SITE INFORMATION

Report Type: Work Plan - 2RP 1099

General Site Information:						
Site:	**Cowtown Tank Battery**					
Company:	**Alamo Permian Resources, LLC.**					
Section, Township and Range	**Section 13**	**T18S**	**R28E**	**Unit K**		
Lease Number:	**30-015-01843**					
County:	**Eddy County**					
GPS:	**32.7464136° N**			**104.1321674 W**		
Surface Owner:	**State**					
Mineral Owner:						
Directions:	From Artesia, NM at the intersection of NM 229 and US 82, go east on US 82 for 11.8 miles, turn south on NM 360 and go 4.8 miles, turn right on Cowtown Rd and go 1.6 miles, turn right and go 0.2 miles, turn left to battery.					

Release Data:	
Date Released:	4/4/2012
Type Release:	Crude Oil
Source of Contamination:	Oil Tank
Fluid Released:	97 barrels
Fluids Recovered:	0 barrels

Official Communication:			
Name:	Steven Mastin		James Kennedy
Company:	Alamo Permian Resources, LLC.		Tetra Tech
Address:	415 W. Wall St. Suite 500		1910 N. Big Spring
P.O. Box			
City:	Midland Texas		Midland, Texas
Phone number:	(432) 557-5847		(432) 682-4559
Fax:			
Email:	smastin@alamoresources.com		james.kennedy@tetratech.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:	**10**	

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

TETRA TECH

June 3, 2013

RECEIVED
JUN 17 2013
NMOCD ARTESIA

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

Re: Work Plan for the Alamo Permian Resources, LLC., Cowtown Tank Battery, Unit K, Section 13, Township 18 South, Range 28 East, Eddy County, New Mexico. (2RP-1099)

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by Alamo Permian Resources, LLC., (Alamo) to assess a spill from the Cowtown Tank Battery located in Unit K, Section 13, Township 18 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.7464136°, W 104.1321674°.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on April 4, 2012, and released approximately ninety-seven (97) barrels of crude oil from hole in an oil tank. None of the fluids were recovered. The spill migrated approximately 300 yards into the pasture, with a width of approximately 1.0' to 5.0' wide. The initial C-141 form is enclosed in Appendix A.

Groundwater

The New Mexico State Engineer's Office data showed one well located in Section 35, Township 18 South, Range 28 East, with a depth to water of approximately 65' below surface. According to the NMOCD groundwater map and well data, the depth to groundwater in the area is approximately 225' below. The groundwater data is shown in Appendix B.

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 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, ethyl-benzene 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. Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment

On August 21 and 22, 2012, Tetra Tech personnel inspected and sampled the spill area. Eleven (11) trenches (T-1 through T-11) were installed using a backhoe to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. The sampling results are summarized in Table 1. The trench locations are shown on Figure 3. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C.

Referring to Table 1, all of the trench locations, with the exception of T-6 and T-7, showed samples exceeding the RRAL for either TPH and/or BTEX at the 0-1' below surface. The deeper samples decreased significantly with depth below the RRAL at 2.0' below surface.

In the areas of T-1, T-2, T-3 and T-4, chloride concentrations were detected in the subsurface soils. Trench (T-3) detected a chloride high of 1,750 mg/kg and declined with depth to 412 mg/kg at 8.0' below surface. The remaining trench locations (T-1, T-2 and T-4) showed a deeper impact to the soils, with bottom hole samples of 2,930 mg/kg at 10.0', 2,880 mg/kg at 12.0' and 1,480 mg/kg at 6.0', respectively. These trenches were not vertically defined, as deeper samples were not collected due to the dense caliche formation. In addition, chloride spikes were detected in the areas of T-7 (1,110 mg/kg at 2.0') and T-9 (2030 mg/kg at 4.0'), but significantly declined with depth and these concentrations do not appear to be an environmental concern.

On February 20, 2013, Tetra Tech personnel supervised the installation of boreholes (BH-1, BH-2 and BH-3) utilizing an air rotary drilling rig to define extents. The boreholes were installed in the areas of T-1, T-2 and T-4 and installed to a total depth of 30.0' for BH-1 (T-1), 40' for BH-2 (T-2), and 25' for BH-3 (T-4). The borehole locations are shown in Figure 3. The sampling results are summarized in Table 1.

Referring to Table 1, chloride concentrations decreased with depth and all of the borehole locations were vertically defined. Borehole (BH-1, T-1) did not show a significant chloride impact to the soils and the chlorides detected in the trench sampling at depths of 8.0' and 10.0' were not encountered in the borehole. Borehole (BH-2) did show a chloride high of 4,570 mg/kg at 15.0', but decreased with depth to 372 mg/kg at 40.0' below surface. Borehole BH-3 detected a chloride of 4,900 mg/kg at 1.0' below surface, and steadily decreased with depth to 267 mg/kg at 25.0' below surface.

Proposed Work Plan

Alamo proposes to excavate the elevated chloride impacted soil and the soil exceeding the RRAL for TPH and Total BTEX. The proposed excavation areas and depths are highlighted (green) in Table 1 and shown on Figure 4.

The areas of T-1, T-4, T-5, T-8, T-9, T-10, and T-11 will be excavated to a depth of approximately 1.0' below surface. Deeper excavations will be performed in the area of T-2 and T-3 at depths of approximately 10.0' to 14.0' and 4.0', respectively. In the area of T-2, a 40 mil liner will be installed at 4.0' to cap the remaining impact. Once excavated to the appropriate depths, the excavated areas will be backfilled with clean soil.

Based on site formation, the excavation depths may not be reached due to dense formations, 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 safely concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable. If the expected depths are not achieved, a 40 mil liner will be installed at approximately 3.0' to 4.0' below surface to cap the remaining impacted soils.

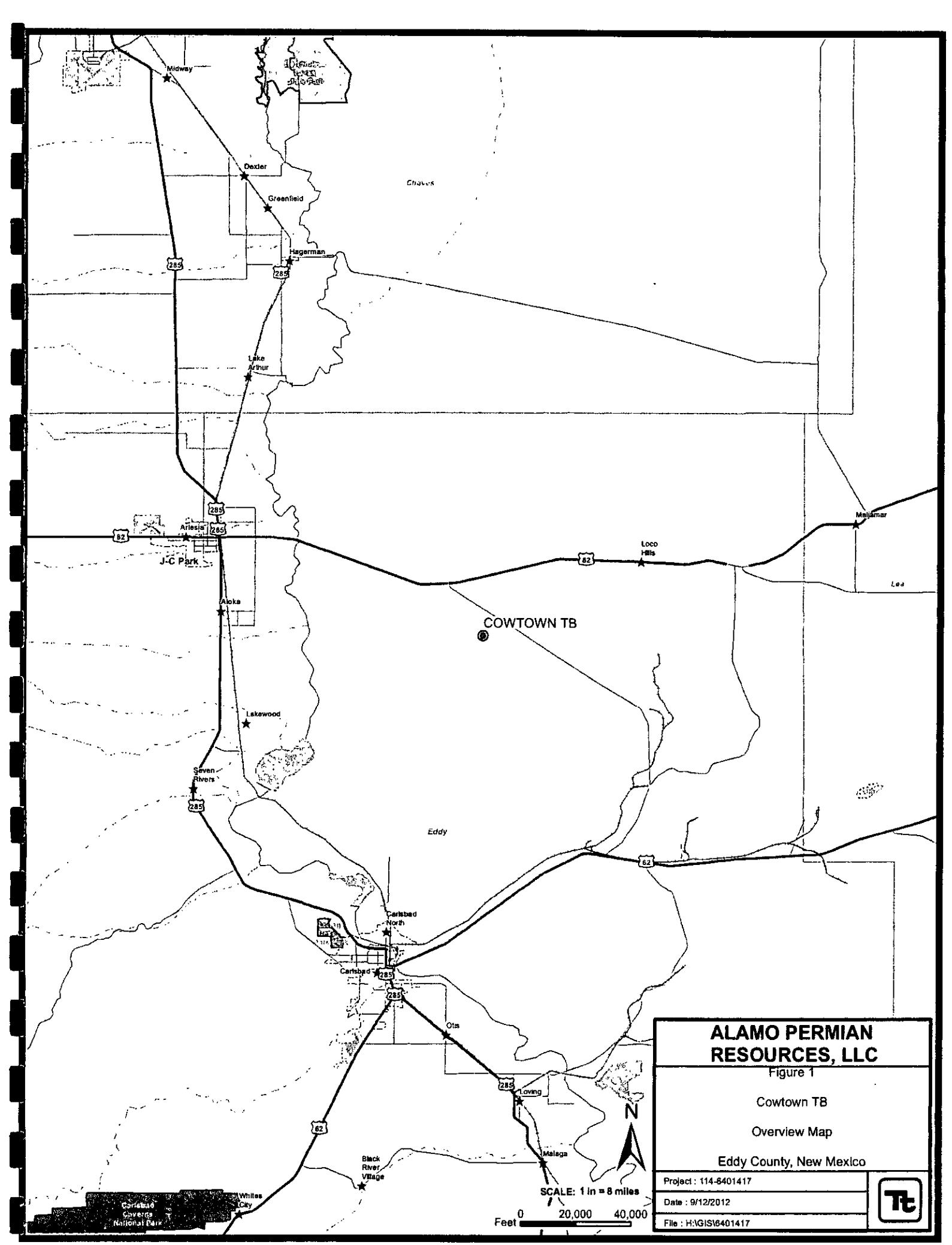
TETRA TECH

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

Respectfully submitted,
TETRA TECH

James F. Kennedy
Sr. Staff Professional

cc: Helms Oil – Michael Stewart
Helms Oil – Hollie Lamb



ALAMO PERMIAN RESOURCES, LLC

Figure 1

Cowtown TB

Overview Map

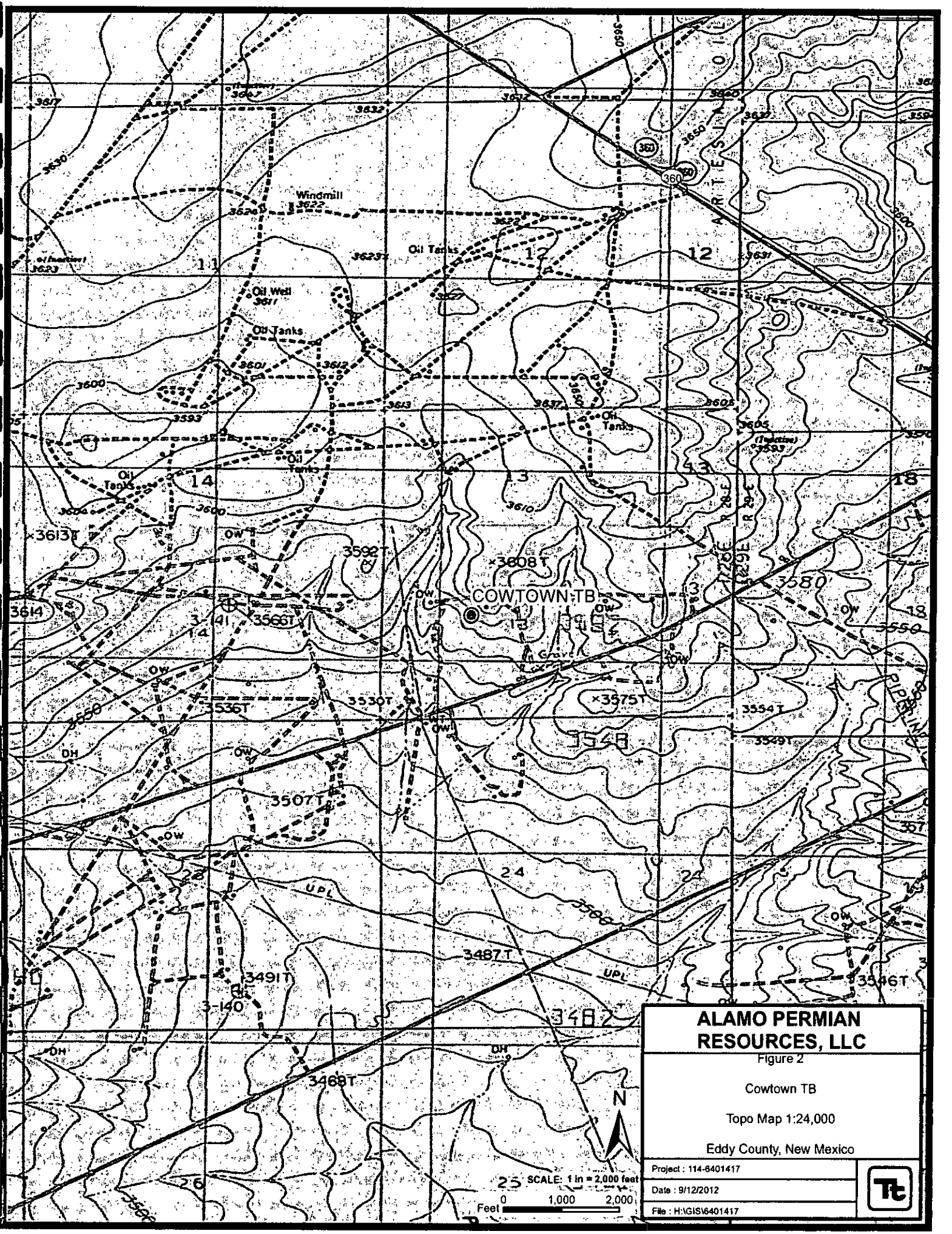
Eddy County, New Mexico

Project : 114-6401417

Date : 9/12/2012

File : H:\GIS\6401417

Drawn By: Isabel Mazzolajo



ALAMO PERMIAN RESOURCES, LLC

Figure 2

Cowtown TB

Topo Map 1:24,000

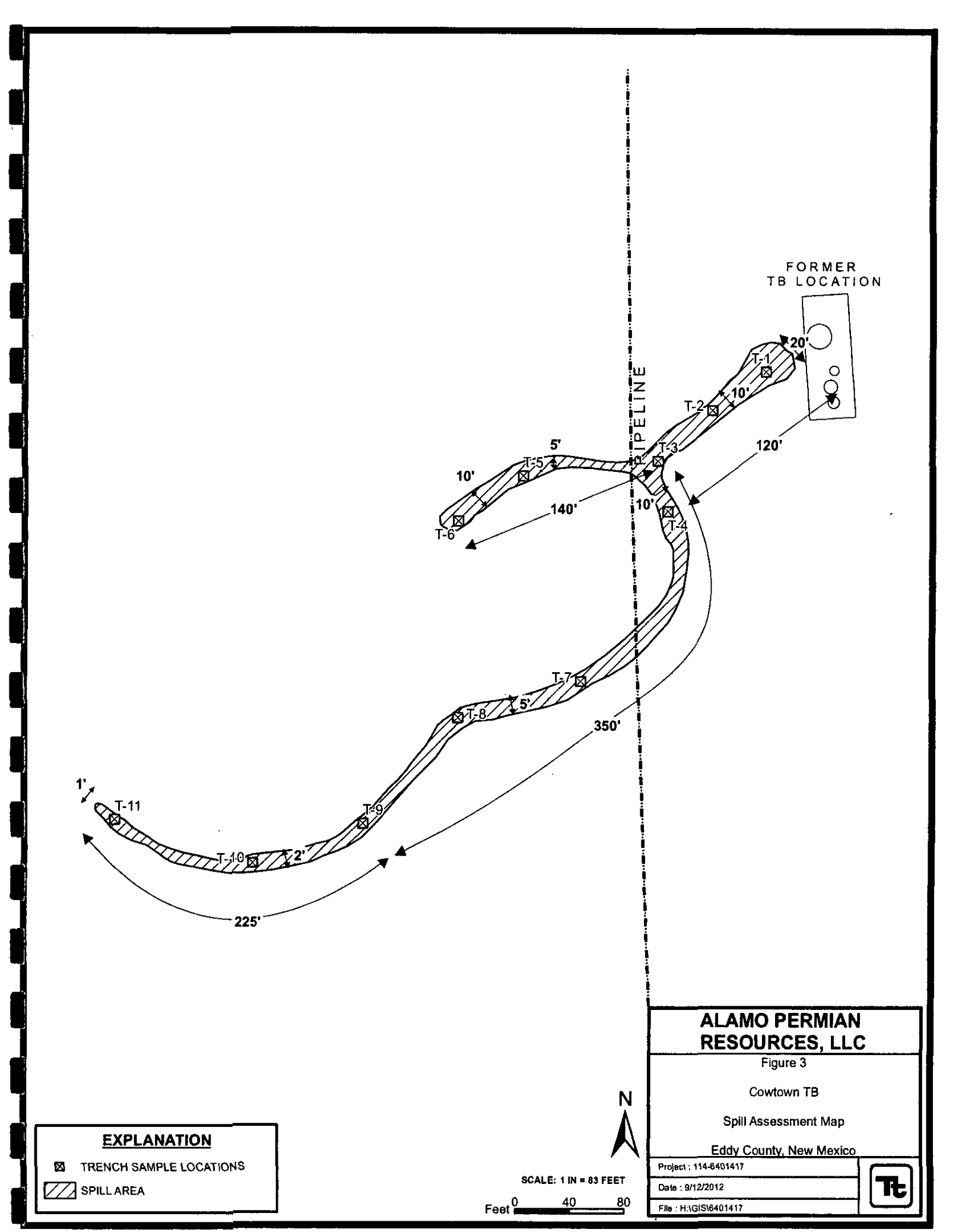
Eddy County, New Mexico

Project : 114-6401417

Date : 9/12/2012

File : H:\GIS\6401417

Drawn By: Isabel Maenciaya



EXPLANATION

- ⊠ TRENCH SAMPLE LOCATIONS
- SPILL AREA

ALAMO PERMIAN RESOURCES, LLC

Figure 3

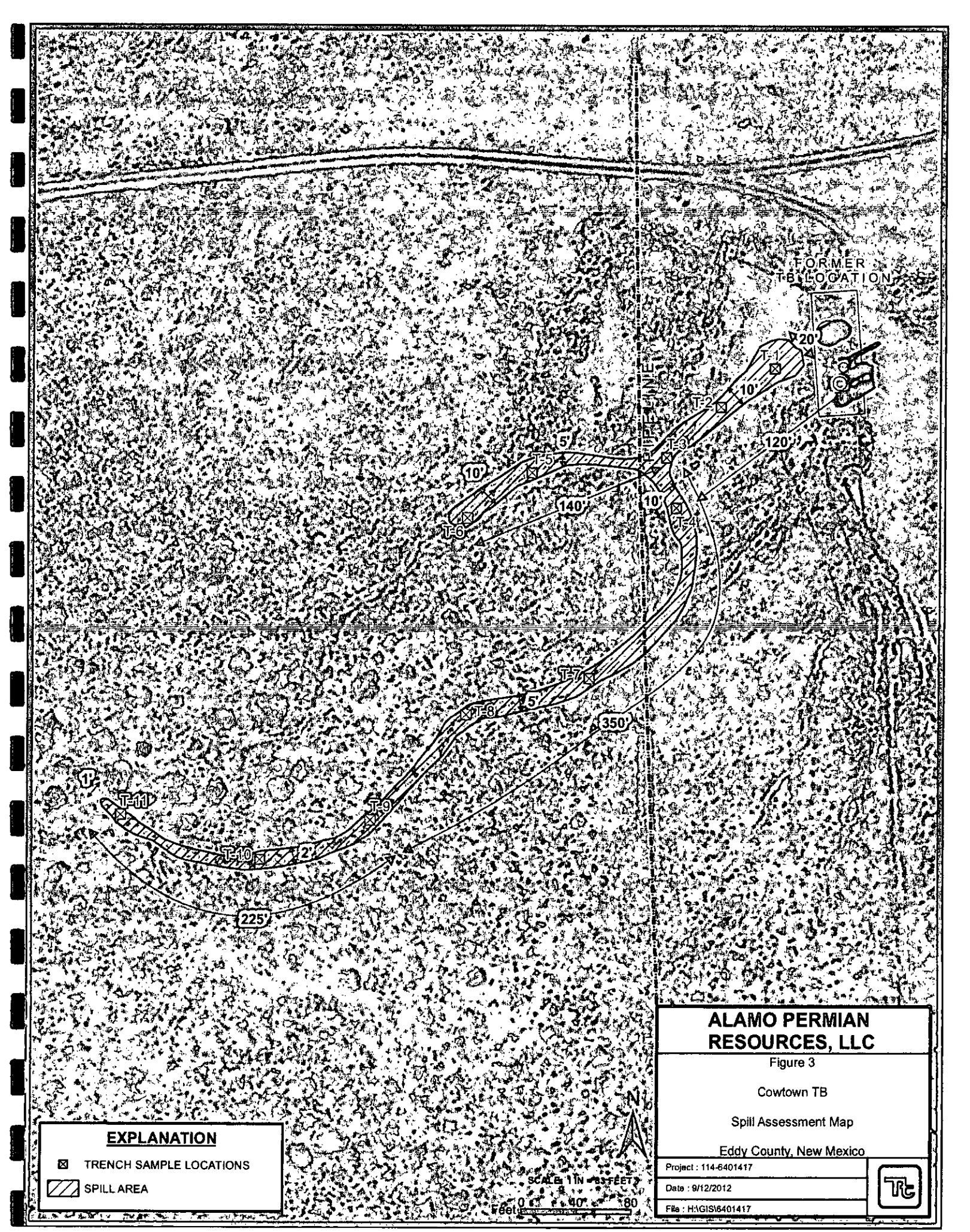
Cowtown TB

Spill Assessment Map

Eddy County, New Mexico

Project : 114-6401417	
Date : 9/12/2012	
File : H:\GIS\6401417	

Drawn By: Isabel Manmolejo



EXPLANATION

- ⊠ TRENCH SAMPLE LOCATIONS
- SPILL AREA

SCALE: 1 IN = 80 FEET

ALAMO PERMIAN RESOURCES, LLC

Figure 3

Cowtown TB

Spill Assessment Map

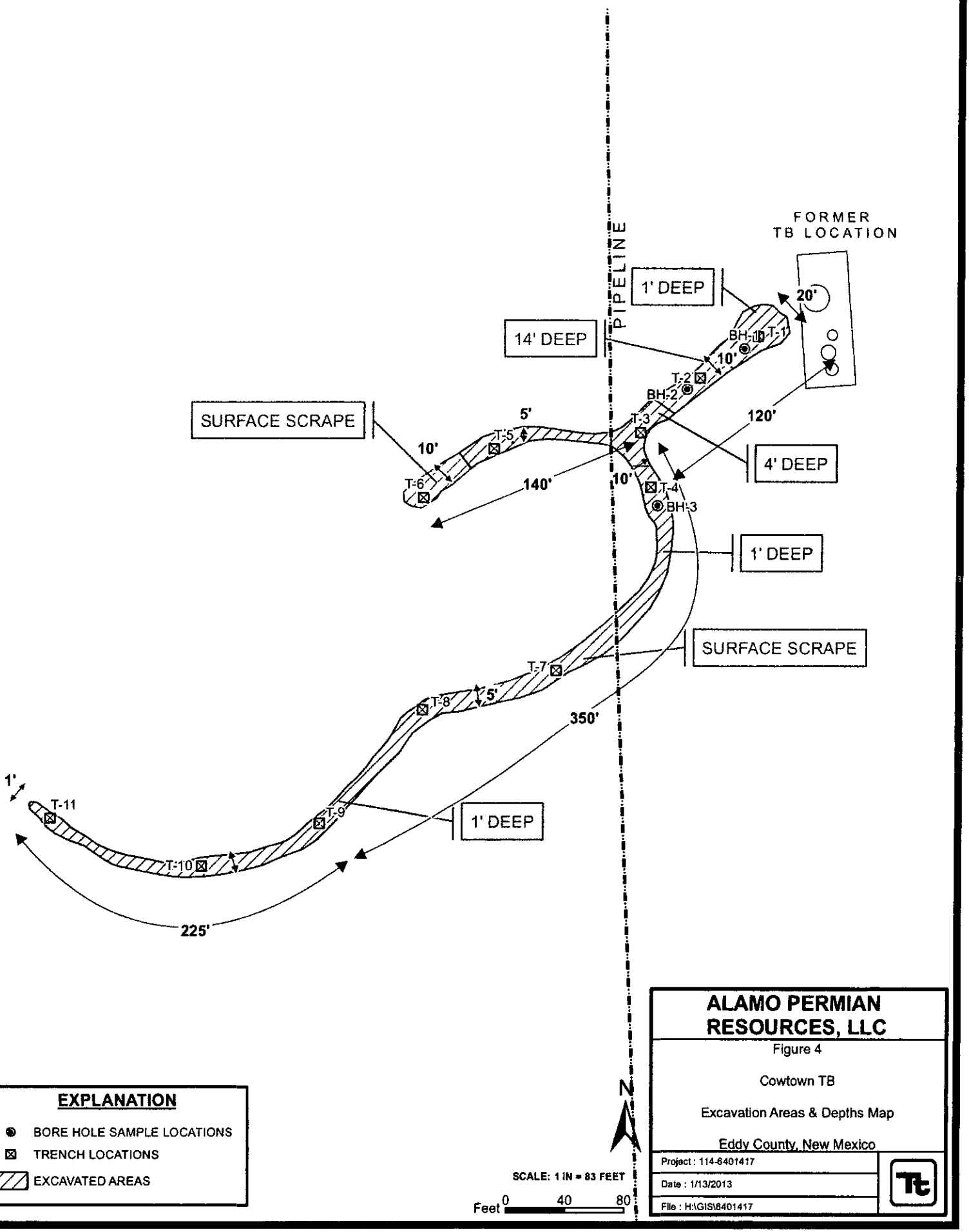
Eddy County, New Mexico

Project : 114-6401417

Date : 9/12/2012

File : H:\GIS\6401417

Drawn By: Isabel Maamolejo



EXPLANATION

- BORE HOLE SAMPLE LOCATIONS
- TRENCH LOCATIONS
- EXCAVATED AREAS

ALAMO PERMIAN RESOURCES, LLC

Figure 4

Cowtown TB

Excavation Areas & Depths Map

Eddy County, New Mexico

Project : 114-6401417

Date : 1/13/2013

File : H:\GIS\6401417

Drawn By: Isabel Maimolejo

Tables

Table 1
Alamo Permian
Cowtown Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
T-1	8/21/2012	0-1	X		115	9,500	9,615	<0.200	<0.200	<0.200	0.293	0.293	4,390
	"	2	X		<4.00	<50.0	<50.0	-	-	-	-	-	728
	"	4	X		-	-	-	-	-	-	-	-	620
	"	6	X		-	-	-	-	-	-	-	-	694
	"	8	X		-	-	-	-	-	-	-	-	2,080
	"	10	X		-	-	-	-	-	-	-	-	2,930
BH-1	2/21/2013	0-1	X										6,160
	"	4-5	X		-	-	-	-	-	-	-	-	407
	"	9-10	X		-	-	-	-	-	-	-	-	633
	"	14-15	X		-	-	-	-	-	-	-	-	684
	"	19-20	X		-	-	-	-	-	-	-	-	962
	"	24-25	X		-	-	-	-	-	-	-	-	972
	"	29-30	X		-	-	-	-	-	-	-	-	466

Table 1
Alamo Permian
Cowtown Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
T-2	8/21/2012	0-1	X		1,360	33,300	34,660	3.88	25.0	18.6	47.9	95.4	7,270
	"	2	X		40.9	2,240	2,281	<0.0400	<0.0400	0.0477	0.110	0.158	3,700
	"	4	X										3,130
	"	6	X										3,840
	"	8	X										3,190
	"	10	X										3,810
	"	12	X										2,880
BH-2	2/21/2013	0-1	X										1,430
	"	4-5	X										2,990
	"	9-10	X										2,680
Liner, 14' below surface	"	14-15	X										4,570
	"	19-20	X		-	-	-	-	-	-	-	-	1,990
	"	24-25	X		-	-	-	-	-	-	-	-	2,600
	"	29-30	X		-	-	-	-	-	-	-	-	1,090
	"	34-35	X		-	-	-	-	-	-	-	-	568
	"	39-40	X		-	-	-	-	-	-	-	-	372
T-3	8/21/2012	0-1	X		233	18,800	19,033	<0.200	<0.200	0.917	2.01	2.93	1,350
	"	2	X		<4.00	<50.0	<50.0						1,750
	"	4	X										1,520
	"	6	X		-	-	-	-	-	-	-	-	868
	"	8	X		-	-	-	-	-	-	-	-	412
	"	10	X		-	-	-	-	-	-	-	-	228
	"	12	X		-	-	-	-	-	-	-	-	456

Table 1
Alamo Permian
Cowtown Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
T-4	8/21/2012	0-1	X		251	15,100	**15,351**	<0.200	<0.200	0.469	1.99	2.46	1,550
	"	2	X		<4.00	<50.0	<50.0	-	-	-	-	-	828
	"	4	X		-	-	-	-	-	-	-	-	2,100
	"	6	X		-	-	-	-	-	-	-	-	1,480
BH-3	2/21/2013	0-1	X		-	-	-	-	-	-	-	-	4,900
	"	4-5	X		-	-	-	-	-	-	-	-	986
	"	9-10	X		-	-	-	-	-	-	-	-	1,490
	"	14-15	X		-	-	-	-	-	-	-	-	1,350
	"	19-20	X		-	-	-	-	-	-	-	-	780
	"	24-25	X		-	-	-	-	-	-	-	-	267
T-5	8/21/2012	0-1	X		486	23,600	**24,086**	<0.200	0.347	4.35	9.25	13.9	131
	"	2	X		<4.00	<50.0	<50.0	-	-	-	-	-	248
	"	4	X		-	-	-	-	-	-	-	-	282
	"	6	X		-	-	-	-	-	-	-	-	200
	"	8	X		-	-	-	-	-	-	-	-	633
T-6	8/22/2012	0-1	X		155	1,900	2,055	<0.100	0.119	0.301	0.716	1.14	68.2
	"	2	X		-	-	-	-	-	-	-	-	717
	"	4	X		-	-	-	-	-	-	-	-	926
	"	6	X		-	-	-	-	-	-	-	-	629
	"	8	X		-	-	-	-	-	-	-	-	722
	"	10	X		-	-	-	-	-	-	-	-	697

Table 1
Alamo Permian
Cowtown Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
T-7	8/22/2012	0-1	X		32.5	1,110	1,143	<0.0200	<0.0200	0.0394	0.296	0.335	53.6
	"	2	X		-	-	-	-	-	-	-	-	1,110
	"	4	X		-	-	-	-	-	-	-	-	405
	"	6	X		-	-	-	-	-	-	-	-	585
	"	8	X		-	-	-	-	-	-	-	-	97.5
	"	10	X		-	-	-	-	-	-	-	-	64.5
T-8	8/22/2012	0-1	X		746	15,800	**16,546**	<0.100	3.68	12.0	26.7	42.4	<20.0
	"	2	X		75.9	1,240	1,316	-	-	-	-	-	476
	"	4	X		-	-	-	-	-	-	-	-	739
	"	6	X		-	-	-	-	-	-	-	-	550
	"	8	X		-	-	-	-	-	-	-	-	139
	"	10	X		-	-	-	-	-	-	-	-	74.4
	"	12	X		-	-	-	-	-	-	-	-	29.8
T-9	8/22/2012	0-1	X		530	10,200	**10,730**	0.172	1.33	3.01	9.12	13.6	<20.0
	"	2	X		332	1,250	1,582	-	-	-	-	-	679
	"	4	X		-	-	-	-	-	-	-	-	2,030
	"	6	X		-	-	-	-	-	-	-	-	487
	"	8	X		-	-	-	-	-	-	-	-	278
	"	10	X		-	-	-	-	-	-	-	-	248

Table 1
Alamo Permian
Cowtown Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
T-10	8/22/2012	0-1	X		1,170	18,600	**19,770**	<0.200	11.8	23.8	41.8	77.4	34.1
	"	2	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	633
	"	4	X		-	-	-	-	-	-	-	-	813
T-11	8/22/2012	0-1	X		618	24,100	**24,718**	<0.200	0.291	1.20	4.28	5.77	82.8
	"	2	X		116	215	331	-	-	-	-	-	214
	"	4	X		-	-	-	-	-	-	-	-	409

Proposed Liner

(-) Not Analyzed

T-1 Backhoe Trenches

Proposed Excavation Depths

Photos

PHOTOGRAPHIC DOCUMENTATION
Alamo Permian Resources, LLC
Cowtown Tank Battery
Eddy County, New Mexico

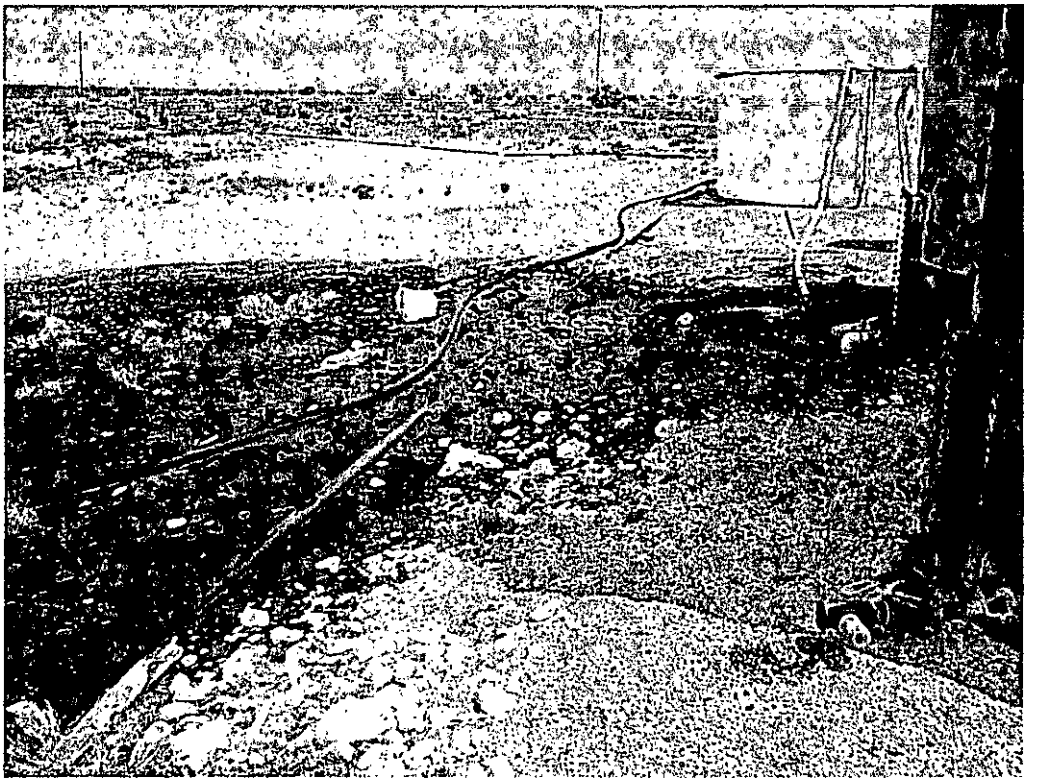


Photo 1. View of the release area behind tanks.

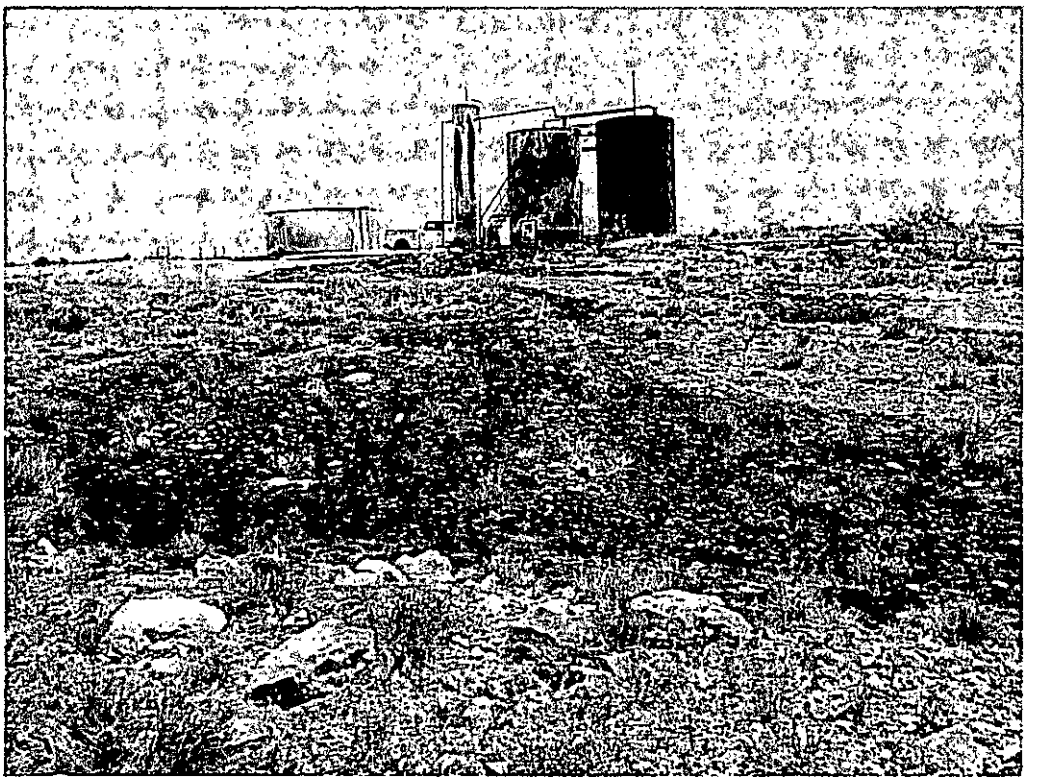


Photo 2. View of the spill path from midway down the hill behind tanks.

PHOTOGRAPHIC DOCUMENTATION
Alamo Permian Resources, LLC
Cowtown Tank Battery
Eddy County, New Mexico

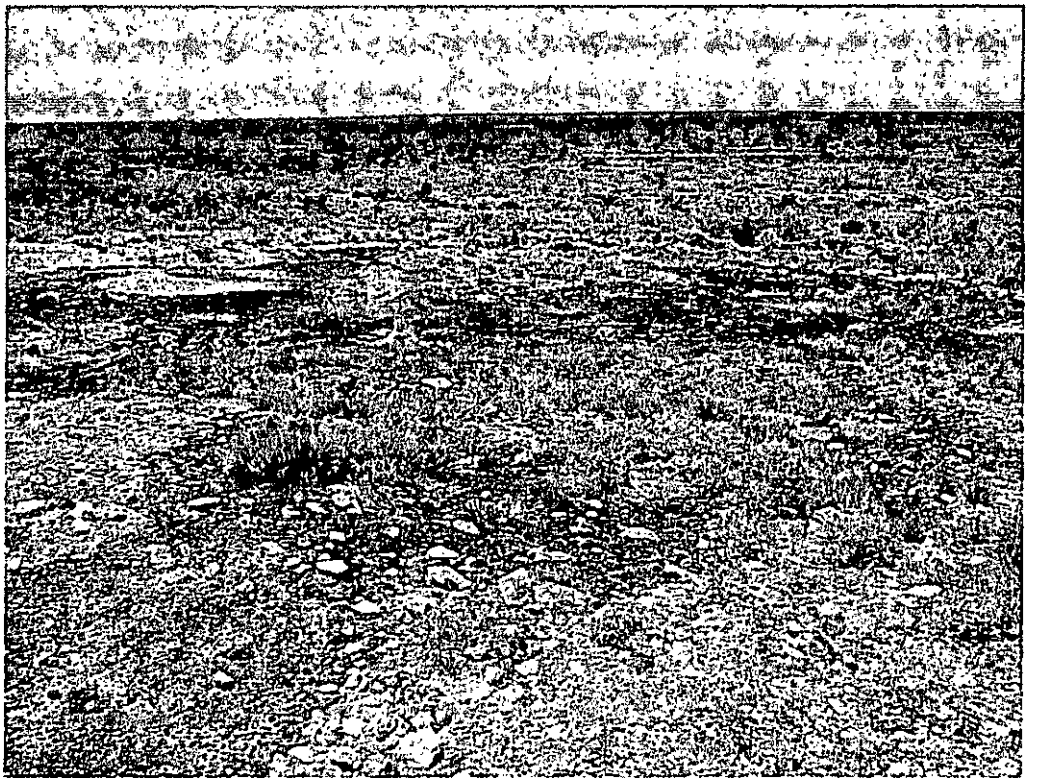


Photo 3. View of the spill path looking down hill from behind tanks.

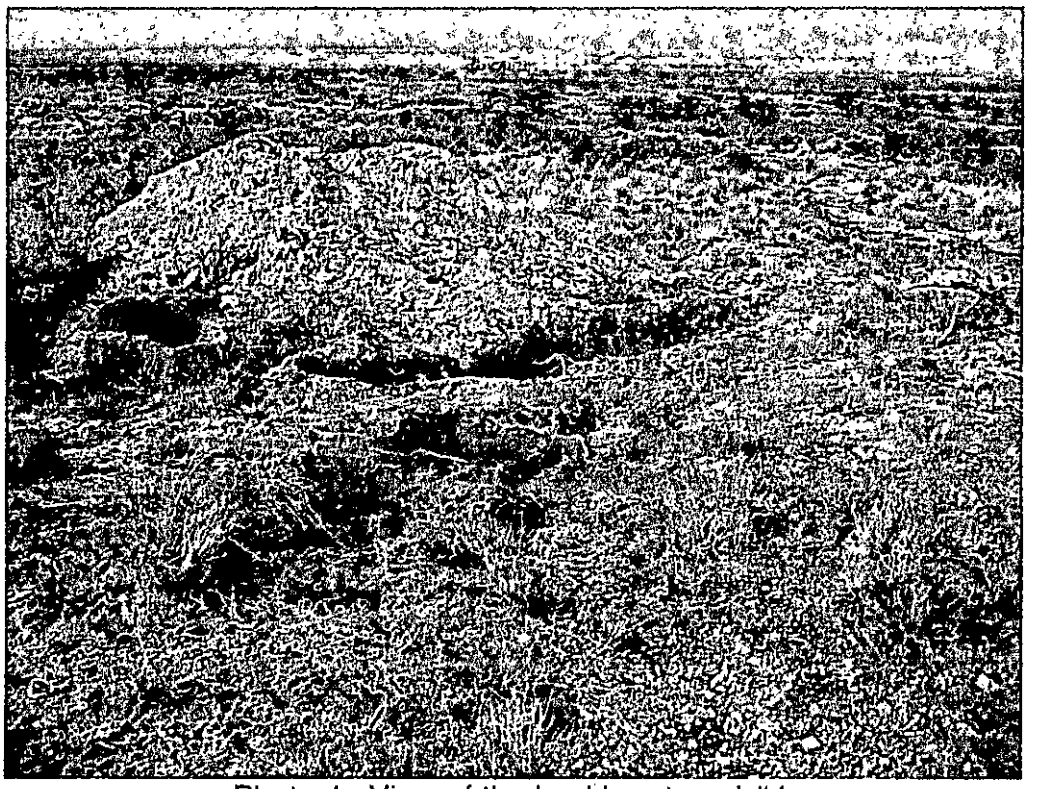


Photo 4. View of the backhoe trench#4.

PHOTOGRAPHIC DOCUMENTATION
Alamo Permian Resources, LLC
Cowtown Tank Battery
Eddy County, New Mexico

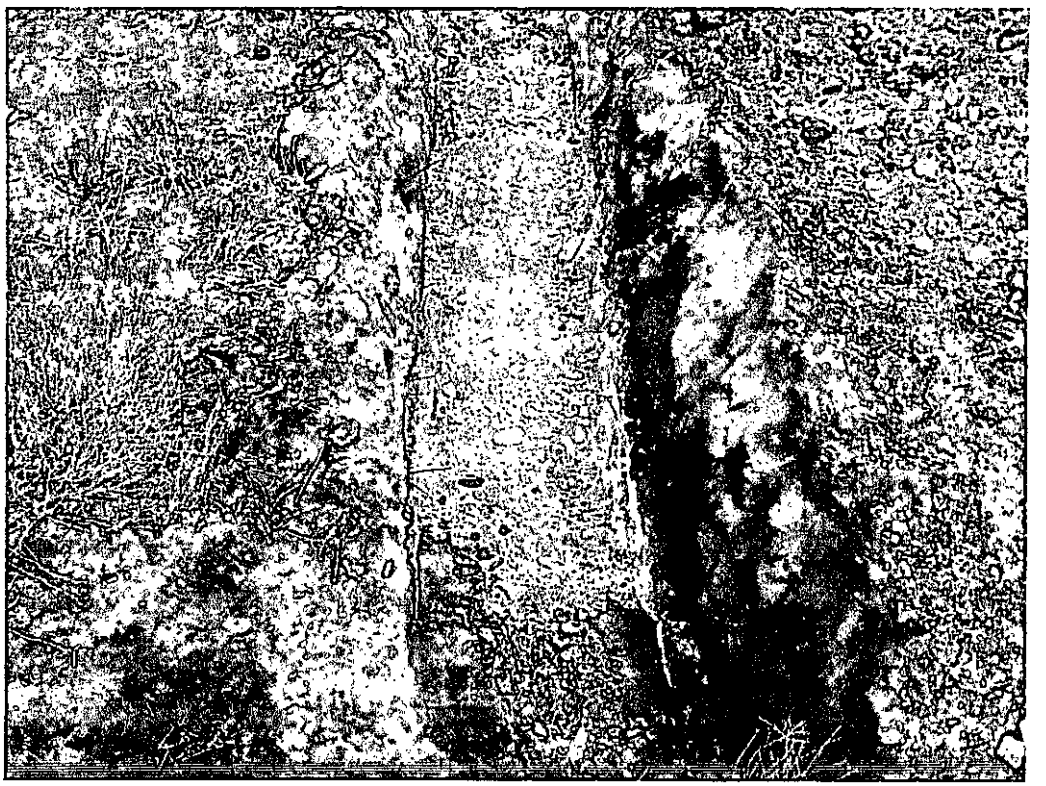


Photo 5. View of the backhoe trench #5.

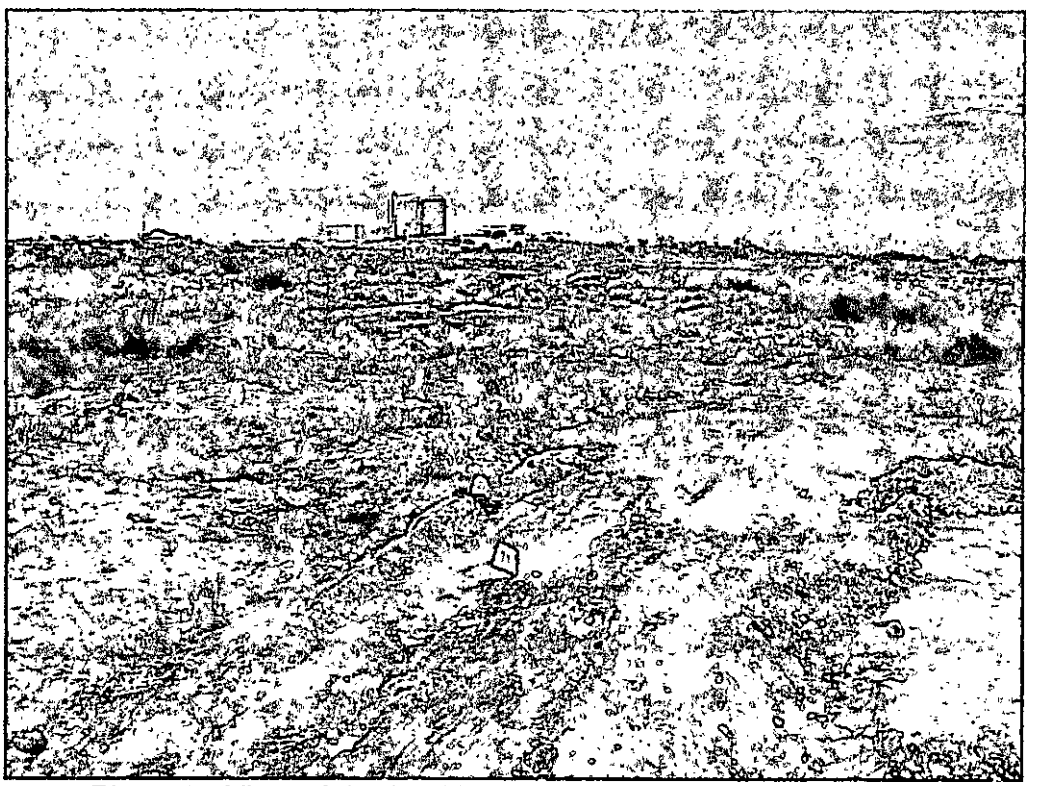


Photo 6. View of the backhoe trench locations T-7, T-8, T-9.

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

274841 **OPERATOR** ☒ Initial Report ☐ Final Report

Name of Company ALAMO PERMIAN RESOUCES, LLC	Contact STEVEN MASTIN
Address 415 W. WALL ST. SUITE 500	Telephone No. 432 557 5847
Facility Name COWTOWN Ut 101	Facility Type BATTERY

Surface Owner STATE	Mineral Owner STATE	API No. 30-015-01843

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	13	18S	28E	1986	S	1932	W	EDDY

Latitude 32.7464136

Longitude -104.1321674

NATURE OF RELEASE

Type of Release: OIL	Volume of Release: 97 BBLS	Volume Recovered: 0
Source of Release: OIL TANK	Date and Hour of Occurrence: APRIL 4, 2012 4:00 A.M	Date and Hour of Discovery APRIL 4, 2012
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? STEVEN MASTIN	
By Whom? RICKY RODRIGUEZ, FIELD SUPERVISOR	Date and Hour APR 4, 2012 8:00 A.M.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

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APR 6 2012
NMOCD ARTESIA

Describe Cause of Problem and Remedial Action Taken.*

Cause of problem: Hole developed in oil tank. Not remedial action taken as there was no standing oil remaining.

Describe Area Affected and Cleanup Action Taken.*

There was approximately 97 bbls of oil released. The spill traveled downhill approximately 300 yards in two separate areas approximately 5 feet wide. Clean up action: TBD per an environmental assessment and agreement with current NMOCD procedures and regulations.

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: Carie Stoker

Printed Name: CARIE STOKER

Title: REGULATORY/ PRODUCTION TECH

E-mail Address: cstoker@helmsoil.com

Date: 04/04/2012 Phone: 432 664 7659

OIL CONSERVATION DIVISION

Signed By Mike Bratcher

Approved by Environmental Specialist:

Approval Date: APR 20 2012 Expiration Date:

Conditions of Approval: Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN: 5/20/2012

Attached ☐

2RP-1099

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
Alamo - Cowtown Tank Battery
Eddy County, New Mexico

17 South 27 East

6	5 **30**	4	3	2	1
7 **14**	8	9	10	11 **54** **50**	12
18 **111**	17 **90**	16 **175**	15	14	13
19	20	21	22	23 **40**	24
30	29	28	27	26	25
31	32 **140**	33	34	35	36

17 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 **79**	23	24
30	29	28	27	26	25
31	32	33	34	35 **258**	36

17 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 **80**	23	24
30	29 **210** **208'**	28	27	26	25
31	32	33	34	35 153	36

18 South 27 East

6	5	4	3	2	1
7	8	9	10 **50**	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28 **100**	27	26	25
31 **65**	32	33	34	35	36

18 South 28 East

6	5	4 **108**	3	2	1
7 **49**	8 **69**	9	10	11	12
18	17	16	15	14	13 Site
19	20	21 **226**	22	23	24
49	29	28	27	26	25
31	32	33	34	35 **65**	36

18 South 29 East

6	5	4	3	2	1
7	8	9	10 **95**	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 27 East

6	5 **20**	4	3	2	1
7	8 **50**	9	10	11	12
18	17	16 **18**	15	14 **82** **107**	13 **60**
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 **246** **265**	10	11	12
18 **91**	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** **101**
19	20 **62**	21	22	23	24
30	29	28	27	26	25
31	32	33	34 62 **60**	35 121 **110**	36 **115**

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 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location

Appendix C

Summary Report

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

Report Date: November 9, 2012

Work Order: 12082608

Project Location: Eddy Co., NM
Project Name: Alamo/Cowtown Tank Battery
Project Number: 114-6401417

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
307751	T-1 (0-1')	soil	2012-08-21	00:00	2012-08-21
307752	T-1 (2')	soil	2012-08-21	00:00	2012-08-21
307753	T-1 (4')	soil	2012-08-21	00:00	2012-08-21
307754	T-1 (6')	soil	2012-08-21	00:00	2012-08-21
307755	T-1 (8')	soil	2012-08-21	00:00	2012-08-21
307756	T-1 (10')	soil	2012-08-21	00:00	2012-08-21
307757	T-2 (0-1')	soil	2012-08-21	00:00	2012-08-21
307758	T-2 (2')	soil	2012-08-21	00:00	2012-08-21
307759	T-2 (4')	soil	2012-08-21	00:00	2012-08-21
307760	T-2 (6')	soil	2012-08-21	00:00	2012-08-21
307761	T-2 (8')	soil	2012-08-21	00:00	2012-08-21
307762	T-2 (10')	soil	2012-08-21	00:00	2012-08-21
307763	T-2 (12')	soil	2012-08-21	00:00	2012-08-21
307764	T-3 (0-1')	soil	2012-08-21	00:00	2012-08-21
307765	T-3 (2')	soil	2012-08-21	00:00	2012-08-21
307766	T-3 (4')	soil	2012-08-21	00:00	2012-08-21
307767	T-3 (6')	soil	2012-08-21	00:00	2012-08-21
307768	T-3 (8')	soil	2012-08-21	00:00	2012-08-21
307769	T-3 (10')	soil	2012-08-21	00:00	2012-08-21
307770	T-3 (12')	soil	2012-08-21	00:00	2012-08-21
307771	T-4 (0-1')	soil	2012-08-21	00:00	2012-08-21
307772	T-4 (2')	soil	2012-08-21	00:00	2012-08-21
307773	T-4 (4')	soil	2012-08-21	00:00	2012-08-21
307774	T-4 (6')	soil	2012-08-21	00:00	2012-08-21
307775	T-5 (0-1')	soil	2012-08-21	00:00	2012-08-21
307776	T-5 (2')	soil	2012-08-21	00:00	2012-08-21
307777	T-5 (4')	soil	2012-08-21	00:00	2012-08-21
307778	T-5 (6')	soil	2012-08-21	00:00	2012-08-21
307779	T-5 (8')	soil	2012-08-21	00:00	2012-08-21
307780	T-6 (0-1')	soil	2012-08-22	00:00	2012-08-21

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
307781	T-6 (2')	soil	2012-08-22	00:00	2012-08-21
307782	T-6 (4')	soil	2012-08-22	00:00	2012-08-21
307783	T-6 (6')	soil	2012-08-22	00:00	2012-08-21
307784	T-6 (8')	soil	2012-08-22	00:00	2012-08-21
307785	T-6 (10')	soil	2012-08-22	00:00	2012-08-21
307786	T-7 (0-1')	soil	2012-08-22	00:00	2012-08-21
307787	T-7 (2')	soil	2012-08-22	00:00	2012-08-21
307788	T-7 (4')	soil	2012-08-22	00:00	2012-08-21
307789	T-7 (6')	soil	2012-08-22	00:00	2012-08-21
307790	T-7 (8')	soil	2012-08-22	00:00	2012-08-21
307791	T-7 (10')	soil	2012-08-22	00:00	2012-08-21
307792	T-8 (0-1')	soil	2012-08-22	00:00	2012-08-21
307793	T-8 (2')	soil	2012-08-22	00:00	2012-08-21
307794	T-8 (4')	soil	2012-08-22	00:00	2012-08-21
307795	T-8 (6')	soil	2012-08-22	00:00	2012-08-21
307796	T-8 (8')	soil	2012-08-22	00:00	2012-08-21
307797	T-8 (10')	soil	2012-08-22	00:00	2012-08-21
307798	T-8 (12')	soil	2012-08-22	00:00	2012-08-21
307799	T-9 (0-1')	soil	2012-08-22	00:00	2012-08-21
307800	T-9 (2')	soil	2012-08-22	00:00	2012-08-21
307801	T-9 (4')	soil	2012-08-22	00:00	2012-08-21
307802	T-9 (6')	soil	2012-08-22	00:00	2012-08-21
307803	T-9 (8')	soil	2012-08-22	00:00	2012-08-21
307804	T-9 (10')	soil	2012-08-22	00:00	2012-08-21
307805	T-10 (0-1')	soil	2012-08-22	00:00	2012-08-21
307806	T-10 (2')	soil	2012-08-22	00:00	2012-08-21
307807	T-10 (4')	soil	2012-08-22	00:00	2012-08-21
307808	T-11 (0-1')	soil	2012-08-22	00:00	2012-08-21
307809	T-11 (2')	soil	2012-08-22	00:00	2012-08-21
307810	T-11 (4')	soil	2012-08-22	00:00	2012-08-21

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
307751 - T-1 (0-1')	<0.200 [1]	<0.200	<0.200	**0.293**	**9500**	**115** Qs
307752 - T-1 (2')					<50.0	<4.00 Qr
307757 - T-2 (0-1')	**3.88**	**25.0**	**18.6**	**47.9**	**33300**	**1360** Qs
307758 - T-2 (2')	<0.0400 [2]	<0.0400	**0.0477**	**0.110**	**2240**	**40.9** Qr
307764 - T-3 (0-1')	<0.200 [3]	<0.200	**0.917**	**2.01**	**18800**	**233** Qs
307765 - T-3 (2')					<50.0	<4.00 Qr
307771 - T-4 (0-1')	<0.200 [4]	<0.200	**0.469**	**1.99**	**15100**	**251** Qs
307772 - T-4 (2')					<50.0	<4.00 Qr
307775 - T-5 (0-1')	<0.200 [5]	**0.347**	**4.35**	**9.25**	**23600**	**486** Qs
307776 - T-5 (2')					<50.0	<4.00 Qr

continued ...

[1]Dilution due to excessive hydrocarbons.
[2]Sample dilution due to hydrocarbons.
[3]Dilution due to excessive hydrocarbons.
[4]Dilution due to excessive hydrocarbons.
[5]Dilution due to excessive hydrocarbons.

... continued

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
307780 - T-6 (0-1')	<0.100 [6]	0.119	0.301	0.716	1900	155 Qs
307786 - T-7 (0-1')	<0.0200	<0.0200	0.0394	0.296	1110	32.5 Qs
307792 - T-8 (0-1')	<0.100 [7]	3.68	12.0	26.7	15800	746 Qr
307793 - T-8 (2')					1240	75.9 Qr
307799 - T-9 (0-1')	0.172	1.33	3.01	9.12	10200	530 Qs
307800 - T-9 (2')					1250	332 Qs
307805 - T-10 (0-1')	<0.200 [8]	11.8	23.8	41.8	18600	1170 Qs
307806 - T-10 (2')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00 Qr
307808 - T-11 (0-1')	<0.200 [9]	0.291	1.20	4.28	24100	618 Qs
307809 - T-11 (2')					215	116 Qs

Sample: 307751 - T-1 (0-1')

Param	Flag	Result	Units	RL
Chloride		4390	mg/Kg	4

Sample: 307752 - T-1 (2')

Param	Flag	Result	Units	RL
Chloride		728	mg/Kg	4

Sample: 307753 - T-1 (4')

Param	Flag	Result	Units	RL
Chloride		620	mg/Kg	4

Sample: 307754 - T-1 (6')

Param	Flag	Result	Units	RL
Chloride		694	mg/Kg	4

Sample: 307755 - T-1 (8')

Param	Flag	Result	Units	RL
Chloride		2080	mg/Kg	4

[6]Dilution due to excessive hydrocarbons.
[7]Sample dilution due to hydrocarbons.
[8]Dilution due to excessive hydrocarbons.
[9]Dilution due to excessive hydrocarbons.

Sample: 307756 - T-1 (10')

Param	Flag	Result	Units	RL
Chloride		**2930**	mg/Kg	4

Sample: 307757 - T-2 (0-1')

Param	Flag	Result	Units	RL
Chloride		**7270**	mg/Kg	4

Sample: 307758 - T-2 (2')

Param	Flag	Result	Units	RL
Chloride		**3700**	mg/Kg	4

Sample: 307759 - T-2 (4')

Param	Flag	Result	Units	RL
Chloride		**3130**	mg/Kg	4

Sample: 307760 - T-2 (6')

Param	Flag	Result	Units	RL
Chloride		**3840**	mg/Kg	4

Sample: 307761 - T-2 (8')

Param	Flag	Result	Units	RL
Chloride		**3190**	mg/Kg	4

Sample: 307762 - T-2 (10')

Param	Flag	Result	Units	RL
Chloride		**3810**	mg/Kg	4

Sample: 307763 - T-2 (12')

Param	Flag	Result	Units	RL
Chloride		**2880**	mg/Kg	4

Sample: 307764 - T-3 (0-1')

Param	Flag	Result	Units	RL
Chloride		**1350**	mg/Kg	4

Sample: 307765 - T-3 (2')

Param	Flag	Result	Units	RL
Chloride		**1750**	mg/Kg	4

Sample: 307766 - T-3 (4')

Param	Flag	Result	Units	RL
Chloride		**1520**	mg/Kg	4

Sample: 307767 - T-3 (6')

Param	Flag	Result	Units	RL
Chloride		**868**	mg/Kg	4

Sample: 307768 - T-3 (8')

Param	Flag	Result	Units	RL
Chloride		**412**	mg/Kg	4

Sample: 307769 - T-3 (10')

Param	Flag	Result	Units	RL
Chloride		**228**	mg/Kg	4

Sample: 307770 - T-3 (12')

Param	Flag	Result	Units	RL
Chloride		**456**	mg/Kg	4

Sample: 307771 - T-4 (0-1')

Param	Flag	Result	Units	RL
Chloride		**1550**	mg/Kg	4

Sample: 307772 - T-4 (2')

Param	Flag	Result	Units	RL
Chloride		**828**	mg/Kg	4

Sample: 307773 - T-4 (4')

Param	Flag	Result	Units	RL
Chloride		**2100**	mg/Kg	4

Sample: 307774 - T-4 (6')

Param	Flag	Result	Units	RL
Chloride		**1480**	mg/Kg	4

Sample: 307775 - T-5 (0-1')

Param	Flag	Result	Units	RL
Chloride		**131**	mg/Kg	4

Sample: 307776 - T-5 (2')

Param	Flag	Result	Units	RL
Chloride		**248**	mg/Kg	4

Sample: 307777 - T-5 (4')

Param	Flag	Result	Units	RL
Chloride		**282**	mg/Kg	4

Sample: 307778 - T-5 (6')

Param	Flag	Result	Units	RL
Chloride		**200**	mg/Kg	4

Sample: 307779 - T-5 (8')

Param	Flag	Result	Units	RL
Chloride		**633**	mg/Kg	4

Sample: 307780 - T-6 (0-1')

Param	Flag	Result	Units	RL
Chloride		**68.2**	mg/Kg	4

Sample: 307781 - T-6 (2')

Param	Flag	Result	Units	RL
Chloride		**717**	mg/Kg	4

Sample: 307782 - T-6 (4')

Param	Flag	Result	Units	RL
Chloride		**926**	mg/Kg	4

Sample: 307783 - T-6 (6')

Param	Flag	Result	Units	RL
Chloride		**629**	mg/Kg	4

Sample: 307784 - T-6 (8')

Param	Flag	Result	Units	RL
Chloride		**722**	mg/Kg	4

Sample: 307785 - T-6 (10')

Param	Flag	Result	Units	RL
Chloride		**697**	mg/Kg	4

Sample: 307786 - T-7 (0-1')

Param	Flag	Result	Units	RL
Chloride		**53.6**	mg/Kg	4

Sample: 307787 - T-7 (2')

Param	Flag	Result	Units	RL
Chloride		**1110**	mg/Kg	4

Sample: 307788 - T-7 (4')

Param	Flag	Result	Units	RL
Chloride		**405**	mg/Kg	4

Sample: 307789 - T-7 (6')

Param	Flag	Result	Units	RL
Chloride		**585**	mg/Kg	4

Sample: 307790 - T-7 (8')

Param	Flag	Result	Units	RL
Chloride		**97.5**	mg/Kg	4

Sample: 307791 - T-7 (10')

Param	Flag	Result	Units	RL
Chloride		**64.5**	mg/Kg	4

Sample: 307792 - T-8 (0-1')

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

Sample: 307793 - T-8 (2')

Param	Flag	Result	Units	RL
Chloride		**476**	mg/Kg	4

Sample: 307794 - T-8 (4')

Param	Flag	Result	Units	RL
Chloride		**739**	mg/Kg	4

Sample: 307795 - T-8 (6')

Param	Flag	Result	Units	RL
Chloride		**550**	mg/Kg	4

Sample: 307796 - T-8 (8')

Param	Flag	Result	Units	RL
Chloride		**139**	mg/Kg	4

Sample: 307797 - T-8 (10')

Param	Flag	Result	Units	RL
Chloride		**74.4**	mg/Kg	4

Sample: 307798 - T-8 (12')

Param	Flag	Result	Units	RL
Chloride		**29.8**	mg/Kg	4

Sample: 307799 - T-9 (0-1')

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

Sample: 307800 - T-9 (2')

Param	Flag	Result	Units	RL
Chloride		**679**	mg/Kg	4

Sample: 307801 - T-9 (4')

Param	Flag	Result	Units	RL
Chloride		**2030**	mg/Kg	4

Sample: 307802 - T-9 (6')

Param	Flag	Result	Units	RL
Chloride		**487**	mg/Kg	4

Sample: 307803 - T-9 (8')

Param	Flag	Result	Units	RL
Chloride		**278**	mg/Kg	4

Sample: 307804 - T-9 (10')

Param	Flag	Result	Units	RL
Chloride		**248**	mg/Kg	4

Sample: 307805 - T-10 (0-1')

Param	Flag	Result	Units	RL
Chloride		**34.1**	mg/Kg	4

Sample: 307806 - T-10 (2')

Param	Flag	Result	Units	RL
Chloride		**633**	mg/Kg	4

Sample: 307807 - T-10 (4')

Param	Flag	Result	Units	RL
Chloride		**813**	mg/Kg	4

Sample: 307808 - T-11 (0-1')

Param	Flag	Result	Units	RL
Chloride		**82.8**	mg/Kg	4

Sample: 307809 - T-11 (2')

Param	Flag	Result	Units	RL
Chloride		**214**	mg/Kg	4

Sample: 307810 - T-11 (4')

Param	Flag	Result	Units	RL
Chloride		**409**	mg/Kg	4

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
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
(Corrected Report)

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

Report Date: November 9, 2012

Work Order: 12082608

Project Location: Eddy Co., NM
Project Name: Alamo/Cowtown Tank Battery
Project Number: 114-6401417

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
307751	T-1 (0-1')	soil	2012-08-21	00:00	2012-08-21
307752	T-1 (2')	soil	2012-08-21	00:00	2012-08-21
307753	T-1 (4')	soil	2012-08-21	00:00	2012-08-21
307754	T-1 (6')	soil	2012-08-21	00:00	2012-08-21
307755	T-1 (8')	soil	2012-08-21	00:00	2012-08-21
307756	T-1 (10')	soil	2012-08-21	00:00	2012-08-21
307757	T-2 (0-1')	soil	2012-08-21	00:00	2012-08-21
307758	T-2 (2')	soil	2012-08-21	00:00	2012-08-21
307759	T-2 (4')	soil	2012-08-21	00:00	2012-08-21
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307762	T-2 (10')	soil	2012-08-21	00:00	2012-08-21
307763	T-2 (12')	soil	2012-08-21	00:00	2012-08-21
307764	T-3 (0-1')	soil	2012-08-21	00:00	2012-08-21
307765	T-3 (2')	soil	2012-08-21	00:00	2012-08-21
307766	T-3 (4')	soil	2012-08-21	00:00	2012-08-21

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
307767	T-3 (6')	soil	2012-08-21	00:00	2012-08-21
307768	T-3 (8')	soil	2012-08-21	00:00	2012-08-21
307769	T-3 (10')	soil	2012-08-21	00:00	2012-08-21
307770	T-3 (12')	soil	2012-08-21	00:00	2012-08-21
307771	T-4 (0-1')	soil	2012-08-21	00:00	2012-08-21
307772	T-4 (2')	soil	2012-08-21	00:00	2012-08-21
307773	T-4 (4')	soil	2012-08-21	00:00	2012-08-21
307774	T-4 (6')	soil	2012-08-21	00:00	2012-08-21
307775	T-5 (0-1')	soil	2012-08-21	00:00	2012-08-21
307776	T-5 (2')	soil	2012-08-21	00:00	2012-08-21
307777	T-5 (4')	soil	2012-08-21	00:00	2012-08-21
307778	T-5 (6')	soil	2012-08-21	00:00	2012-08-21
307779	T-5 (8')	soil	2012-08-21	00:00	2012-08-21
307780	T-6 (0-1')	soil	2012-08-22	00:00	2012-08-21
307781	T-6 (2')	soil	2012-08-22	00:00	2012-08-21
307782	T-6 (4')	soil	2012-08-22	00:00	2012-08-21
307783	T-6 (6')	soil	2012-08-22	00:00	2012-08-21
307784	T-6 (8')	soil	2012-08-22	00:00	2012-08-21
307785	T-6 (10')	soil	2012-08-22	00:00	2012-08-21
307786	T-7 (0-1')	soil	2012-08-22	00:00	2012-08-21
307787	T-7 (2')	soil	2012-08-22	00:00	2012-08-21
307788	T-7 (4')	soil	2012-08-22	00:00	2012-08-21
307789	T-7 (6')	soil	2012-08-22	00:00	2012-08-21
307790	T-7 (8')	soil	2012-08-22	00:00	2012-08-21
307791	T-7 (10')	soil	2012-08-22	00:00	2012-08-21
307792	T-8 (0-1')	soil	2012-08-22	00:00	2012-08-21
307793	T-8 (2')	soil	2012-08-22	00:00	2012-08-21
307794	T-8 (4')	soil	2012-08-22	00:00	2012-08-21
307795	T-8 (6')	soil	2012-08-22	00:00	2012-08-21
307796	T-8 (8')	soil	2012-08-22	00:00	2012-08-21
307797	T-8 (10')	soil	2012-08-22	00:00	2012-08-21
307798	T-8 (12')	soil	2012-08-22	00:00	2012-08-21
307799	T-9 (0-1')	soil	2012-08-22	00:00	2012-08-21
307800	T-9 (2')	soil	2012-08-22	00:00	2012-08-21
307801	T-9 (4')	soil	2012-08-22	00:00	2012-08-21
307802	T-9 (6')	soil	2012-08-22	00:00	2012-08-21
307803	T-9 (8')	soil	2012-08-22	00:00	2012-08-21
307804	T-9 (10')	soil	2012-08-22	00:00	2012-08-21
307805	T-10 (0-1')	soil	2012-08-22	00:00	2012-08-21
307806	T-10 (2')	soil	2012-08-22	00:00	2012-08-21
307807	T-10 (4')	soil	2012-08-22	00:00	2012-08-21
307808	T-11 (0-1')	soil	2012-08-22	00:00	2012-08-21
307809	T-11 (2')	soil	2012-08-22	00:00	2012-08-21
307810	T-11 (4')	soil	2012-08-22	00:00	2012-08-21

Notes

- **Work Order 12082608:** Tetra Tech

Report Corrections (Work Order 12082608)

- Added BTEX to sample 307806.

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

Michael Abel

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

Report Contents

Case Narrative

Samples for project Alamo/Cowtown Tank Battery were received by TraceAnalysis, Inc. on 2012-08-21 and assigned to work order 12082608. Samples for work order 12082608 were received intact at a temperature of 3.5 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	79947	2012-08-29 at 12:20	94344	2012-08-29 at 14:30
BTEX	S 8021B	79999	2012-08-30 at 07:22	94406	2012-08-30 at 07:22
Chloride (Titration)	SM 4500-Cl B	79925	2012-08-28 at 12:38	94380	2012-08-29 at 12:29
Chloride (Titration)	SM 4500-Cl B	79925	2012-08-28 at 12:38	94393	2012-08-29 at 15:15
Chloride (Titration)	SM 4500-Cl B	79925	2012-08-28 at 12:38	94394	2012-08-30 at 15:16
Chloride (Titration)	SM 4500-Cl B	79925	2012-08-28 at 12:38	94395	2012-08-30 at 15:17
Chloride (Titration)	SM 4500-Cl B	79925	2012-08-28 at 12:38	94396	2012-08-30 at 15:18
Chloride (Titration)	SM 4500-Cl B	79988	2012-08-30 at 10:20	94456	2012-08-31 at 10:06
TPH DRO - NEW	S 8015 D	79964	2012-08-29 at 11:00	94363	2012-08-29 at 16:00
TPH DRO - NEW	S 8015 D	80040	2012-08-31 at 16:30	94452	2012-08-31 at 16:51
TPH DRO - NEW	S 8015 D	80067	2012-09-05 at 12:04	94485	2012-09-05 at 12:11
TPH GRO	S 8015 D	79947	2012-08-29 at 12:20	94345	2012-08-28 at 14:20
TPH GRO	S 8015 D	79999	2012-08-30 at 07:22	94407	2012-08-30 at 07:22
TPH GRO	S 8015 D	80000	2012-08-30 at 07:22	94409	2012-08-30 at 07:22

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 12082608 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.

Analytical Report

Sample: 307751 - T-1 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.200	mg/Kg	10	0.0200
Toluene	U	1	<0.200	mg/Kg	10	0.0200
Ethylbenzene		1	<0.200	mg/Kg	10	0.0200
Xylene		1	**0.293**	mg/Kg	10	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	QSr	QSr	1.18	mg/Kg	10	2.00	59	70 - 130
4-Bromofluorobenzene (4-BFB)			2.23	mg/Kg	10	2.00	112	70 - 130

Sample: 307751 - T-1 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**4390**	mg/Kg	10	4.00

Sample: 307751 - T-1 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		1	**9500**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		826	mg/Kg	10	100	826	70 - 130

Sample: 307751 - T-1 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	**115**	mg/Kg	10	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.20	mg/Kg	10	2.00	60	70 - 130
4-Bromofluorobenzene (4-BFB)				2.48	mg/Kg	10	2.00	124	70 - 130

Sample: 307752 - T-1 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**728**	mg/Kg	5	4.00

Sample: 307752 - T-1 (2')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94452	Date Analyzed:	2012-08-31	Analyzed By:	DS
Prep Batch:	80040	Sample Preparation:	2012-08-31	Prepared By:	DS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			117	mg/Kg	1	100	117	70 - 130

Sample: 307752 - T-1 (2')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94407	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.13	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			2.19	mg/Kg	1	2.00	110	70 - 130

Sample: 307753 - T-1 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**620**	mg/Kg	10	4.00

Sample: 307754 - T-1 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

continued ...

sample 307754 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**694**	mg/Kg	5	4.00

Sample: 307755 - T-1 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

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

Sample: 307756 - T-1 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2930**	mg/Kg	10	4.00

Sample: 307757 - T-2 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	**3.88**	mg/Kg	20	0.0200
Toluene		1	**25.0**	mg/Kg	20	0.0200
Ethylbenzene		1	**18.6**	mg/Kg	20	0.0200
Xylene		1	**47.9**	mg/Kg	20	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.25	mg/Kg	20	2.00	62	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		11.8	mg/Kg	20	2.00	590	70 - 130

Sample: 307757 - T-2 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7270**	mg/Kg	10	4.00

Sample: 307757 - T-2 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**33300**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		1100	mg/Kg	10	100	1100	70 - 130

Sample: 307757 - T-2 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	**1360**	mg/Kg	20	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		11.1	mg/Kg	20	2.00	555	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		62.1	mg/Kg	20	2.00	3105	70 - 130

Sample: 307758 - T-2 (2')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94406	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [2]	U	1	<0.0400	mg/Kg	2	0.0200
Toluene	U	1	<0.0400	mg/Kg	2	0.0200
Ethylbenzene		1	**0.0477**	mg/Kg	2	0.0200
Xylene	B	1	**0.110**	mg/Kg	2	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	2	2.00	92	73.1 - 120
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	2	2.00	98	71.5 - 120

Sample: 307758 - T-2 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3700**	mg/Kg	10	4.00

Sample: 307758 - T-2 (2')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94452	Date Analyzed:	2012-08-31	Analyzed By:	DS
Prep Batch:	80040	Sample Preparation:	2012-08-31	Prepared By:	DS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**2240**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr Qsr		267	mg/Kg	5	100	267	70 - 130

Sample: 307758 - T-2 (2')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94407	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr	1	**40.9**	mg/Kg	2	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	2	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	2	2.00	104	70 - 130

Sample: 307759 - T-2 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3130**	mg/Kg	10	4.00

Sample: 307760 - T-2 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94380	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**3840**	mg/Kg	10	4.00

Sample: 307761 - T-2 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**3190**	mg/Kg	10	4.00

Sample: 307762 - T-2 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**3810**	mg/Kg	10	4.00

Sample: 307763 - T-2 (12')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2880**	mg/Kg	10	4.00

Sample: 307764 - T-3 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [3]	U	1	<0.200	mg/Kg	10	0.0200
Toluene	U	1	<0.200	mg/Kg	10	0.0200
Ethylbenzene		1	**0.917**	mg/Kg	10	0.0200
Xylene		1	**2.01**	mg/Kg	10	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.61	mg/Kg	10	2.00	80	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3.25	mg/Kg	10	2.00	162	70 - 130

Sample: 307764 - T-3 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1350**	mg/Kg	10	4.00

Sample: 307764 - T-3 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**18800**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		808	mg/Kg	10	100	808	70 - 130

Sample: 307764 - T-3 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	**233**	mg/Kg	10	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.15	mg/Kg	10	2.00	58	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		9.83	mg/Kg	10	2.00	492	70 - 130

Sample: 307765 - T-3 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1750**	mg/Kg	10	4.00

Sample: 307765 - T-3 (2')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94452	Date Analyzed:	2012-08-31	Analyzed By:	DS
Prep Batch:	80040	Sample Preparation:	2012-08-31	Prepared By:	DS

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

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q-07	Q-01		142	mg/Kg	1	100	142	70 - 130

Sample: 307765 - T-3 (2')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94407	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q-07,U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.05	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	70 - 130

Sample: 307766 - T-3 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1520**	mg/Kg	10	4.00

Sample: 307767 - T-3 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**868**	mg/Kg	5	4.00

Sample: 307768 - T-3 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**412**	mg/Kg	5	4.00

Sample: 307769 - T-3 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**228**	mg/Kg	5	4.00

Sample: 307770 - T-3 (12')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94393	Date Analyzed:	2012-08-29	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**456**	mg/Kg	5	4.00

Sample: 307771 - T-4 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.200	mg/Kg	10	0.0200
Toluene		1	<0.200	mg/Kg	10	0.0200
Ethylbenzene		1	**0.469**	mg/Kg	10	0.0200
Xylene		1	**1.99**	mg/Kg	10	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	1.22	mg/Kg	10	2.00	61	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	2.72	mg/Kg	10	2.00	136	70 - 130

Sample: 307771 - T-4 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1550**	mg/Kg	10	4.00

Sample: 307771 - T-4 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		1	**15100**	mg/Kg	10	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	614	mg/Kg	10	100	614	70 - 130

Sample: 307771 - T-4 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	**251**	mg/Kg	10	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.20	mg/Kg	10	2.00	60	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		9.07	mg/Kg	10	2.00	454	70 - 130

Sample: 307772 - T-4 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**828**	mg/Kg	5	4.00

Sample: 307772 - T-4 (2')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94452	Date Analyzed:	2012-08-31	Analyzed By:	DS
Prep Batch:	80040	Sample Preparation:	2012-08-31	Prepared By:	DS

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

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		140	mg/Kg	1	100	140	70 - 130

Sample: 307772 - T-4 (2')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94407	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	70 - 130

Sample: 307773 - T-4 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2100	mg/Kg	5	4.00

Sample: 307774 - T-4 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1480	mg/Kg	5	4.00

Sample: 307775 - T-5 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene [5]	U	1	<0.200	mg/Kg	10	0.0200
Toluene		1	**0.347**	mg/Kg	10	0.0200
Ethylbenzene		1	**4.35**	mg/Kg	10	0.0200
Xylene		1	**9.25**	mg/Kg	10	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.36	mg/Kg	10	2.00	68	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		2.62	mg/Kg	10	2.00	131	70 - 130

Sample: 307775 - T-5 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**131**	mg/Kg	5	4.00

Sample: 307775 - T-5 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		1	**23600**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		857	mg/Kg	10	100	857	70 - 130

Sample: 307775 - T-5 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO	Q8	1	**486**		mg/Kg	10	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q81	Q81		1.06	mg/Kg	10	2.00	53	70 - 130
4-Bromofluorobenzene (4-BFB)	Q81	Q81		16.0	mg/Kg	10	2.00	800	70 - 130

Sample: 307776 - T-5 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Chloride			**248**		mg/Kg	5	4.00

Sample: 307776 - T-5 (2')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94452	Date Analyzed:	2012-08-31	Analyzed By:	DS
Prep Batch:	80040	Sample Preparation:	2012-08-31	Prepared By:	DS

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

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q81	Q81		141	mg/Kg	1	100	141	70 - 130

Sample: 307776 - T-5 (2')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94407	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)			2.13	mg/Kg	1	2.00	106	70 - 130

Sample: 307777 - T-5 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**282**	mg/Kg	5	4.00

Sample: 307778 - T-5 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**200**	mg/Kg	5	4.00

Sample: 307779 - T-5 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**633**	mg/Kg	5	4.00

Sample: 307780 - T-6 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U		<0.100	mg/Kg	5	0.0200
Toluene			**0.119**	mg/Kg	5	0.0200
Ethylbenzene			**0.301**	mg/Kg	5	0.0200
Xylene			**0.716**	mg/Kg	5	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.32	mg/Kg	5	2.00	66	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		2.67	mg/Kg	5	2.00	134	70 - 130

Sample: 307780 - T-6 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94394	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**68.2**	mg/Kg	5	4.00

Sample: 307780 - T-6 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**1900**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		156	mg/Kg	5	100	156	70 - 130

Sample: 307780 - T-6 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qsr	1	**155**	mg/Kg	5	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.11	mg/Kg	5	2.00	56	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		3.07	mg/Kg	5	2.00	154	70 - 130

Sample: 307781 - T-6 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**717**	mg/Kg	5	4.00

Sample: 307782 - T-6 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**926**	mg/Kg	5	4.00

Sample: 307783 - T-6 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**629**	mg/Kg	5	4.00

Sample: 307784 - T-6 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**722**	mg/Kg	5	4.00

Sample: 307785 - T-6 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**697**		mg/Kg	5	4.00

Sample: 307786 - T-7 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene	U	1	<0.0200		mg/Kg	1	0.0200
Toluene		1	<0.0200		mg/Kg	1	0.0200
Ethylbenzene		1	**0.0394**		mg/Kg	1	0.0200
Xylene		1	**0.296**		mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.58	mg/Kg	1	2.00	79	70 - 130
4-Bromofluorobenzene (4-BFB)			1.99	mg/Kg	1	2.00	100	70 - 130

Sample: 307786 - T-7 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**53.6**		mg/Kg	5	4.00

Sample: 307786 - T-7 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	1110	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	156	mg/Kg	1	100	156	70 - 130

Sample: 307786 - T-7 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qn	1	32.5	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.53	mg/Kg	1	2.00	76	70 - 130
4-Bromofluorobenzene (4-BFB)			2.13	mg/Kg	1	2.00	106	70 - 130

Sample: 307787 - T-7 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1110	mg/Kg	10	4.00

Sample: 307788 - T-7 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**405**	mg/Kg	5	4.00

Sample: 307789 - T-7 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**585**	mg/Kg	5	4.00

Sample: 307790 - T-7 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94395	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**97.5**	mg/Kg	5	4.00

Sample: 307791 - T-7 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**64.5**	mg/Kg	5	4.00

Sample: 307792 - T-8 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94406	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.100	mg/Kg	5	0.0200
Toluene		1	**3.68**	mg/Kg	5	0.0200
Ethylbenzene		1	**12.0**	mg/Kg	5	0.0200
Xylene		1	**26.7**	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.62	mg/Kg	5	2.00	81	73.1 - 120
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	12.6	mg/Kg	5	2.00	630	71.5 - 120

Sample: 307792 - T-8 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

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

Sample: 307792 - T-8 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		1	**15800**	mg/Kg	10	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	507	mg/Kg	10	100	507	70 - 130

Sample: 307792 - T-8 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94407	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	Qr	1	**746**	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.57	mg/Kg	5	2.00	78	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	34.2	mg/Kg	5	2.00	1710	70 - 130

Sample: 307793 - T-8 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**476**	mg/Kg	5	4.00

Sample: 307793 - T-8 (2')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94452	Date Analyzed:	2012-08-31	Analyzed By:	DS
Prep Batch:	80040	Sample Preparation:	2012-08-31	Prepared By:	DS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		1	**1240**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	142	mg/Kg	5	100	142	70 - 130

Sample: 307793 - T-8 (2')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94407	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr	1	**75.9**	mg/Kg	1	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		0.241	mg/Kg	1	2.00	12	70 - 130
4-Bromofluorobenzene (4-BFB)				2.21	mg/Kg	1	2.00	110	70 - 130

Sample: 307794 - T-8 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**739**	mg/Kg	5	4.00

Sample: 307795 - T-8 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**550**	mg/Kg	5	4.00

Sample: 307796 - T-8 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**139**	mg/Kg	5	4.00

Sample: 307797 - T-8 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**74.4**	mg/Kg	5	4.00

Sample: 307798 - T-8 (12')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**29.8**	mg/Kg	5	4.00

Sample: 307799 - T-9 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene		1	**0.172**		mg/Kg	5	0.0200
Toluene		1	**1.33**		mg/Kg	5	0.0200
Ethylbenzene		1	**3.01**		mg/Kg	5	0.0200
Xylene		1	**9.12**		mg/Kg	5	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.32	mg/Kg	5	2.00	66	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		8.30	mg/Kg	5	2.00	415	70 - 130

Sample: 307799 - T-9 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

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

Sample: 307799 - T-9 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
DRO		1	**10200**		mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		501	mg/Kg	10	100	501	70 - 130

Sample: 307799 - T-9 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	530	mg/Kg	5	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		0.821	mg/Kg	5	2.00	41	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		40.1	mg/Kg	5	2.00	2005	70 - 130

Sample: 307800 - T-9 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94396	Date Analyzed:	2012-08-30	Analyzed By:	AR
Prep Batch:	79925	Sample Preparation:	2012-08-28	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			679	mg/Kg	5	4.00

Sample: 307800 - T-9 (2')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94452	Date Analyzed:	2012-08-31	Analyzed By:	DS
Prep Batch:	80040	Sample Preparation:	2012-08-31	Prepared By:	DS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	1250	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		161	mg/Kg	5	100	161	70 - 130

Sample: 307800 - T-9 (2')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94409	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	80000	Sample Preparation:	2012-08-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	**332**	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.60	mg/Kg	5	2.00	80	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	7.63	mg/Kg	5	2.00	382	70 - 130

Sample: 307801 - T-9 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2030**	mg/Kg	10	4.00

Sample: 307802 - T-9 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**487**	mg/Kg	5	4.00

Sample: 307803 - T-9 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

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

Sample: 307804 - T-9 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**248**	mg/Kg	5	4.00

Sample: 307805 - T-10 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	[8]	1	<0.200	mg/Kg	10	0.0200
Toluene		1	**11.8**	mg/Kg	10	0.0200
Ethylbenzene		1	**23.8**	mg/Kg	10	0.0200
Xylene		1	**41.8**	mg/Kg	10	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qar	Qar	1.31	mg/Kg	10	2.00	66	70 - 130
4-Bromofluorobenzene (4-BFB)	Qar	Qar	14.9	mg/Kg	10	2.00	745	70 - 130

Sample: 307805 - T-10 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**34.1**	mg/Kg	5	4.00

Sample: 307805 - T-10 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**18600**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		686	mg/Kg	10	100	686	70 - 130

Sample: 307805 - T-10 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	**1170**	mg/Kg	10	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		0.882	mg/Kg	10	2.00	44	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		68.4	mg/Kg	10	2.00	3420	70 - 130

Sample: 307806 - T-10 (2')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94406	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	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)			2.02	mg/Kg	1	2.00	101	73.1 - 120
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	71.5 - 120

Sample: 307806 - T-10 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			633	mg/Kg	5	4.00

Sample: 307806 - T-10 (2')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94452	Date Analyzed:	2012-08-31	Analyzed By:	DS
Prep Batch:	80040	Sample Preparation:	2012-08-31	Prepared By:	DS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			113	mg/Kg	1	100	113	70 - 130

Sample: 307806 - T-10 (2')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94407	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	79999	Sample Preparation:	2012-08-30	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.20	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			2.26	mg/Kg	1	2.00	113	70 - 130

Sample: 307807 - T-10 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**813**	mg/Kg	5	4.00

Sample: 307808 - T-11 (0-1')

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.200	mg/Kg	10	0.0200
Toluene		1	**0.291**	mg/Kg	10	0.0200
Ethylbenzene		1	**1.20**	mg/Kg	10	0.0200
Xylene		1	**4.28**	mg/Kg	10	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.32	mg/Kg	10	2.00	66	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		6.34	mg/Kg	10	2.00	317	70 - 130

Sample: 307808 - T-11 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**82.8**	mg/Kg	5	4.00

Sample: 307808 - T-11 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	Sample Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**24100**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		837	mg/Kg	10	100	837	70 - 130

Sample: 307808 - T-11 (0-1')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	Sample Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	**618**	mg/Kg	10	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		1.04	mg/Kg	10	2.00	52	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		11.2	mg/Kg	10	2.00	560	70 - 130

Sample: 307809 - T-11 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**214**	mg/Kg	5	4.00

Sample: 307809 - T-11 (2')

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	94485	Date Analyzed:	2012-09-05	Analyzed By:	CM
Prep Batch:	80067	Sample Preparation:	2012-09-04	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**215**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			136	mg/Kg	1	100	136	59.9 - 168

Sample: 307809 - T-11 (2')

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	94409	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	80000	Sample Preparation:	2012-08-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	**116**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.92	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsi	Qsr	3.72	mg/Kg	1	2.00	186	70 - 130

Sample: 307810 - T-11 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	Sample Preparation:	2012-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**409**	mg/Kg	5	4.00

Method Blanks

Method Blank (1) QC Batch: 94344

QC Batch:	94344	Date Analyzed:	2012-08-29	Analyzed By:	JS
Prep Batch:	79947	QC Preparation:	2012-08-29	Prepared By:	JS

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)			1.71	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			1.66	mg/Kg	1	2.00	83	70 - 130

Method Blank (1) QC Batch: 94345

QC Batch:	94345	Date Analyzed:	2012-08-28	Analyzed By:	JS
Prep Batch:	79947	QC Preparation:	2012-08-29	Prepared By:	JS

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.359	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Method Blank (1) QC Batch: 94363

QC Batch:	94363	Date Analyzed:	2012-08-29	Analyzed By:	DS
Prep Batch:	79964	QC Preparation:	2012-08-29	Prepared By:	DS

Parameter	Flag	Cert	MDL Result	Units	RL
DRO			<15.3	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			122	mg/Kg	1	100	122	70 - 130

Method Blank (1) QC Batch: 94380

QC Batch: 94380 | Date Analyzed: 2012-08-29 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

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

Method Blank (1) QC Batch: 94393

QC Batch: 94393 | Date Analyzed: 2012-08-29 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

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

Method Blank (1) QC Batch: 94394

QC Batch: 94394 | Date Analyzed: 2012-08-30 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

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

Method Blank (1) QC Batch: 94395

QC Batch: 94395 | Date Analyzed: 2012-08-30 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

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

Method Blank (1) QC Batch: 94396

QC Batch: 94396 | Date Analyzed: 2012-08-30 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

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

Method Blank (1) QC Batch: 94406

QC Batch: 94406 | Date Analyzed: 2012-08-30 | Analyzed By: MT
Prep Batch: 79999 | QC Preparation: 2012-08-30 | 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	0.00920	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.66	mg/Kg	1	2.00	83	73.1 - 120
4-Bromofluorobenzene (4-BFB)			1.64	mg/Kg	1	2.00	82	71.5 - 120

Method Blank (1) QC Batch: 94407

QC Batch: 94407 | Date Analyzed: 2012-08-30 | Analyzed By: MT
Prep Batch: 79999 | QC Preparation: 2012-08-30 | Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.359	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.92	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Method Blank (1) QC Batch: 94409

QC Batch:	94409	Date Analyzed:	2012-08-30	Analyzed By:	MT
Prep Batch:	80000	QC Preparation:	2012-08-30	Prepared By:	MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.359	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Method Blank (1) QC Batch: 94452

QC Batch:	94452	Date Analyzed:	2012-08-31	Analyzed By:	DS
Prep Batch:	80040	QC Preparation:	2012-08-31	Prepared By:	DS

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<15.3	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			116	mg/Kg	1	100	116	70 - 130

Method Blank (1) QC Batch: 94456

QC Batch:	94456	Date Analyzed:	2012-08-31	Analyzed By:	AR
Prep Batch:	79988	QC Preparation:	2012-08-30	Prepared By:	AR

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

Method Blank (1) QC Batch: 94485

QC Batch:	94485	Date Analyzed:	2012-09-05	Analyzed By:	CM
Prep Batch:	80067	QC Preparation:	2012-09-05	Prepared By:	CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO			17.2	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			113	mg/Kg	1	100	113	59.9 - 168

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 94344 | Date Analyzed: 2012-08-29 | Analyzed By: JS
Prep Batch: 79947 | QC Preparation: 2012-08-29 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.87	mg/Kg	1	2.00	<0.00365	94	75.4 - 120
Toluene		1	1.84	mg/Kg	1	2.00	<0.00816	92	74.9 - 120
Ethylbenzene		1	1.82	mg/Kg	1	2.00	<0.00560	91	78.1 - 120
Xylene		1	5.52	mg/Kg	1	6.00	<0.00460	92	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	1.88	mg/Kg	1	2.00	<0.00365	94	75.4 - 120	0	20
Toluene		1	1.87	mg/Kg	1	2.00	<0.00816	94	74.9 - 120	2	20
Ethylbenzene		1	1.86	mg/Kg	1	2.00	<0.00560	93	78.1 - 120	2	20
Xylene		1	5.64	mg/Kg	1	6.00	<0.00460	94	77.3 - 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)	1.72	1.74	mg/Kg	1	2.00	86	87	70 - 130
4-Bromofluorobenzene (4-BFB)	1.71	1.71	mg/Kg	1	2.00	86	86	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 94345 | Date Analyzed: 2012-08-28 | Analyzed By: JS
Prep Batch: 79947 | QC Preparation: 2012-08-29 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.7	mg/Kg	1	20.0	<0.359	88	68.9 - 120

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

continued ...

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	17.1	mg/Kg	1	20.0	<0.359	86	68.9 - 120	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)	1.62	1.49	mg/Kg	1	2.00	81	74	70 - 130
4-Bromofluorobenzene (4-BFB)	1.90	1.75	mg/Kg	1	2.00	95	88	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 94363 | Date Analyzed: 2012-08-29 | Analyzed By: DS
Prep Batch: 79964 | QC Preparation: 2012-08-29 | Prepared By: DS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	303	mg/Kg	1	250	<15.3	121	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
DRO		1	286	mg/Kg	1	250	<15.3	114	70 - 130	6	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	126	120	mg/Kg	1	100	126	120	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 94380 | Date Analyzed: 2012-08-29 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2550	mg/Kg	1	2500	<3.85	102	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			2470	mg/Kg	1	2500	<3.85	99	85 - 115	3	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: 94393 | Date Analyzed: 2012-08-29 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2670	mg/Kg	1	2500	<3.85	107	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			2570	mg/Kg	1	2500	<3.85	103	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: 94394 | Date Analyzed: 2012-08-30 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2560	mg/Kg	1	2500	<3.85	102	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			2660	mg/Kg	1	2500	<3.85	106	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: 94395 | Date Analyzed: 2012-08-30 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2540	mg/Kg	1	2500	<3.85	102	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			2720	mg/Kg	1	2500	<3.85	109	85 - 115	7	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: 94396 | Date Analyzed: 2012-08-30 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2850	mg/Kg	1	2500	<3.85	114	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			2750	mg/Kg	1	2500	<3.85	110	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: 94406 | Date Analyzed: 2012-08-30 | Analyzed By: MT
Prep Batch: 79999 | QC Preparation: 2012-08-30 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.78	mg/Kg	1	2.00	<0.00365	89	78.4 - 120
Toluene		1	1.82	mg/Kg	1	2.00	<0.00816	91	78.3 - 120
Ethylbenzene		1	1.80	mg/Kg	1	2.00	<0.00560	90	77.4 - 120

continued ...

control spikes continued ...

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Xylene		1	5.45	mg/Kg	1	6.00	0.0092	91	77 - 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	1.80	mg/Kg	1	2.00	<0.00365	90	78.4 - 120	1	20
Toluene		1	1.85	mg/Kg	1	2.00	<0.00816	92	78.3 - 120	2	20
Ethylbenzene		1	1.83	mg/Kg	1	2.00	<0.00560	92	77.4 - 120	2	20
Xylene		1	5.56	mg/Kg	1	6.00	0.0092	92	77 - 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)	1.66	1.65	mg/Kg	1	2.00	83	82	73.1 - 120
4-Bromofluorobenzene (4-BFB)	1.66	1.66	mg/Kg	1	2.00	83	83	71.5 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 94407 | Date Analyzed: 2012-08-30 | Analyzed By: MT
Prep Batch: 79999 | QC Preparation: 2012-08-30 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.7	mg/Kg	1	20.0	<0.359	84	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	16.2	mg/Kg	1	20.0	<0.359	81	68.9 - 120	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	1.62	mg/Kg	1	2.00	82	81	70 - 130
4-Bromofluorobenzene (4-BFB)	1.87	1.83	mg/Kg	1	2.00	94	92	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 94409 | Date Analyzed: 2012-08-30 | Analyzed By: MT
Prep Batch: 80000 | QC Preparation: 2012-08-30 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO			16.2	mg/Kg	1	20.0	<0.359	81	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			16.7	mg/Kg	1	20.0	<0.359	84	68.9 - 120	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)	1.57	1.76	mg/Kg	1	2.00	78	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.80	1.86	mg/Kg	1	2.00	90	93	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 94452 | Date Analyzed: 2012-08-31 | Analyzed By: DS
Prep Batch: 80040 | QC Preparation: 2012-08-31 | Prepared By: DS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO			288	mg/Kg	1	250	<15.3	115	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
DRO			309	mg/Kg	1	250	<15.3	124	70 - 130	7	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	113	125	mg/Kg	1	100	113	125	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 94456 | Date Analyzed: 2012-08-31 | Analyzed By: AR
Prep Batch: 79988 | QC Preparation: 2012-08-30 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2590	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			2690	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.

Laboratory Control Spike (LCS-1)

QC Batch: 94485 | Date Analyzed: 2012-09-05 | Analyzed By: CM
Prep Batch: 80067 | QC Preparation: 2012-09-05 | Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	230	mg/Kg	1	250	17.2	85	72.7 - 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
DRO		1	227	mg/Kg	1	250	17.2	84	72.7 - 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
n-Tricosane	115	115	mg/Kg	1	100	115	115	59.9 - 168

Matrix Spike (MS-1) Spiked Sample: 307134

QC Batch: 94344 | Date Analyzed: 2012-08-29 | Analyzed By: JS
Prep Batch: 79947 | QC Preparation: 2012-08-29 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.72	mg/Kg	1	2.00	<0.00365	86	37.6 - 142
Toluene		1	1.84	mg/Kg	1	2.00	0.0178	91	38.6 - 153
Ethylbenzene		1	1.91	mg/Kg	1	2.00	<0.00560	96	36.7 - 172
Xylene		1	5.79	mg/Kg	1	6.00	0.0116	96	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	1.72	mg/Kg	1	2.00	<0.00365	86	37.6 - 142	0	20
Toluene		1	1.87	mg/Kg	1	2.00	0.0178	93	38.6 - 153	2	20
Ethylbenzene		1	1.93	mg/Kg	1	2.00	<0.00560	96	36.7 - 172	1	20
Xylene		1	5.87	mg/Kg	1	6.00	0.0116	98	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)	1.69	1.68	mg/Kg	1	2	84	84	70 - 130
4-Bromofluorobenzene (4-BFB)	1.71	1.70	mg/Kg	1	2	86	85	70 - 130

Matrix Spike (MS-1) Spiked Sample: 307134

QC Batch: 94345 | Date Analyzed: 2012-08-28 | Analyzed By: JS
Prep Batch: 79947 | QC Preparation: 2012-08-29 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Q*	Q*	16.1	mg/Kg	1	20.0	3.02	65	68.9 - 120

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	19.0	mg/Kg	1	20.0	3.02	80	68.9 - 120	16	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)	1.53	1.61	mg/Kg	1	2	76	80	70 - 130
4-Bromofluorobenzene (4-BFB)	1.86	1.90	mg/Kg	1	2	93	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 307703

QC Batch: 94363 | Date Analyzed: 2012-08-29 | Analyzed By: DS
Prep Batch: 79964 | QC Preparation: 2012-08-29 | Prepared By: DS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	280	mg/Kg	1	250	<15.3	112	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		1	289	mg/Kg	1	250	<15.3	116	70 - 130	3	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	125	126	mg/Kg	1	100	125	126	70 - 130

Matrix Spike (MS-1) Spiked Sample: 307760

QC Batch: 94380 | Date Analyzed: 2012-08-29 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			6440	mg/Kg	10	2500	3840	104	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			6840	mg/Kg	10	2500	3840	120	78.9 - 121	6	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: 307770

QC Batch: 94393 | Date Analyzed: 2012-08-29 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2720	mg/Kg	5	2500	456	90	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2820	mg/Kg	5	2500	456	94	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: 307780

QC Batch: 94394 | Date Analyzed: 2012-08-30 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2570	mg/Kg	5	2500	68.2	100	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2680	mg/Kg	5	2500	68.2	104	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: 307790

QC Batch: 94395 | Date Analyzed: 2012-08-30 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	5	2500	97.5	100	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2740	mg/Kg	5	2500	97.5	106	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: 307800

QC Batch: 94396 | Date Analyzed: 2012-08-30 | Analyzed By: AR
Prep Batch: 79925 | QC Preparation: 2012-08-28 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3120	mg/Kg	5	2500	679	98	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3200	mg/Kg	5	2500	679	101	78.9 - 121	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: 307689

QC Batch: 94406 | Date Analyzed: 2012-08-30 | Analyzed By: MT
Prep Batch: 79999 | QC Preparation: 2012-08-30 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.93	mg/Kg	1	2.00	<0.00365	96	64.4 - 121
Toluene		1	2.08	mg/Kg	1	2.00	<0.00816	104	67.8 - 129
Ethylbenzene		1	2.20	mg/Kg	1	2.00	<0.00560	110	62.6 - 142
Xylene		1	6.64	mg/Kg	1	6.00	<0.00460	111	57.2 - 147

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	1.96	mg/Kg	1	2.00	<0.00365	98	64.4 - 121	2	20
Toluene		1	2.08	mg/Kg	1	2.00	<0.00816	104	67.8 - 129	0	20
Ethylbenzene		1	2.18	mg/Kg	1	2.00	<0.00560	109	62.6 - 142	1	20
Xylene		1	6.57	mg/Kg	1	6.00	<0.00460	110	57.2 - 147	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)	1.95	1.92	mg/Kg	1	2	98	96	73.1 - 120
4-Bromofluorobenzene (4-BFB)	1.90	1.86	mg/Kg	1	2	95	93	71.5 - 120

Matrix Spike (MS-1) Spiked Sample: 307689

QC Batch: 94407 | Date Analyzed: 2012-08-30 | Analyzed By: MT
Prep Batch: 79999 | QC Preparation: 2012-08-30 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.8	mg/Kg	1	20.0	<0.359	89	68.9 - 120

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	Qr	Qr	1 23.1	mg/Kg	1	20.0	<0.359	116	68.9 - 120	26	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	4.32	mg/Kg	1	2	95	216	70 - 130
4-Bromofluorobenzene (4-BFB)	2.19	4.38	mg/Kg	1	2	110	219	70 - 130

Matrix Spike (MS-1) Spiked Sample: 307800

QC Batch: 94409 | Date Analyzed: 2012-08-30 | Analyzed By: MT
Prep Batch: 80000 | QC Preparation: 2012-08-30 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs	1 53.0	mg/Kg	1	20.0	332	-1395	68.9 - 120

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	Qs	Qs	1 52.5	mg/Kg	1	20.0	332	-1396	68.9 - 120	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)	Qsr	Qsr	0.336	0.327	mg/Kg	1	2	17	16	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	1.23	1.49	mg/Kg	1	2	62	74	70 - 130

Matrix Spike (MS-1) Spiked Sample: 307671

QC Batch: 94452 | Date Analyzed: 2012-08-31 | Analyzed By: DS
Prep Batch: 80040 | QC Preparation: 2012-08-31 | Prepared By: DS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	250	mg/Kg	1	250	<15.3	100	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		1	304	mg/Kg	1	250	<15.3	122	70 - 130	20	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	116	144	mg/Kg	1	100	116	144	70 - 130

Matrix Spike (MS-1) Spiked Sample: 307810

QC Batch: 94456 | Date Analyzed: 2012-08-31 | Analyzed By: AR
Prep Batch: 79988 | QC Preparation: 2012-08-30 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3000	mg/Kg	5	2500	409	104	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3120	mg/Kg	5	2500	409	108	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: 307945

QC Batch: 94485 | Date Analyzed: 2012-09-05 | Analyzed By: CM
Prep Batch: 80067 | QC Preparation: 2012-09-05 | Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		,	242	mg/Kg	1	250	86.7	62	45.3 - 139

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		,	248	mg/Kg	1	250	86.7	64	45.3 - 139	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	129	120	mg/Kg	1	100	129	120	59.9 - 168

Calibration Standards

Standard (CCV-1)

QC Batch: 94344 | Date Analyzed: 2012-08-29 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0922	92	80 - 120	2012-08-29
Toluene		1	mg/kg	0.100	0.0914	91	80 - 120	2012-08-29
Ethylbenzene		1	mg/kg	0.100	0.0910	91	80 - 120	2012-08-29
Xylene		1	mg/kg	0.300	0.275	92	80 - 120	2012-08-29

Standard (CCV-2)

QC Batch: 94344 | Date Analyzed: 2012-08-29 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0937	94	80 - 120	2012-08-29
Toluene		1	mg/kg	0.100	0.0915	92	80 - 120	2012-08-29
Ethylbenzene		1	mg/kg	0.100	0.0908	91	80 - 120	2012-08-29
Xylene		1	mg/kg	0.300	0.277	92	80 - 120	2012-08-29

Standard (CCV-3)

QC Batch: 94344 | Date Analyzed: 2012-08-29 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0850	85	80 - 120	2012-08-29
Toluene		1	mg/kg	0.100	0.0822	82	80 - 120	2012-08-29
Ethylbenzene		1	mg/kg	0.100	0.0811	81	80 - 120	2012-08-29
Xylene		1	mg/kg	0.300	0.248	83	80 - 120	2012-08-29

Standard (CCV-1)

QC Batch: 94345 Date Analyzed: 2012-08-28 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.891	89	80 - 120	2012-08-28

Standard (CCV-2)

QC Batch: 94345 Date Analyzed: 2012-08-28 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.956	96	80 - 120	2012-08-28

Standard (CCV-3)

QC Batch: 94345 Date Analyzed: 2012-08-28 Analyzed By: JS

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	2012-08-28

Standard (CCV-1)

QC Batch: 94363 Date Analyzed: 2012-08-29 Analyzed By: DS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	247	99	80 - 120	2012-08-29

Standard (CCV-2)

QC Batch: 94363 Date Analyzed: 2012-08-29 Analyzed By: DS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	270	108	80 - 120	2012-08-29

Standard (CCV-3)

QC Batch: 94363 Date Analyzed: 2012-08-29 Analyzed By: DS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	282	113	80 - 120	2012-08-29

Standard (CCV-1)

QC Batch: 94380 Date Analyzed: 2012-08-29 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	2012-08-29

Standard (CCV-2)

QC Batch: 94380 Date Analyzed: 2012-08-29 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	99.7	100	85 - 115	2012-08-29

Standard (CCV-1)

QC Batch: 94393 Date Analyzed: 2012-08-29 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	2012-08-29

Standard (CCV-2)

QC Batch: 94393 Date Analyzed: 2012-08-29 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	2012-08-29

Standard (CCV-1)

QC Batch: 94394 Date Analyzed: 2012-08-30 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	2012-08-30

Standard (CCV-2)

QC Batch: 94394 Date Analyzed: 2012-08-30 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	2012-08-30

Standard (CCV-1)

QC Batch: 94395 Date Analyzed: 2012-08-30 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	2012-08-30

Standard (CCV-2)

QC Batch: 94395 Date Analyzed: 2012-08-30 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	2012-08-30

Standard (CCV-1)

QC Batch: 94396 Date Analyzed: 2012-08-30 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	2012-08-30

Standard (CCV-2)

QC Batch: 94396 Date Analyzed: 2012-08-30 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	2012-08-30

Standard (CCV-1)

QC Batch: 94406 Date Analyzed: 2012-08-30 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	0.0896	90	80 - 120	2012-08-30
Toluene		1	mg/kg	0.100	0.0954	95	80 - 120	2012-08-30
Ethylbenzene		1	mg/kg	0.100	0.0972	97	80 - 120	2012-08-30
Xylene		1	mg/kg	0.300	0.312	104	80 - 120	2012-08-30

Standard (CCV-2)

QC Batch: 94406 Date Analyzed: 2012-08-30 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	0.0906	91	80 - 120	2012-08-30
Toluene		1	mg/kg	0.100	0.0902	90	80 - 120	2012-08-30
Ethylbenzene		1	mg/kg	0.100	0.0869	87	80 - 120	2012-08-30
Xylene		1	mg/kg	0.300	0.263	88	80 - 120	2012-08-30

Standard (CCV-3)

QC Batch: 94406 Date Analyzed: 2012-08-30 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	0.0890	89	80 - 120	2012-08-30
Toluene		1	mg/kg	0.100	0.0876	88	80 - 120	2012-08-30
Ethylbenzene		1	mg/kg	0.100	0.0858	86	80 - 120	2012-08-30
Xylene		1	mg/kg	0.300	0.262	87	80 - 120	2012-08-30

Standard (CCV-1)

QC Batch: 94407 Date Analyzed: 2012-08-30 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	1.09	109	80 - 120	2012-08-30

Standard (CCV-2)

QC Batch: 94407 Date Analyzed: 2012-08-30 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	0.827	83	80 - 120	2012-08-30

Standard (CCV-3)

QC Batch: 94407 Date Analyzed: 2012-08-30 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	0.942	94	80 - 120	2012-08-30

Standard (CCV-1)

QC Batch: 94409 Date Analyzed: 2012-08-30 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	0.863	86	80 - 120	2012-08-30

Standard (CCV-2)

QC Batch: 94409 Date Analyzed: 2012-08-30 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	0.920	92	80 - 120	2012-08-30

Standard (CCV-1)

QC Batch: 94452 Date Analyzed: 2012-08-31 Analyzed By: DS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		,	mg/Kg	250	280	112	80 - 120	2012-08-31

Standard (CCV-2)

QC Batch: 94452 Date Analyzed: 2012-08-31 Analyzed By: DS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		,	mg/Kg	250	298	119	80 - 120	2012-08-31

Standard (CCV-3)

QC Batch: 94452 Date Analyzed: 2012-08-31 Analyzed By: DS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		,	mg/Kg	250	295	118	80 - 120	2012-08-31

Standard (CCV-1)

QC Batch: 94456 Date Analyzed: 2012-08-31 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	2012-08-31

Standard (CCV-2)

QC Batch: 94456 Date Analyzed: 2012-08-31 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	99.5	100	85 - 115	2012-08-31

Standard (CCV-1)

QC Batch: 94485 Date Analyzed: 2012-09-05 Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	224	90	80 - 120	2012-09-05

Standard (CCV-2)

QC Batch: 94485 Date Analyzed: 2012-09-05 Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	202	81	80 - 120	2012-09-05

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	T104704219-12-8	Lubbock

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.
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 excessive hydrocarbons.
2 Sample dilution due to hydrocarbons.
3 Dilution due to excessive hydrocarbons.
4 Dilution due to excessive hydrocarbons.

5 Dilution due to excessive hydrocarbons.
6 Dilution due to excessive hydrocarbons.
7 Sample dilution due to hydrocarbons.
8 Dilution due to excessive hydrocarbons.
9 Dilution due to excessive hydrocarbons.

Attachments

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

120826O8

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 6

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

CLIENT NAME: Alamo Permian

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401417

PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
307751	8-21		S	X		T-1 (0-1')	1	N			X	X	X	X											X				
7752					X	T-1 (2')																			X				
7753					X	T-1 (4')																			X				
7754					X	T-1 (6')																			X				
7755					X	T-1 (8')																			X				
7756					X	T-1 (10')																			X				
7757				X		T-2 (0-1')							X	X											X				
7758					X	T-2 (2')																			X				
7759					X	T-2 (4')																			X				
7760	8-21		S		X	T-2 (6')	1	N			X	X													X				

RELINQUISHED BY: (Signature) — Date: 8-21-12 Time: 0900 — RECEIVED BY: (Signature) — Date: 24 Aug 2012 Time: 1235

RELINQUISHED BY: (Signature) — Date: 24 Aug 2012 Time: 1410 — RECEIVED BY: (Signature) — Date: 24 Aug 2012 Time: 14:10

RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) James — Date: 8-21-12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5

REMARKS:
If Benzene > 10 mg/kg Run deeper Sample If Total BTEX > 50 mg/kg Run deeper Sample
If TPH > 5,000 mg/kg Run deeper Sample

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

12082608

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: Alamo Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-640 1417
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
307761	8-21		S		X	T-2 (8')	1	N			X	X												X				
7762					X	T-2 (10')																		X				
7763					X	T-2 (12')																		X				
7764				X		T-3 (0-1')							X	X										X				
7765					X	T-3 (2')																		X				
7766					X	T-3 (4')																		X				
7767					X	T-3 (6')																		X				
7768					X	T-3 (8')																		X				
7769					X	T-3 (10')																		X				
7770	8-21		S		X	T-3 (12')	1	N			X	X												X				

1/26/12 AH 7768

RELINQUISHED BY: (Signature) Date: 8-21-12 Time: 0900
RECEIVED BY: (Signature) Date: 8-24-12 Time: 1330
RELINQUISHED BY: (Signature) Date: 24 Aug 2012 Time: 1410
RECEIVED BY: (Signature) Date: 24 Aug 2012 Time: 14:10
RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) James Date: 8-21-12 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:
TETRA TECH CONTACT PERSON: IKE Tavarez
Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS: See Notes on COC #

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

120826O8

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: Alamo Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401417
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
307771	8-21		S	X		T-4 (0-1')	1	N			X	X	X	X											X			
7772					X	T-4 (2')																			X			
7773					X	T-4 (4')																			X			
7774					X	T-4 (6')																			X			
7775				X		T-5 (0-1')							X	X											X			
7776					X	T-5 (2')																			X			
7777					X	T-5 (4')																			X			
7778					X	T-5 (6')																			X			
7779	8-21				X	T-5 (8')																			X			
7780	8-22		S	X		T-6 (0-1')	1	N			X	X	X	X											X			

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 8.24.12 Time: 0900
RECEIVED BY: (Signature) — Date: 8.24.12 Time: 1320
SAMPLED BY: (Print & Initial) James — Date: 8-21-12 Time:

RELINQUISHED BY: (Signature) — Date: 8.24.12 Time: 1440
RECEIVED BY: (Signature) A Hirnard — Date: 8/24/12 Time: 14:10
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: Ike Tavarez — Results by:

RECEIVING LABORATORY: Trace
ADDRESS: CITY: Midland STATE: ZIP:
CONTACT: PHONE: RECEIVED BY: (Signature) DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS: SEE NOTES on COC #1

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

120826O8

Analysis Request of Chain of Custody Record

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 Permian
SITE MANAGER: IKE Tavarez
PROJECT NO.: 114-640 1417
PROJECT NAME: Cowtown Tank Battery Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
307781	8-22		S		X	T-6 (2')	1	N			X	X														X				
7782					X	T-6 (4')																				X				
7783					X	T-6 (6')																				X				
7784					X	T-6 (8')																				X				
7785					X	T-6 (10')																				X				
7786				X		T-7 (0-1')							X	X												X				
7787					X	T-7 (2')																				X				
7788					X	T-7 (4')																				X				
7789					X	T-7 (6')																				X				
7790	8-22		S		X	T-7 (8')	1	N			X	X														X				

RELINQUISHED BY: (Signature) — Date: 8-22-12 Time: 0900 — RECEIVED BY: (Signature) — Date: 8-24-12 Time: 1330
RELINQUISHED BY: (Signature) — Date: 8.24.12 Time: 1410 — RECEIVED BY: (Signature) — Date: 8/24/12 Time: 14:10
RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) James — Date: 8-22-12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

TETRA TECH CONTACT PERSON: IKE Tavarez — Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 3.5

REMARKS: SEE NOTES ON COC

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

12082608

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: Alamo Permian
SITE MANAGER: IKE Tavarez
PROJECT NO.: 114-6X01417
PROJECT NAME: Countown Tank Battery Edd, Co NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd 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
30 7791	8-22		S		X	T-7 (10')	1	N			X	X														X				
7792				X		T-8 (0-1')							X	X												X				
7793					X	T-8 (2')																				X				
7794					X	T-8 (4')																				X				
7795					X	T-8 (6')																				X				
7796					X	T-8 (8')																				X				
7797					X	T-8 (10')																				X				
7798					X	T-8 (12')																				X				
7799				X		T-9 (0-1')							X	X												X				
7800	8-22		S		X	T-9 (2')	1	N			X	X														X				

RELINQUISHED BY: (Signature) — Date: 8-24-12 Time: 0900 — RECEIVED BY: (Signature) — Date: 8.24.12 Time: 1330
RELINQUISHED BY: (Signature) — Date: 8.24.12 Time: 1410 — RECEIVED BY: (Signature) A Hernandez — Date: 8/24/12 Time: 14:10
RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) James — Date: 8-22-12 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS — AIRBILL #: — OTHER:
TETRA TECH CONTACT PERSON: IKE Tavarez — Results by: — RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE: DATE: TIME:
RECEIVED BY: (Signature)

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS: SEE NOTES ON COC #1

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

12082608

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: Alamo Permian
SITE MANAGER: IKE Tavarez
PROJECT NO.: 114-640 1417
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
307801	8-22		S		X	T-9 (4')	1	N			X	X												X				
7802					X	T-9 (6')																		X				
7803					X	T-9 (8')																		X				
7804					X	T-9 (10')																		X				
7805				X		T-10 (0-1')							X	X										X				
7806					X	T-10 (2')																		X				
7807					X	T-10 (4')																		X				
7808				X		T-11 (0-1')							X	X										X				
7809					X	T-11 (2')																		X				
7810	8-22		S		X	T-11 (4')																		X				

RELINQUISHED BY: (Signature) Date: 8-24-12 Time: 0900
RECEIVED BY: (Signature) Date: 8.24.12 Time: (33)
RELINQUISHED BY: (Signature) Date: 8.24.12 Time: 1410
RECEIVED BY: (Signature) A. Hinojos Date: 8/24/12 Time: 14:10
RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) James Date: 8-22-12 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #:
OTHER:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: IKE Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS: SEE NOTES ON COC #1

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

12U82608

Analysis Request of Chain of Custody Record

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

PAGE: 1 OF: 6

CLIENT NAME: Alamo Permian

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401417

PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST: BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd 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	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
307751	8-21		S	X		T-1 (0-1')	1	N			X	X	X	X												X				
7752					X	T-1 (2')																				X				
7753					X	T-1 (4')																				X				
7754					X	T-1 (6')																				X				
7755					X	T-1 (8')																				X				
7756					X	T-1 (10')																				X				
7757				X		T-2 (0-1')							X	X												X				
7758					X	T-2 (2')																				X				
7759					X	T-2 (4')																				X				
7760	8-21		S		X	T-2 (6')	1	N			X	X														X				

RELINQUISHED BY: (Signature) — Date: 8-24-12 Time: 0900 — RECEIVED BY: (Signature) — Date: 24 Aug 2012 Time: 1230

RELINQUISHED BY: (Signature) — Date: 24 Aug 2012 Time: 1410 — RECEIVED BY: (Signature) — Date: 24 Aug 2012 Time: 14:10

RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) James — Date: 8-21-12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Brenda Ward — 25ZP054258
DATE: 8/29/12 TIME: 9:15

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5

REMARKS: 5.0/4.5°

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

[redacted] 5,000 mg/kg Cl in deeper Sample

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 6

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

CLIENT NAME: Alamo Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401417
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE
307761	8-21		S		X	T-2 (8')	1	N			X	X
7762					X	T-2 (10')						
7763					X	T-2 (12')						
7764				X		T-3 (0-1')						
7765					X	T-3 (2')						
7766					X	T-3 (4')						
7767 (7765 struck out)					X	T-3 (6')						
7768					X	T-3 (8')						
7769					X	T-3 (10')						
7770	8-21		S		X	T-3 (12')	1	N			X	X

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	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 Vr Pd 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
307761													X				
7762													X				
7763													X				
7764	X	X											X				
7765													X				
7766													X				
7767													X				
7768													X				
7769													X				
7770													X				

26/12

RELINQUISHED BY: (Signature) [signature] Date: 8-24-12 Time: 0900
RECEIVED BY: (Signature) [signature] Date: 8-24-12 Time: 14:13
RELINQUISHED BY: (Signature) [signature] Date: 24 Aug 2012 Time: 1410
RECEIVED BY: (Signature) A. Hernandez Date: 24 Aug 2012 Time: 14:10
RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) James Date: Time: 8-21-12
SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: HAND DELIVERED (circled) UPS OTHER:
TETRA TECH CONTACT PERSON: IKE Tavarez
Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward ZP054258
DATE: 8/28/12 TIME: 9:15

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS: [redacted] 5.0/4.5

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

12082608

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: Atlantic Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401417
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. (Ext. to C35) TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd 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
307771	8-21		S	X		T-4 (0-1')	1	N			X	X	X	X											X			
7772					X	T-4 (2')																			X			
7773					X	T-4 (4')																			X			
7774					X	T-4 (6')																			X			
7775				X		T-5 (0-1')							X	X											X			
7776					X	T-5 (2')																			X			
7777					X	T-5 (4')																			X			
7778					X	T-5 (6')																			X			
7779	8-21				X	T-5 (8')																			X			
7780	8-22		S	X		T-6 (0-1')	1	N			X	X	X	X											X			

RELINQUISHED BY: (Signature) — Date: 8-24-12 Time: 0900
RELINQUISHED BY: (Signature) — Date: 8.29.12 Time: 1410
RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: 8-24-12 Time: 1330
RECEIVED BY: (Signature) A Hirvara — Date: 8/27/12 Time: 14:10
RECEIVED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) Brenda Ward ZP0544258 — DATE: 8/28/12 TIME: 9:15

SAMPLED BY: (Print & Initial) James — Date: 8-21-12 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS — AIRBILL #: — OTHER:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:

TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5

REMARKS: [redacted] 5.0/4.5

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

12002608

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: Alamo Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-640 1417
PROJECT NAME: Cowtown Tank Battery Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD (Ext. to C35) TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd 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
307781	8-22		S		X	T-6 (2')	1	N			X	X												X				
7782					X	T-6 (4')																		X				
7783					X	T-6 (6')																		X				
7784					X	T-6 (8')																		X				
7785					X	T-6 (10')																		X				
7786				X		T-7 (0-1')							X	X										X				
7787					X	T-7 (2')																		X				
7788					X	T-7 (4')																		X				
7789					X	T-7 (6')																		X				
7790	8-22		S		X	T-7 (8')	1	N			X	X												X				

RELINQUISHED BY: (Signature) — Date: 8-24-12 Time: 0900
RELINQUISHED BY: (Signature) — Date: 8-24-12 Time: 1410
RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: 8-24-12 Time: 1337
RECEIVED BY: (Signature) — Date: 8/24/12 Time: 14:10
RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) James — Date: 8-22-12 Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS
HAND DELIVERED UPS
AIRBILL #:
OTHER:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Brenda Ward ZP054258
DATE: 8/29/12 TIME: 9:15

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5

REMARKS: [redacted] 5.0/4.5

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

Analysis Request of Chain of Custody Record

PAGE: 5 OF: 6

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

CLIENT NAME: Alamo Permian
SITE MANAGER: IKE Tavarez
PROJECT NO.: 114-6401417
PROJECT NAME: Countown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
30 7791	8-22		S		X	T-7 (10')	1	N			X	X														X				
7792				X		T-8 (0-1')								X	X											X				
7793					X	T-8 (2')																				X				
7794					X	T-8 (4')																				X				
7795					X	T-8 (6')																				X				
7796					X	T-8 (8')																				X				
7797					X	T-8 (10')																				X				
7798					X	T-8 (12')																				X				
7799				X		T-9 (0-1')								X	X											X				
7800	8-22		S		X	T-9 (2')	1	N			X	X														X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 8-24-12	Time: 0900	RECEIVED BY: (Signature)	Date: 8-24-12	Time: 1330
RELINQUISHED BY: (Signature)	Date: 8-24-12	Time: 1410	RECEIVED BY: (Signature)	Date: 8/24/12	Time: 14:10
RELINQUISHED BY: (Signature)	Date:	Time:	RECEIVED BY: (Signature)	Date:	Time:

SAMPLED BY: (Print & Initial) James — Date: 8-22-12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED — AIRBILL #: — OTHER:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Brenda Ward ZP054258
DATE: 8/28/12 TIME: 9:15

TETRA TECH CONTACT PERSON: IKE Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5

REMARKS: [redacted] 5.0/4.5

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

120826O8

Analysis Request of Chain of Custody Record

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

PAGE: 6 OF: 6

CLIENT NAME: Alamo Permian
SITE MANAGER: IKE Tavarez
PROJECT NO.: 114-640 1417
PROJECT NAME: Cowtown Tank Battery Edd, Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST: 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 Vr Pd 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	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
307801	8-22		S		X	T-9 (4')	1	N			X	X												X				
7802					X	T-9 (6')																		X				
7803					X	T-9 (8')																		X				
7804					X	T-9 (10')																		X				
7805				X		T-10 (0-1')							X	X										X				
7806					X	T-10 (2')																		X				
7807					X	T-10 (4')																		X				
7808				X		T-11 (0-1')							X	X										X				
7809					X	T-11 (2')																		X				
7810	8-22		S		X	T-11 (4')																		X				

RELINQUISHED BY: (Signature) Date: 8-24-12 Time: 0900
RECEIVED BY: (Signature) Date: 8-24-12 Time: (331)

RELINQUISHED BY: (Signature) Date: 8-24-12 Time: 1410
RECEIVED BY: (Signature) A. Hinojosa Date: 8/24/12 Time: 14:10

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

SAMPLED BY: (Print & Initial) James Date: 8-22-12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Brenda Ward ZP 054258
DATE: 8/29/12 TIME: 9:15

TETRA TECH CONTACT PERSON: IKE Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5

REMARKS: [redacted]

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

120826O8

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 6

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 Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401417
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
307751	8-21		S	X		T-1 (0-1')	1	N			X	X	X	X											X				
7752					X	T-1 (2')								X											X				
7753					X	T-1 (4')																			X				
7754					X	T-1 (6')																			X				
7755					X	T-1 (8')																			X				
7756					X	T-1 (10')																			X				
7757				X		T-2 (0-1')							X	X											X				
7758					X	T-2 (2')								X											X				
7759					X	T-2 (4')																			X				
7760	8-21		S		X	T-2 (6')	1	N			X	X													X				

RELINQUISHED BY: (Signature) — Date: 8-21-12 Time: 0900 — RECEIVED BY: (Signature) — Date: 24 Aug 2012 Time: 1235
RELINQUISHED BY: (Signature) — Date: Tuesday, 2012 Time: 1410 — RECEIVED BY: (Signature) — Date: 24 Aug 2012 Time: 14:10
RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) James — Date: 8-21-12 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:
TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:
5.0/4.5° — RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward — LS ZP054258
DATE: 8/29/12 TIME: 9:15

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS:

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

SEP - 5 2012

12082608

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: Alamo Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-640 1417
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
307761	8-21		S		X	T-2 (8')	1	N			X	X		X										X				
7762					X	T-2 (10')																		X				
7763					X	T-2 (12')																		X				
7764				X		T-3 (0-1')							X	X										X				
7765					X	T-3 (2')								X										X				
7766					X	T-3 (4')																		X				
7767					X	T-3 (6')																		X				
7768					X	T-3 (8')																		X				
7769					X	T-3 (10')																		X				
7770	8-21		S		X	T-3 (12')	1	N			X	X												X				

1/26/12 AH

RELINQUISHED BY: (Signature) — Date: 8-21-12 Time: 0960
RECEIVED BY: (Signature) — Date: 8.24.12 Time: 1335
SAMPLED BY: (Print & Initial) James — Date: 8-21-12 Time:

RELINQUISHED BY: (Signature) — Date: 24 Aug 12 Time: 1410
RECEIVED BY: (Signature) A. Hernandez — Date: 24 Aug 12 Time: 14:10
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: Ike Tavarez — Results by:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward — ZP054258
DATE: 8/28/12 TIME: 9:15
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS: [redacted] COC — 5.0/4.5

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

120826O8

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: Atlantic Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401417
PROJECT NAME: Courtorum Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST: BTEX 8021B	TPH TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd 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
307771	8-21		S	X		T-4 (0-1')	1	N			X	X	X	X											X			
7772					X	T-4 (2')								X										X				
7773					X	T-4 (4')																		X				
7774					X	T-4 (6')																		X				
7775				X		T-5 (0-1')							X	X										X				
7776					X	T-5 (2')								X										X				
7777					X	T-5 (4')																		X				
7778					X	T-5 (6')																		X				
7779	8-21				X	T-5 (8')																		X				
7780	8-22		S	X		T-6 (0-1')	1	N			X	X	X	X										X				

RELINQUISHED BY: (Signature) — Date: 8-24-12 Time: 0900 — RECEIVED BY: (Signature) — Date: 8-24-12 Time: 1340
RELINQUISHED BY: (Signature) — Date: 8.24.12 Time: 1440 — RECEIVED BY: (Signature) — Date: 8/24/12 Time: 14:10
RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:
RECEIVING LABORATORY: Trace
ADDRESS: CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward ZP054258
DATE: 8/28/12 TIME: 9:15

SAMPLED BY: (Print & Initial) James — Date: 8-24-12 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #: OTHER:
TETRA TECH CONTACT PERSON: IKE Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS: [redacted] 5.0/4.5

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

12082608

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: Alamo Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-640 1417
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD (Ext. to C35)	TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd 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
307781	8-22		S		X	T-6 (2')	1	N			X	X														X				
7782					X	T-6 (4')																				X				
7783					X	T-6 (6')																				X				
7784					X	T-6 (8')																				X				
7785					X	T-6 (10')																				X				
7786				X		T-7 (0-1')							X	X												X				
7787					X	T-7 (2')																				X				
7788					X	T-7 (4')																				X				
7789					X	T-7 (6')																				X				
7790	8-22		S		X	T-7 (8')	1	N			X	X														X				

RELINQUISHED BY: (Signature) Date: 8-24-12 Time: 0900
RECEIVED BY: (Signature) Date: 8-24-12 Time: 1330
RELINQUISHED BY: (Signature) Date: 8.24.12 Time: 1410
RECEIVED BY: (Signature) Date: 8/24/12 Time: 14:10
RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward ZP054258
DATE: 8/29/12 TIME: 9:15

SAMPLE CONDITION WHEN RECEIVED: 3.5

REMARKS: [redacted] COC. 5.0/4.5

SAMPLED BY: (Print & Initial) James Date: 8-22-12 Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS
HAND DELIVERED UPS
AIRBILL #:
OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

ANALYSIS REQUEST (Circle or Specify Method No.)

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

12082608

Analysis Request of Chain of Custody Record

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

PAGE: 5 OF: 6

CLIENT NAME: Alamo Permian
SITE MANAGER: IKE Tavarez
PROJECT NO.: 114-6X01417
PROJECT NAME: Countown Tank Battery Eddy Co NM

	LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
30	7791	8-22		S		X	T-7 (10')	1	N			X	X												X				
	7792				X		T-8 (0-1')								X	X									X				
	7793					X	T-8 (2')									X									X				
	7794					X	T-8 (4')																		X				
	7795					X	T-8 (6')																		X				
	7796					X	T-8 (8')																		X				
	7797					X	T-8 (10')																		X				
	7798					X	T-8 (12')																		X				
	7799				X		T-9 (0-1')								X	X									X				
	7800	8-22		S		X	T-9 (2')	1	N			X	X			X									X				

RELINQUISHED BY: (Signature) — Date: 8-24-12 Time: 0900 — RECEIVED BY: (Signature) — Date: 8-24-12 Time: 1330
RELINQUISHED BY: (Signature) — Date: 8-28-12 Time: 1410 — RECEIVED BY: (Signature) — Date: 8/24/12 Time: 14:10
RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward ZP0542S8
DATE: 8/28/12 TIME: 9:15

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS: [redacted] 5.0/4.5

SAMPLED BY: (Print & Initial) James — Date: 8-22-12 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #:
OTHER:
TETRA TECH CONTACT PERSON: IKE Tavarez
Results by:
RUSH Charges Authorized: Yes No

ANALYSIS REQUEST (Circle or Specify Method No.)

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

12082608

Analysis Request of Chain of Custody Record

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

PAGE: 6 OF: 6

CLIENT NAME: Alamo Permian
SITE MANAGER: IKE Tavarez
PROJECT NO.: 114-640 1417
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST: 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 Vr Pd 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
307801	8-22		S		X	T-9 (4')	1	N			X	X		X	X										X				
7802					X	T-9 (6')																			X				
7803					X	T-9 (8')																			X				
7804					X	T-9 (10')																			X				
7805				X		T-10 (0-1')							X	X											X				
7806					X	T-10 (2')								X											X				
7807					X	T-10 (4')																			X				
7808				X		T-11 (0-1')							X	X											X				
7809					X	T-11 (2')								X											X				
7810	8-22		S		X	T-11 (4')																			X				

RELINQUISHED BY: (Signature) Date: 8-24-12 Time: 0900
RECEIVED BY: (Signature) Date: 8-24-12 Time: 1330
RELINQUISHED BY: (Signature) Date: 8-24-12 Time: 1410
RECEIVED BY: (Signature) A. Hinojosa Date: 8/24/12 Time: 14:10
RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward ZP 054258
DATE: 8/29/12 TIME: 9:15

SAMPLED BY: (Print & Initial) James Date: 8-22-12 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:
TETRA TECH CONTACT PERSON: IKE Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5
REMARKS: [redacted]

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

Summary Report

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

Report Date: March 1, 2013

Work Order: 13022213

Project Location: Eddy Co., NM
Project Name: Alamo/Cowtown Tank Battery
Project Number: 114-6401417

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
321944	BH-1 (0-1')	soil	2013-02-21	00:00	2013-02-22
321945	BH-1 (4-5')	soil	2013-02-21	00:00	2013-02-22
321946	BH-1 (9-10')	soil	2013-02-21	00:00	2013-02-22
321947	BH-1 (14-15')	soil	2013-02-21	00:00	2013-02-22
321948	BH-1 (19-20')	soil	2013-02-21	00:00	2013-02-22
321949	BH-1 (24-25')	soil	2013-02-21	00:00	2013-02-22
321950	BH-1 (29-30')	soil	2013-02-21	00:00	2013-02-22
321951	BH-2 (0-1')	soil	2013-02-21	00:00	2013-02-22
321952	BH-2 (4-5')	soil	2013-02-21	00:00	2013-02-22
321953	BH-2 (9-10')	soil	2013-02-21	00:00	2013-02-22
321954	BH-2 (14-15')	soil	2013-02-21	00:00	2013-02-22
321955	BH-2 (19-20')	soil	2013-02-21	00:00	2013-02-22
321956	BH-2 (24-25')	soil	2013-02-21	00:00	2013-02-22
321957	BH-2 (29-30')	soil	2013-02-21	00:00	2013-02-22
321958	BH-2 (34-35')	soil	2013-02-21	00:00	2013-02-22
321959	BH-2 (39-40')	soil	2013-02-21	00:00	2013-02-22
321960	BH-3 (0-1')	soil	2013-02-21	00:00	2013-02-22
321961	BH-3 (4-5')	soil	2013-02-21	00:00	2013-02-22
321962	BH-3 (9-10')	soil	2013-02-21	00:00	2013-02-22
321963	BH-3 (14-15')	soil	2013-02-21	00:00	2013-02-22
321964	BH-3 (19-20')	soil	2013-02-21	00:00	2013-02-22
321965	BH-3 (24-25')	soil	2013-02-21	00:00	2013-02-22

Sample: 321944 - BH-1 (0-1')

continued ...

sample 321944 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		**6160**	mg/Kg	4

Sample: 321945 - BH-1 (4-5')

Param	Flag	Result	Units	RL
Chloride		**407**	mg/Kg	4

Sample: 321946 - BH-1 (9-10')

Param	Flag	Result	Units	RL
Chloride		**633**	mg/Kg	4

Sample: 321947 - BH-1 (14-15')

Param	Flag	Result	Units	RL
Chloride		**684**	mg/Kg	4

Sample: 321948 - BH-1 (19-20')

Param	Flag	Result	Units	RL
Chloride		**962**	mg/Kg	4

Sample: 321949 - BH-1 (24-25')

Param	Flag	Result	Units	RL
Chloride		**972**	mg/Kg	4

Sample: 321950 - BH-1 (29-30')

Param	Flag	Result	Units	RL
Chloride		**466**	mg/Kg	4

Sample: 321951 - BH-2 (0-1')

Param	Flag	Result	Units	RL
Chloride		**1430**	mg/Kg	4

Sample: 321952 - BH-2 (4-5')

Param	Flag	Result	Units	RL
Chloride		**2990**	mg/Kg	4

Sample: 321953 - BH-2 (9-10')

Param	Flag	Result	Units	RL
Chloride		**2680**	mg/Kg	4

Sample: 321954 - BH-2 (14-15')

Param	Flag	Result	Units	RL
Chloride		**4570**	mg/Kg	4

Sample: 321955 - BH-2 (19-20')

Param	Flag	Result	Units	RL
Chloride		**1990**	mg/Kg	4

Sample: 321956 - BH-2 (24-25')

Param	Flag	Result	Units	RL
Chloride		**2600**	mg/Kg	4

Sample: 321957 - BH-2 (29-30')

Param	Flag	Result	Units	RL
Chloride		**1090**	mg/Kg	4

Sample: 321958 - BH-2 (34-35')

Param	Flag	Result	Units	RL
Chloride		**568**	mg/Kg	4

Sample: 321959 - BH-2 (39-40')

Param	Flag	Result	Units	RL
Chloride		**372**	mg/Kg	4

Sample: 321960 - BH-3 (0-1')

Param	Flag	Result	Units	RL
Chloride		**4900**	mg/Kg	4

Sample: 321961 - BH-3 (4-5')

Param	Flag	Result	Units	RL
Chloride		**986**	mg/Kg	4

Sample: 321962 - BH-3 (9-10')

Param	Flag	Result	Units	RL
Chloride		**1490**	mg/Kg	4

Sample: 321963 - BH-3 (14-15')

Param	Flag	Result	Units	RL
Chloride		**1350**	mg/Kg	4

Sample: 321964 - BH-3 (19-20')

Param	Flag	Result	Units	RL
Chloride		**780**	mg/Kg	4

Sample: 321965 - BH-3 (24-25')

Param	Flag	Result	Units	RL
Chloride		**267**	mg/Kg	4

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
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

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

Report Date: March 1, 2013

Work Order: 13022213

Project Location: Eddy Co., NM
Project Name: Alamo/Cowtown Tank Battery
Project Number: 114-6401417

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
321944	BH-1 (0-1')	soil	2013-02-21	00:00	2013-02-22
321945	BH-1 (4-5')	soil	2013-02-21	00:00	2013-02-22
321946	BH-1 (9-10')	soil	2013-02-21	00:00	2013-02-22
321947	BH-1 (14-15')	soil	2013-02-21	00:00	2013-02-22
321948	BH-1 (19-20')	soil	2013-02-21	00:00	2013-02-22
321949	BH-1 (24-25')	soil	2013-02-21	00:00	2013-02-22
321950	BH-1 (29-30')	soil	2013-02-21	00:00	2013-02-22
321951	BH-2 (0-1')	soil	2013-02-21	00:00	2013-02-22
321952	BH-2 (4-5')	soil	2013-02-21	00:00	2013-02-22
321953	BH-2 (9-10')	soil	2013-02-21	00:00	2013-02-22
321954	BH-2 (14-15')	soil	2013-02-21	00:00	2013-02-22
321955	BH-2 (19-20')	soil	2013-02-21	00:00	2013-02-22
321956	BH-2 (24-25')	soil	2013-02-21	00:00	2013-02-22
321957	BH-2 (29-30')	soil	2013-02-21	00:00	2013-02-22
321958	BH-2 (34-35')	soil	2013-02-21	00:00	2013-02-22
321959	BH-2 (39-40')	soil	2013-02-21	00:00	2013-02-22
321960	BH-3 (0-1')	soil	2013-02-21	00:00	2013-02-22
321961	BH-3 (4-5')	soil	2013-02-21	00:00	2013-02-22

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
321962	BH-3 (9-10')	soil	2013-02-21	00:00	2013-02-22
321963	BH-3 (14-15')	soil	2013-02-21	00:00	2013-02-22
321964	BH-3 (19-20')	soil	2013-02-21	00:00	2013-02-22
321965	BH-3 (24-25')	soil	2013-02-21	00:00	2013-02-22

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.

Michael Abel

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

Report Contents

Case Narrative

Samples for project Alamo/Cowtown Tank Battery were received by TraceAnalysis, Inc. on 2013-02-22 and assigned to work order 13022213. Samples for work order 13022213 were received intact at a temperature of 3.8 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	84163	2013-02-27 at 12:54	99355	2013-02-28 at 19:10
Chloride (Titration)	SM 4500-Cl B	84163	2013-02-27 at 12:54	99356	2013-02-28 at 19:11
Chloride (Titration)	SM 4500-Cl B	84163	2013-02-27 at 12:54	99357	2013-02-28 at 19:12

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 13022213 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.

Analytical Report

Sample: 321944 - BH-1 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99355	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**6160**	mg/Kg	10	4.00

Sample: 321945 - BH-1 (4-5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99355	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

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

Sample: 321946 - BH-1 (9-10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**633**	mg/Kg	5	4.00

Sample: 321947 - BH-1 (14-15')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**684**	mg/Kg	5	4.00

Sample: 321948 - BH-1 (19-20')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**962**	mg/Kg	5	4.00

Sample: 321949 - BH-1 (24-25')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**972**	mg/Kg	10	4.00

Sample: 321950 - BH-1 (29-30')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**466**	mg/Kg	5	4.00

Sample: 321951 - BH-2 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1430**	mg/Kg	5	4.00

Sample: 321952 - BH-2 (4-5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2990**	mg/Kg	10	4.00

Sample: 321953 - BH-2 (9-10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2680**	mg/Kg	10	4.00

Sample: 321954 - BH-2 (14-15')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**4570**	mg/Kg	10	4.00

Sample: 321955 - BH-2 (19-20')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1990**	mg/Kg	10	4.00

Sample: 321956 - BH-2 (24-25')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2600**	mg/Kg	10	4.00

Sample: 321957 - BH-2 (29-30')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1090**	mg/Kg	10	4.00

Sample: 321958 - BH-2 (34-35')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**568**	mg/Kg	5	4.00

Sample: 321959 - BH-2 (39-40')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**372**	mg/Kg	5	4.00

Sample: 321960 - BH-3 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4900**	mg/Kg	10	4.00

Sample: 321961 - BH-3 (4-5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**986**	mg/Kg	10	4.00

Sample: 321962 - BH-3 (9-10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1490**	mg/Kg	10	4.00

Sample: 321963 - BH-3 (14-15')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1350**	mg/Kg	10	4.00

Sample: 321964 - BH-3 (19-20')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**780**	mg/Kg	5	4.00

Sample: 321965 - BH-3 (24-25')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	Sample Preparation:	2013-02-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**267**	mg/Kg	5	4.00

Method Blanks

Method Blank (1) QC Batch: 99355

QC Batch:	99355	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	QC Preparation:	2013-02-27	Prepared By:	AR

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

Method Blank (1) QC Batch: 99356

QC Batch:	99356	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	QC Preparation:	2013-02-27	Prepared By:	AR

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

Method Blank (1) QC Batch: 99357

QC Batch:	99357	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84163	QC Preparation:	2013-02-27	Prepared By:	AR

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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 99355 | Date Analyzed: 2013-02-28 | Analyzed By: AR
Prep Batch: 84163 | QC Preparation: 2013-02-27 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2650	mg/Kg	1	2500	<3.85	106	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			2430	mg/Kg	1	2500	<3.85	97	85 - 115	9	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: 99356 | Date Analyzed: 2013-02-28 | Analyzed By: AR
Prep Batch: 84163 | QC Preparation: 2013-02-27 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2680	mg/Kg	1	2500	<3.85	107	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			2510	mg/Kg	1	2500	<3.85	100	85 - 115	7	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: 99357 | Date Analyzed: 2013-02-28 | Analyzed By: AR
Prep Batch: 84163 | QC Preparation: 2013-02-27 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2300	mg/Kg	1	2500	<3.85	92	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			2540	mg/Kg	1	2500	<3.85	102	85 - 115	10	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: 321945

QC Batch: 99355 | Date Analyzed: 2013-02-28 | Analyzed By: AR
Prep Batch: 84163 | QC Preparation: 2013-02-27 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3080	mg/Kg	5	2500	407	107	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2820	mg/Kg	5	2500	407	96	78.9 - 121	9	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: 321955

QC Batch: 99356 | Date Analyzed: 2013-02-28 | Analyzed By: AR
Prep Batch: 84163 | QC Preparation: 2013-02-27 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			4290	mg/Kg	10	2500	1990	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			4850	mg/Kg	10	2500	1990	114	78.9 - 121	12	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: 321965

QC Batch: 99357 | Date Analyzed: 2013-02-28 | Analyzed By: AR
Prep Batch: 84163 | QC Preparation: 2013-02-27 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2710	mg/Kg	5	2500	267	98	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2930	mg/Kg	5	2500	267	106	78.9 - 121	8	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: 99355 Date Analyzed: 2013-02-28 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	2013-02-28

Standard (CCV-2)

QC Batch: 99355 Date Analyzed: 2013-02-28 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	2013-02-28

Standard (CCV-1)

QC Batch: 99356 Date Analyzed: 2013-02-28 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	99.1	99	85 - 115	2013-02-28

Standard (CCV-2)

QC Batch: 99356 Date Analyzed: 2013-02-28 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	2013-02-28

Standard (CCV-1)

QC Batch: 99357 | Date Analyzed: 2013-02-28 | 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	2013-02-28

Standard (CCV-2)

QC Batch: 99357 | Date Analyzed: 2013-02-28 | 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	2013-02-28

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

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

Attachments

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

13022213

Analysis Request of Chain of Custody Record

PAGE: OF: 3

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

CLIENT NAME: Alamo Permian

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-640147

PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
321944	2-21		S		X	BH-1 (0-1)	1	N			X	X
945	"		"		"	BH-1 (4-5)	"	"			"	"
946	"		"		"	BH-1 (9-10)	"	"			"	"
947	"		"		"	BH-1 (14-15)	"	"			"	"
948	"		"		"	BH-1 (19-20)	"	"			"	"
949	"		"		"	BH-1 (24-25)	"	"			"	"
950	"		"		"	BH-1 (29-30)	"	"			"	"
951	"		"		"	BH-2 (0-1)	"	"			"	"
952	"		"		"	BH-2 (4-5)	"	"			"	"
953	2-21		S		X	BH-2 (9-10)	1	N			X	X

ANALYSIS REQUEST (Circle or Specify Method No.)

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 Vr Pd 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: 2-22-13 Time: 0600	RECEIVED BY: (Signature)	Date: 02-22-13 Time: 0900
RELINQUISHED BY: (Signature)	Date: 02-22-13 Time: 1100	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) James — Date: 2-21-13 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RECEIVING LABORATORY: Trace — RECEIVED BY: (Signature)
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE: DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.8°

REMARKS: Mail all

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

1302223

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: Alamo Permian
SITE MANAGER: IKE Tavarez
PROJECT NO.: 114-640147
PROJECT NAME: Cowtown Tank Battery Eddy Co NM

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
954	2-21		S		X	BH-2 (14-15)	1	N			X	X													X				
955						BH-2 (19-20)																							
956						BH-2 (24-25)																							
957						BH-2 (29-30)																							
958						BH-2 (34-35)																							
959						BH-2 (39-40)																							
960						BH-3 (0-1)																							
961						BH-3 (4-5)																							
962						BH-3 (9-10)																							
963	2-21		S		X	BH-3 (14-15)	1	N			X	X													X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 2-22-13 Time: 0900
RECEIVED BY: (Signature) — Date: 02-22-13 Time: 0900
SAMPLED BY: (Print & Initial) James — Date: 2-21-13 Time:

RELINQUISHED BY: (Signature) — Date: 02-22-13 Time: 1100
RECEIVED BY: (Signature) — Date: 2.22.13 Time: 11.00
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: IKE Tavarez — Results by:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.8
REMARKS:

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

1302213

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: Alamo Permian
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401417
PROJECT NAME: Cowtown Tank Battery Eddy County NM

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	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 Vr Pd 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
964	2-21		S		X	BH-3 (19-20)	1	N			X	X												X				
965	2-21		S		X	BH-3 (24-25)	1	N			X	X												X				

RELINQUISHED BY: (Signature) — Date: 02-22-13 Time: 12:22 — RECEIVED BY: (Signature) — Date: 02-22-13 Time: 1600
RELINQUISHED BY: (Signature) — Date: 02-22-13 Time: 1100 — RECEIVED BY: (Signature) — Date: 2/22/13 Time: 11:00
RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:
SAMPLED BY: (Print & Initial) James — Date: 2-21-13 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:
TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:
RECEIVING LABORATORY: Trace — RECEIVED BY: (Signature)
ADDRESS: — CITY: Midland — STATE: — ZIP: — CONTACT: — PHONE: — DATE: — TIME:
RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 3.8° — REMARKS:

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