kg	5	0.0200
Ethylbenzene		1	9.24	mg/Kg	5	0.0200
Xylene		1	16.5	mg/Kg	5	0.0200

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 18 of 42
Eddy Co, NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.42	mg/Kg	5	2.00	71	70 - 130
4-Bromofluorobenzene (4-BFB)	Q _{ST}	Q _{ST}	6.01	mg/Kg	5	2.00	300	70 - 130

Sample: 354205 - AH-5 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 109259 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 Sample Preparation: 2014-02-12 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1820	mg/Kg	10	4.00

Sample: 354205 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 109182 Date Analyzed: 2014-02-12 Analyzed By: RG
Prep Batch: 92334 Sample Preparation: 2014-02-11 Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	1030	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			112	mg/Kg	1	100	112	70 - 130

Sample: 354205 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 109325 Date Analyzed: 2014-02-15 Analyzed By: AK
Prep Batch: 92348 Sample Preparation: 2014-02-12 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	501	mg/Kg	5	4.00

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 19 of 42
Eddy Co, NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.51	mg/Kg	5	2.00	76	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	13.5	mg/Kg	5	2.00	675	70 - 130

Sample: 354206 - AH-5 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 109259 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 Sample Preparation: 2014-02-12 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			479	mg/Kg	5	4.00

Sample: 354206 - AH-5 1-1.5'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 109353 Date Analyzed: 2014-02-17 Analyzed By: RG
Prep Batch: 92474 Sample Preparation: 2014-02-14 Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qr, Qs	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			90.9	mg/Kg	1	100	91	70 - 130

Sample: 354206 - AH-5 1-1.5'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 109325 Date Analyzed: 2014-02-15 Analyzed By: AK
Prep Batch: 92348 Sample Preparation: 2014-02-12 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	<4.00	mg/Kg	1	4.00

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 20 of 42
Eddy Co, NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

Sample: 354207 - AH-5 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 109259 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 Sample Preparation: 2014-02-12 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			310	mg/Kg	5	4.00

Sample: 354208 - AH-5 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 109260 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 Sample Preparation: 2014-02-12 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			460	mg/Kg	5	4.00

Sample: 354209 - AH-6 0-1'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 109324 Date Analyzed: 2014-02-15 Analyzed By: AK
Prep Batch: 92348 Sample Preparation: 2014-02-12 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	9	1	<1.00	mg/Kg	50	0.0200
Toluene		1	48.4	mg/Kg	50	0.0200

continued ...

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 21 of 42
Eddy Co, NM

sample 354209 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Ethylbenzene		1	62.5	mg/Kg	50	0.0200
Xylene		1	104	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.22	mg/Kg	50	2.00	111	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	18.7	mg/Kg	50	2.00	935	70 - 130

Sample: 354209 - AH-6 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 109260 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 Sample Preparation: 2014-02-12 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			287	mg/Kg	5	4.00

Sample: 354209 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 109182 Date Analyzed: 2014-02-12 Analyzed By: RG
Prep Batch: 92334 Sample Preparation: 2014-02-11 Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	7100	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	276	mg/Kg	5	100	276	70 - 130

Sample: 354209 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 109325 Date Analyzed: 2014-02-15 Analyzed By: AK
Prep Batch: 92348 Sample Preparation: 2014-02-12 Prepared By: AK

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 22 of 42
Eddy Co, NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	2190	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.40	mg/Kg	50	2.00	70	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	76.2	mg/Kg	50	2.00	3810	70 - 130

Sample: 354210 - AH-6 1-1.5'

Laboratory: Midland

Analysis: BTEX

QC Batch: 109324

Prep Batch: 92348

Analytical Method: S 8021B

Date Analyzed: 2014-02-15

Sample Preparation: 2014-02-12

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene		1	0.0396	mg/Kg	1	0.0200
Ethylbenzene		1	0.0463	mg/Kg	1	0.0200
Xylene		1	0.0927	mg/Kg	1	0.0200

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)			1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 354210 - AH-6 1-1.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 109260

Prep Batch: 92355

Analytical Method: SM 4500-Cl-B

Date Analyzed: 2014-02-13

Sample Preparation: 2014-02-12

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			460	mg/Kg	5	4.00

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 23 of 42
Eddy Co, NM

Sample: 354210 - AH-6 1-1.5'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 109353

Prep Batch: 92474

Analytical Method: S 8015 D

Date Analyzed: 2014-02-17

Sample Preparation: 2014-02-14

Prep Method: N/A

Analyzed By: RG

Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qr,Qs	1	75.1	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			91.1	mg/Kg	1	100	91	70 - 130

Sample: 354210 - AH-6 1-1.5'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 109325

Prep Batch: 92348

Analytical Method: S 8015 D

Date Analyzed: 2014-02-15

Sample Preparation: 2014-02-12

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	4.43	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.72	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

Method Blanks

Method Blank (1) QC Batch: 109182

QC Batch: 109182
Prep Batch: 92334

Date Analyzed: 2014-02-12
QC Preparation: 2014-02-11

Analyzed By: RG
Prepared By: RG

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	9.16	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			96.7	mg/Kg	1	100	97	70 - 130

Method Blank (1) QC Batch: 109229

QC Batch: 109229
Prep Batch: 92372

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

Analyzed By: RG
Prepared By: RG

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<6.88	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			94.4	mg/Kg	1	100	94	70 - 130

Method Blank (1) QC Batch: 109253

QC Batch: 109253
Prep Batch: 92355

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

Analyzed By: AR
Prepared By: AR

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

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 25 of 42
Eddy Co, NM

Method Blank (1) QC Batch: 109259

QC Batch: 109259 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 QC Preparation: 2014-02-12 Prepared By: AR

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

Method Blank (1) QC Batch: 109260

QC Batch: 109260 Date Analyzed: 2014-02-13 Analyzed By: AR
Prep Batch: 92355 QC Preparation: 2014-02-12 Prepared By: AR

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

Method Blank (1) QC Batch: 109324

QC Batch: 109324 Date Analyzed: 2014-02-15 Analyzed By: AK
Prep Batch: 92348 QC Preparation: 2014-02-12 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00533	mg/Kg	0.02
Toluene		1	<0.00645	mg/Kg	0.02
Ethylbenzene		1	<0.0116	mg/Kg	0.02
Xylene		1	<0.00874	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.60	mg/Kg	1	2.00	80	70 - 130
4-Bromofluorobenzene (4-BFB)			1.73	mg/Kg	1	2.00	86	70 - 130

Method Blank (1) QC Batch: 109325

QC Batch: 109325 Date Analyzed: 2014-02-15 Analyzed By: AK
Prep Batch: 92348 QC Preparation: 2014-02-12 Prepared By: AK

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 26 of 42
Eddy Co, NM

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			1.66	mg/Kg	1	2.00	83	70 - 130

Method Blank (1) QC Batch: 109353

QC Batch: 109353

Date Analyzed: 2014-02-17

Analyzed By: RG

Prep Batch: 92474

QC Preparation: 2014-02-14

Prepared By: RG

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	33.8	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			179	mg/Kg	1	200	90	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 109182
Prep Batch: 92334

Date Analyzed: 2014-02-12
QC Preparation: 2014-02-11

Analyzed By: RG
Prepared By: RG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRÖ		1	237	mg/Kg	1	250	9.16	91	70 - 130

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
DRÖ		1	236	mg/Kg	1	250	9.16	91	70 - 130	0	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	91.4	91.2	mg/Kg	1	100	91	91	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 109229
Prep Batch: 92372

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

Analyzed By: RG
Prepared By: RG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRÖ		1	263	mg/Kg	1	250	<6.88	105	70 - 130

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
DRÖ		1	266	mg/Kg	1	250	<6.88	106	70 - 130	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
n-Tricosane	97.1	97.7	mg/Kg	1	100	97	98	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 28 of 42
Eddy Co, NM

Laboratory Control Spike (LCS-1)

QC Batch: 109253
Prep Batch: 92355

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2320	mg/Kg	1	2500	<3.85	93	89.7 - 115.9

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			2450	mg/Kg	1	2500	<3.85	98	89.7 - 115.9	5	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: 109259
Prep Batch: 92355

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

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	89.7 - 115.9

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			2450	mg/Kg	1	2500	<3.85	98	89.7 - 115.9	5	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: 109260
Prep Batch: 92355

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2400	mg/Kg	1	2500	<3.85	96	89.7 - 115.9

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

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 29 of 42
Eddy Co, NM

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2490	mg/Kg	1	2500	<3.85	100	89.7 - 115.9	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: 109324
Prep Batch: 92348

Date Analyzed: 2014-02-15
QC Preparation: 2014-02-12

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.62	mg/Kg	1	2.00	<0.00533	81	70 - 130
Toluene		1	1.81	mg/Kg	1	2.00	<0.00645	90	70 - 130
Ethylbenzene		1	1.92	mg/Kg	1	2.00	<0.0116	96	70 - 130
Xylene		1	5.84	mg/Kg	1	6.00	<0.00874	97	70 - 130

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	1.75	mg/Kg	1	2.00	<0.00533	88	70 - 130	8	20
Toluene		1	1.87	mg/Kg	1	2.00	<0.00645	94	70 - 130	3	20
Ethylbenzene		1	1.98	mg/Kg	1	2.00	<0.0116	99	70 - 130	3	20
Xylene		1	6.04	mg/Kg	1	6.00	<0.00874	101	70 - 130	3	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)	1.63	1.71	mg/Kg	1	2.00	82	86	70 - 130
4-Bromofluorobenzene (4-BFB)	1.91	1.74	mg/Kg	1	2.00	96	87	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 109325
Prep Batch: 92348

Date Analyzed: 2014-02-15
QC Preparation: 2014-02-12

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.7	mg/Kg	1	20.0	<2.32	84	70 - 130

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

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 30 of 42
Eddy Co, NM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	17.1	mg/Kg	1	20.0	<2.32	86	70 - 130	2	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.66	1.72	mg/Kg	1	2.00	83	86	70 - 130
4-Bromofluorobenzene (4-BFB)	1.98	2.06	mg/Kg	1	2.00	99	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 109353
Prep Batch: 92474

Date Analyzed: 2014-02-17
QC Preparation: 2014-02-14

Analyzed By: RG
Prepared By: RG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	286	mg/Kg	1	250	<6.88	114	70 - 130

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
DRO		1	287	mg/Kg	1	250	<6.88	115	70 - 130	0	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Tricosane	93.0	92.9	mg/Kg	1	100	93	93	70 - 130

Matrix Spike (MS-1) Spiked Sample: 354106

QC Batch: 109182
Prep Batch: 92334

Date Analyzed: 2014-02-12
QC Preparation: 2014-02-11

Analyzed By: RG
Prepared By: RG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	285	mg/Kg	1	250	35.8	100	70 - 130

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

continued ...

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 31 of 42
Eddy Co, NM

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	300	mg/Kg	1	250	35.8	106	70 - 130	5	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	94.3	95.4	mg/Kg	1	100	94	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 354196

QC Batch: 109229
Prep Batch: 92372

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

Analyzed By: RG
Prepared By: RG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	
DRO	Qs	Qs	1	9520	mg/Kg	5	250	8600	368	70 - 130

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

Param			MSD			Spike	Matrix		Rec.		RPD	
	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
DRO	Qs	Qs	1	8500	mg/Kg	5	250	8600	-40	70 - 130	11	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	Q _{sr}	Q _{sr}	310	297	mg/Kg	5	100	310	297	70 - 130

Matrix Spike (MS-1) Spiked Sample: 354197

QC Batch: 109253
Prep Batch: 92355

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2790	mg/Kg	5	2500	33.4	110	78.9 - 121

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

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 32 of 42
Eddy Co, NM

Param	F	C	MSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
			Result	Units							
Chloride			2660	mg/Kg	5	2500	33.4	105	78.9 - 121	5	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: 354207

QC Batch: 109259
Prep Batch: 92355

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

Analyzed By: AR
Prepared By: AR

Param	F	C	MS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
			Result	Units					
Chloride			2930	mg/Kg	5	2500	310	105	78.9 - 121

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

Param	F	C	MSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
			Result	Units							
Chloride			3020	mg/Kg	5	2500	310	108	78.9 - 121	3	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: 354213

QC Batch: 109260
Prep Batch: 92355

Date Analyzed: 2014-02-13
QC Preparation: 2014-02-12

Analyzed By: AR
Prepared By: AR

Param	F	C	MS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
			Result	Units					
Chloride			7450	mg/Kg	10	2500	5150	92	78.9 - 121

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

Param	F	C	MSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
			Result	Units							
Chloride			7190	mg/Kg	10	2500	5150	82	78.9 - 121	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: 354102

QC Batch: 109324
Prep Batch: 92348

Date Analyzed: 2014-02-15
QC Preparation: 2014-02-12

Analyzed By: AK
Prepared By: AK

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 33 of 42
Eddy Co, NM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.58	mg/Kg	1	2.00	<0.00533	79	70 - 130
Toluene		1	1.72	mg/Kg	1	2.00	<0.00645	86	70 - 130
Ethylbenzene		1	1.90	mg/Kg	1	2.00	<0.0116	95	70 - 130
Xylene		1	5.81	mg/Kg	1	6.00	<0.00874	97	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
Benzene		1	1.49	mg/Kg	1	2.00	<0.00533	74	70 - 130	6	20
Toluene		1	1.66	mg/Kg	1	2.00	<0.00645	83	70 - 130	4	20
Ethylbenzene		1	1.82	mg/Kg	1	2.00	<0.0116	91	70 - 130	4	20
Xylene		1	5.57	mg/Kg	1	6.00	<0.00874	93	70 - 130	4	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)	1.60	1.51	mg/Kg	1	2	80	76	70 - 130
4-Bromofluorobenzene (4-BFB)	1.90	1.84	mg/Kg	1	2	95	92	70 - 130

Matrix Spike (MS-1) Spiked Sample: 354102

QC Batch: 109325
Prep Batch: 92348

Date Analyzed: 2014-02-15
QC Preparation: 2014-02-12

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	19.0	mg/Kg	1	20.0	<2.32	95	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	18.3	mg/Kg	1	20.0	<2.32	92	70 - 130	4	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)	1.50	1.70	mg/Kg	1	2	75	85	70 - 130
4-Bromofluorobenzene (4-BFB)	1.89	2.02	mg/Kg	1	2	94	101	70 - 130

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 34 of 42
Eddy Co, NM

Matrix Spike (MS-1) Spiked Sample: 354195

QC Batch: 109353
Prep Batch: 92474

Date Analyzed: 2014-02-17
QC Preparation: 2014-02-14

Analyzed By: RG
Prepared By: RG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs	1	1220	mg/Kg	5	250	667	221 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
DRO	Qr,Qs	Qr,Qs	1	786	mg/Kg	5	250	667	48 70 - 130	43	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	Qsr	Qsr	136	126	mg/Kg	5	100	136 126 70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 109182

Date Analyzed: 2014-02-12

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	262	105	80 - 120	2014-02-12

Standard (CCV-2)

QC Batch: 109182

Date Analyzed: 2014-02-12

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	254	102	80 - 120	2014-02-12

Standard (CCV-3)

QC Batch: 109182

Date Analyzed: 2014-02-12

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	250	100	80 - 120	2014-02-12

Standard (CCV-1)

QC Batch: 109229

Date Analyzed: 2014-02-13

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	263	105	80 - 120	2014-02-13

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 36 of 42
Eddy Co, NM

Standard (CCV-2)

QC Batch: 109229

Date Analyzed: 2014-02-13

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	296	118	80 - 120	2014-02-13

Standard (CCV-3)

QC Batch: 109229

Date Analyzed: 2014-02-13

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	274	110	80 - 120	2014-02-13

Standard (CCV-1)

QC Batch: 109253

Date Analyzed: 2014-02-13

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	2014-02-13

Standard (CCV-2)

QC Batch: 109253

Date Analyzed: 2014-02-13

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	99.6	100	85 - 115	2014-02-13

Standard (CCV-1)

QC Batch: 109259

Date Analyzed: 2014-02-13

Analyzed By: AR

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 37 of 42
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	100	100	85 - 115	2014-02-13

Standard (CCV-2)

QC Batch: 109259

Date Analyzed: 2014-02-13

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	99.9	100	85 - 115	2014-02-13

Standard (CCV-1)

QC Batch: 109260

Date Analyzed: 2014-02-13

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	99.4	99	85 - 115	2014-02-13

Standard (CCV-2)

QC Batch: 109260

Date Analyzed: 2014-02-13

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	2014-02-13

Standard (CCV-1)

QC Batch: 109324

Date Analyzed: 2014-02-15

Analyzed By: AK

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 38 of 42
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	0.0949	95	80 - 120	2014-02-15
Toluene		1	mg/kg	0.100	0.0995	100	80 - 120	2014-02-15
Ethylbenzene		1	mg/kg	0.100	0.0996	100	80 - 120	2014-02-15
Xylene		1	mg/kg	0.300	0.302	101	80 - 120	2014-02-15

Standard (CCV-2)

QC Batch: 109324

Date Analyzed: 2014-02-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0892	89	80 - 120	2014-02-15
Toluene		1	mg/kg	0.100	0.0945	94	80 - 120	2014-02-15
Ethylbenzene		1	mg/kg	0.100	0.0944	94	80 - 120	2014-02-15
Xylene		1	mg/kg	0.300	0.286	95	80 - 120	2014-02-15

Standard (CCV-3)

QC Batch: 109324

Date Analyzed: 2014-02-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0887	89	80 - 120	2014-02-15
Toluene		1	mg/kg	0.100	0.0954	95	80 - 120	2014-02-15
Ethylbenzene		1	mg/kg	0.100	0.0958	96	80 - 120	2014-02-15
Xylene		1	mg/kg	0.300	0.290	97	80 - 120	2014-02-15

Standard (CCV-1)

QC Batch: 109325

Date Analyzed: 2014-02-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.924	92	80 - 120	2014-02-15

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 39 of 42
Eddy Co, NM

Standard (CCV-2)

QC Batch: 109325

Date Analyzed: 2014-02-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.834	83	80 - 120	2014-02-15

Standard (CCV-3)

QC Batch: 109325

Date Analyzed: 2014-02-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.849	85	80 - 120	2014-02-15

Standard (CCV-1)

QC Batch: 109353

Date Analyzed: 2014-02-17

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	286	114	80 - 120	2014-02-17

Standard (CCV-2)

QC Batch: 109353

Date Analyzed: 2014-02-17

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	286	114	80 - 120	2014-02-17

Standard (CCV-3)

QC Batch: 109353

Date Analyzed: 2014-02-17

Analyzed By: RG

Report Date: February 19, 2014
112MC05876

Work Order: 14021001
Alamo/Fed S #6

Page Number: 40 of 42
Eddy Co, NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	292	117	80 - 120	2014-02-17

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-13-7	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 then 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.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
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 Dilution due to surfactants.
- 2 Dilution due to excessive hydrocarbons.
- 3 Dilution due to turbidity.
- 4 Dilution due to excessive hydrocarbons.
- 5 Dilution due to excessive hydrocarbons.
- 6 Dilution due to turbidity.
- 7 Dilution due to excessive hydrocarbons.
- 8 Analyst erroneously spiked 20mics rather than 50mics.
- 9 Dilution due to hydrocarbons.

Attachments

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

14021001

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 2


TETRA TECH

1910 N. Big Spring St.

Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

 ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

ALAMO

SITE MANAGER:

Tom Elliott

PROJECT NO.:

112-605876

PROJECT NAME:

ALAMO - Fed S #6

LAB I.D.
NUMBER

DATE

TIME

MATRIX
COMP.
GRAB
 Cady Co, NM
SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

PRESERVATIVE
METHOD

HCL

HNO3

ICE

NONE

BTEX 8027B

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/624

GC/MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

354194

2/5

S

X

AH-1 0-1

X

X

X

195

1-1.5

196

AH-2 0-1

X

X

197

1-1.5

198

2-2.5

199

3-3.5

200

AH-3 0-1

X

X

201

1-1.5

202

AH-4 0-1

X

X

203

1-1.5

RELINQUISHED BY: (Signature)

Date: 2-5-14

Time: 1620

RECEIVED BY: (Signature)

Date: 3/2/14

Time: 1620

SAMPLED BY: (Print & Initial)

Date: _____

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

SAMPLE SHIPPED BY: (Circle)

FEDEX

BUS

HAND DELIVERED

UPS

AIRBILL #: _____

OTHER: _____

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

TETRA TECH CONTACT PERSON:

Results by:

RECEIVING LABORATORY:

RECEIVED BY: (Signature)

ADDRESS:

CITY:

STATE:

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

REMARKS:

2.30

Run deeper samples if Benzene exceeds 10 mg/kg, run deeper samples if Total BTEX exceeds 50 mg/kg
Run deeper samples if TPH exceeds 100 mg/kg Midland, TX

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

14021001

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 2

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

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

CLIENT NAME:

ALAMO

SITE MANAGER:

Tom Elliott

PROJECT NO.:

112MLOS876

PROJECT NAME:

ALAMO - Fed S #6

LAB I.D.
NUMBERDATE
2014

TIME

MATRIX

COMP.

GRAB

 Kelly Co, NM
 SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD
 BTEX 8021B
 TPH 8015 MOD TX1005 (Ext. to C35)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/624

GC/MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

 Date: 2-27-14
 Time: 1620

RECEIVED BY: (Signature)

 Date: 2-27-14
 Time: 1620

SAMPLED BY: (Print & Initial)

mk

Date:

Time:

RELINQUISHED BY: (Signature)

 Date: _____
 Time: _____

RECEIVED BY: (Signature)

 Date: _____
 Time: _____

SAMPLE SHIPPED BY: (Circle)

FEDEX

BUS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature)

 Date: _____
 Time: _____

RECEIVED BY: (Signature)

 Date: _____
 Time: _____

TETRA TECH CONTACT PERSON:

Tom Elliott

Results by:

RUSH Charges

Authorized:

Yes No

RECEIVING LABORATORY:

TETRA

ADDRESS:

CITY: MIDLAND

STATE: TX

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

2.30

REMARKS:

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

Patterson, Heather, EMNRD

From: Patterson, Heather, EMNRD
Sent: Tuesday, May 06, 2014 9:55 AM
To: 'carie@stokeroilfield.com'
Cc: Bratcher, Mike, EMNRD; 'tom.elliott@tetrattech.com'; 'rrodriguez@alamoresources.com'
Subject: Federal S #6 work plan

Tracking:	Recipient	Delivery
	'carie@stokeroilfield.com'	
	Bratcher, Mike, EMNRD	Delivered: 5/6/2014 9:55 AM
	'tom.elliott@tetrattech.com'	
	'rrodriguez@alamoresources.com'	

Reference: Alamo Resource * Federal S #6 * 30-015-20147 * E-28-17S-30E * Eddy County, NM * NMOCD tracking number: **2RP-2157** * Date of Release: 1/8/2014

Ms. Stoker,

Your proposal for remediation of the above referenced release is approved. Like approval from the BLM is also required for this site.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notifications, please contact me.

Heather Patterson
Environmental Specialist
NMOCD District II
(575)748-1283 ext.101