SITE INFORMATION

Report Type: Closure Report

General Site Information:						
Site:	SRO SWD #101					
Company:	COG Operating LLC					
Section, Township and Range	Sec 05	T26S	R28E			
Lease Number:	API-30-015-26105					
County:	Eddy County					
GPS:	32.073517° N			104.1067 ° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	From the intersection of Hwy 285 and Whites City Rd (C.R. 724) travel West on Whites City road for approximately 2.6 miles, turn North onto lease road and continue for approximately .6 miles, turn East onto lease road for 0.1 miles to location					

Release Data:	
Date Released:	11/26/2013
Type Release:	Produced Water
Source of Contamination:	Steel Line Corrosion
Fluid Released:	85 bbls
Fluids Recovered:	35 bbls

Official Communication:			
Name:	Robert McNeil		Ike Tavarez
Company:	COG Operating, LLC		Tetra Tech
Address:	One Concho Center		4000 N. Big Spring
	600 W. Illinois Ave.		Ste 401
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 687-8110
Fax:	(432) 684-7137		
Email:	rmcneil@conchoresources.com		Ike.Tavarez@tetratech.com

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

Acceptable Soil RRAL (mg/kg)		
Benzene	***Total BTEX***	***TPH***
10	50	100

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 04 2014
RECEIVED

TETRA TECH

May 6, 2014

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

Re: Closure Report for the COG Operating LLC., SRO SWD #101, Unit G, Section 05, Township 26 South, Range 28 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the SRO SWD #101, Unit G, Section 05, Township 26 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.07351°, W 104.1067°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on November 26, 2013, and released approximately eighty five (85) barrels of produced water from a 3" steel line. Thirty five (35) barrels of standing fluids were recovered. The spill initiated north of the tank battery affecting an area 190' X 160' on the pad as well as an area northwest of the pad measuring 40' x 560' in the pasture. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 05. According to the NMOCD groundwater map, the average depth to groundwater in this area is less than 50' below surface. The groundwater data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as

Tetra Tech
4000 North Big Spring, Ste 401 Midland, TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

BTEX) and total petroleum hydrocarbons (TPH) in soil.
The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 100 mg/kg.

Soil Assessment and Analytical Results

On December 17, 2013, Tetra Tech personnel inspected and sampled the spill area. Fifteen (15) auger holes (AH-1 through AH-15) as well as one background auger hole were installed using a stainless steel hand auger 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. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, none of the samples exceeded the TPH or BTEX RRAL's. Tetra Tech installed one background auger hole to evaluate the chloride concentrations and showed no significant chlorides for the area. However, a background auger hole was installed during as previous assessment in September 2011 and showed a chloride high of 1,500 mg/kg at 5.0' below surface. The background results are summarized in Table 1.

Elevated chloride concentrations were detected in all of the auger holes, except for AH-11. On the pad, auger holes (AH-1 through AH-5) showed elevated chloride concentrations at 0-0.5' of 8,910 mg/kg, 4,060 mg/kg, 13,400 mg/kg, 5,570 mg/kg, and 6,240 mg/kg, respectively. In these areas, the chloride impact soils were not vertically defined. Deeper samples were not collected due to the dense formation.

Auger holes (AH-6, AH-7, AH-8, AH-9, AH-10 and AH-13) showed a shallow chloride impact to the soils and vertically defined at depths of 1.0' to 4.0' below surface to background concentrations. The areas of auger holes (AH-12, AH-14, and AH-15) showed a deeper impact to the subsurface soils and were not vertically defined with chloride highs of 11,200 mg/kg at 0'-1', 15,800 mg/kg at 1'-1.5', and 10,000 mg/kg at 0'-1' below surface, respectively. The area of auger hole (AH-11) did not show significant chloride concentrations.

Remedial Activities

On March 12, 2014, Tetra Tech began supervising the excavation of impacted materials as highlighted (green) on Table 1 and shown on Figure 4. Prior to excavating, trenches (T-1 through T-8) were installed to evaluate and define the chloride concentrations for the areas of auger holes (AH-1, AH-2, AH-3, AH-4, AH-5, AH-12, AH-14, and AH-15).

A background trench was also installed, which showed chloride concentrations increasing with depth to 1,260 mg/kg at 6.0', 1,730 mg/kg at 8.0', and 2,640 mg/kg at 10.0' below surface.

Based on the results of the backhoe trenches, the impacted areas showed chloride bottom holes at 10.0' below surface of 1,350 mg/kg at T-1, 255 mg/kg at T-2, 1,500 mg/kg at T-3, 742 mg/kg at T-4, 755 mg/kg at T-5, 991 mg/kg at T-6, 522 mg/kg at T-7, and 665 mg/kg at T-8.

The areas of AH-2 and AH-3 were excavated to a depth of approximately 0.5 - 1.0' below surface. The areas of AH-1, AH-5, AH-6, AH-7, AH-9, AH-10, and AH-13 were excavated to a depth of approximately 2.0' below surface. The areas of AH-4, AH-8, and AH-14 were excavated to a depth of approximately 3.0' below surface. The area of AH-15 was excavated to a depth of approximately 4.0' below surface, and the area of AH-12 was excavated to a depth of approximately 6.0' below surface.

Approximately 3,700 yards of excavated soil was transported offsite for proper disposal and the areas will be backfilled with clean material to surface grade.

Conclusion

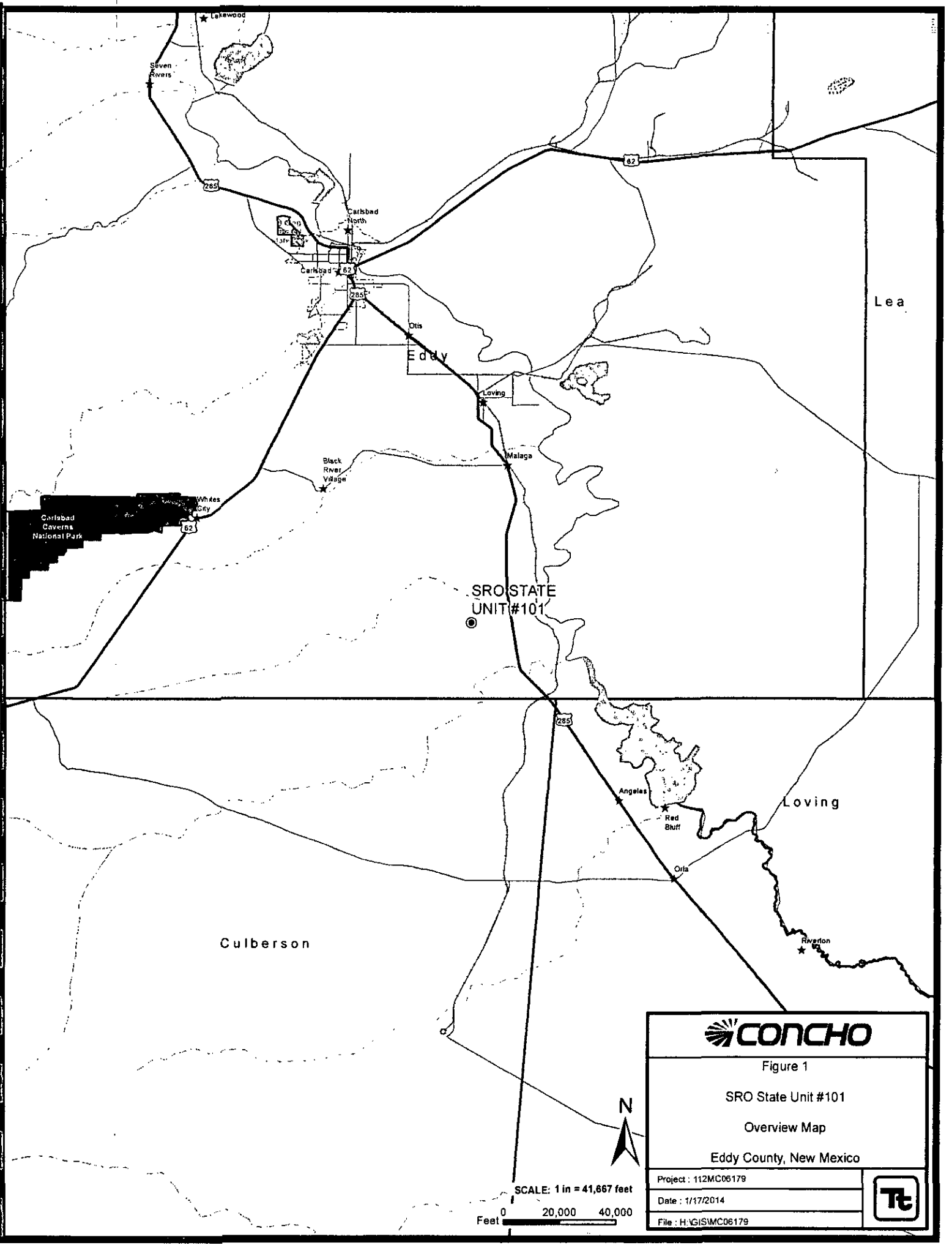
Based on the remedial actions taken, COG requests closure of the site. The Final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

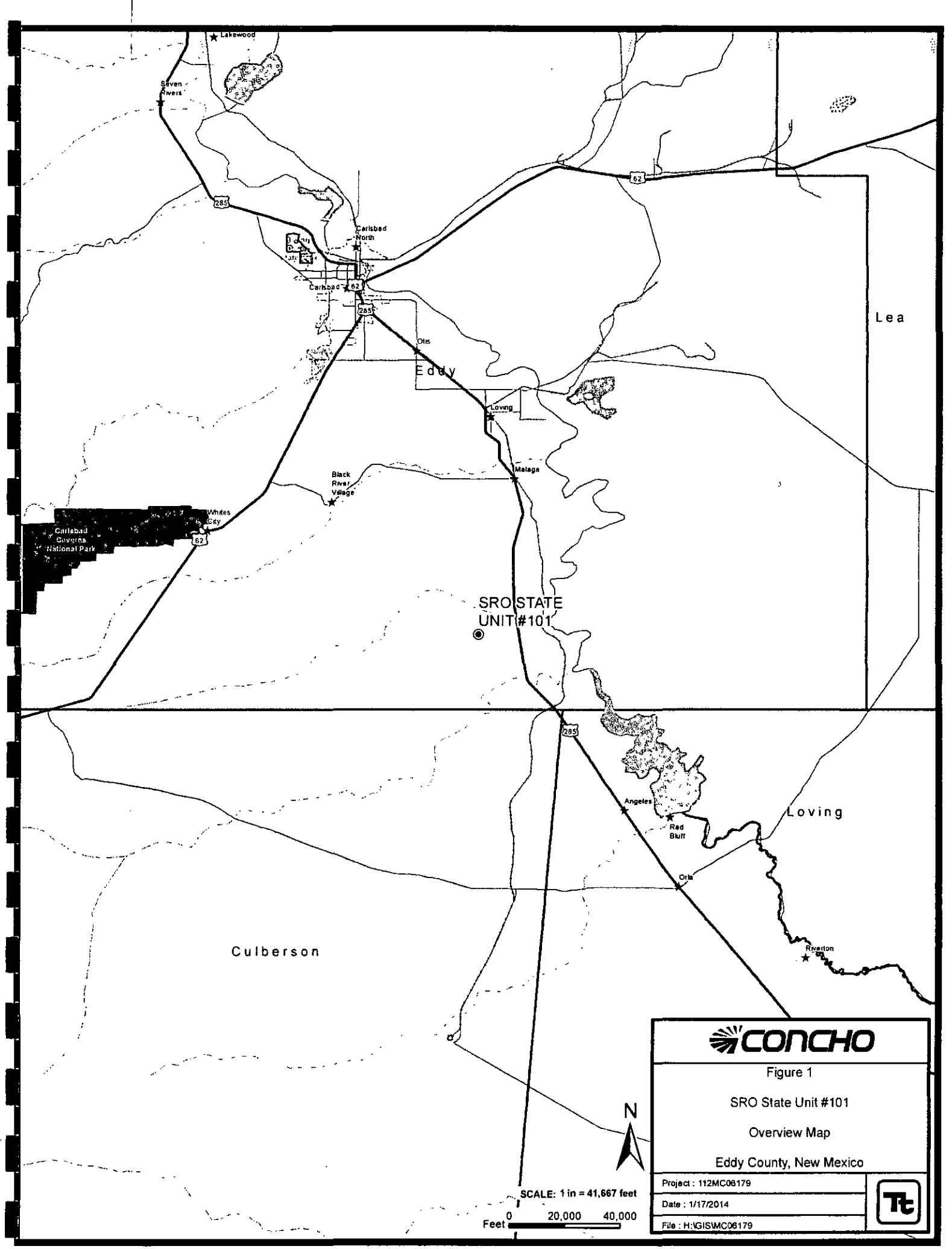
Clair Gonzales,
Geologist

cc: Robert McNeill – COG

Figures



Drawn By: Isabel Marmolejo


Lakewood
Seven Rivers
285
62
Carlsbad North
Carlsbad
Otis
Eddy
Lea
Loving
Malaga
Black River Village
Whites City
Carlsbad Caverns National Park
SRO STATE UNIT #101
Angeles
Red Bluff
Orla
Loving
Culberson
Riverton
N
SCALE: 1 in = 41,667 feet
0 20,000 40,000
Feet
CONCHO
Figure 1
SRO State Unit #101
Overview Map
Eddy County, New Mexico
Project : 112MC06179
Date : 1/17/2014
File : H:\GIS\MC06179
Drawn By: Isabel Marmolejo

AH-15
AH-14
540'
AH-13
AH-12
10'
AH-11
AH-10
AH-9
85'
BG-1
AH-8
AH-7
AH-6
AH-5
AH-3
AH-2
AH-4
AH-1
40'
115'
220'
160'
75'
190'
PAD
PASTURE
RESERVE PIT LOCATION
Lined Facility
PASTURE
ROAD

EXPLANATION

AUGER HOLE SAMPLE LOCATIONS
BACKGROUND SAMPLE LOCATION
SPILL AREA

N

SCALE: 1 IN = 67 FEET

Feet 0 50 10

CONCHO

Figure 3

SRO State Unit #101

Spill Assessment Map

Eddy County, New Mexico

Project : 112MC06179

Date : 1/17/2014

File : H:\GIS\MC06179

AH-15
AH-14
AH-13
AH-12
AH-11
AH-10
AH-9
AH-8
AH-7
AH-6
AH-5
AH-4
AH-3
AH-2
AH-1
BG-1
540'
10'
85'
40'
115'
190'
75'
160'
220'
PASTURE
RESERVE PIT LOCATION
PAD
Lined Facility
PASTURE
PASTURE
ROAD

EXPLANATION

AUGER HOLE SAMPLE LOCATIONS
BACKGROUND SAMPLE LOCATION
SPILL AREA

N

SCALE: 1 IN = 67 FEET
Feet 0 20 40

CONCHO

Figure 3a

SRO State Unit #101

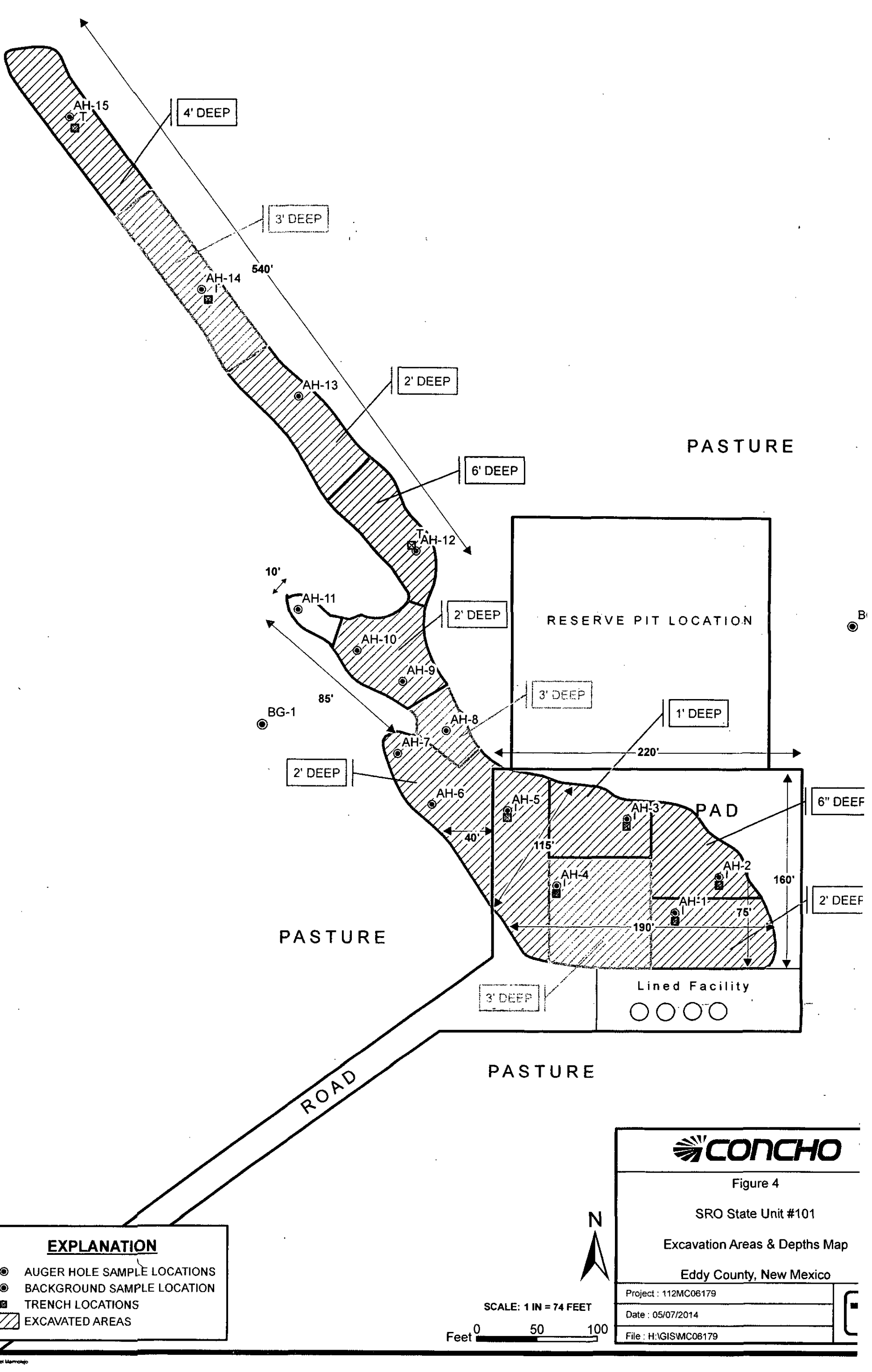
Spill Assessment Map

Eddy County, New Mexico

Project : 112MC06179

Date : 1/17/2014

File : H:\GIS\MC06179

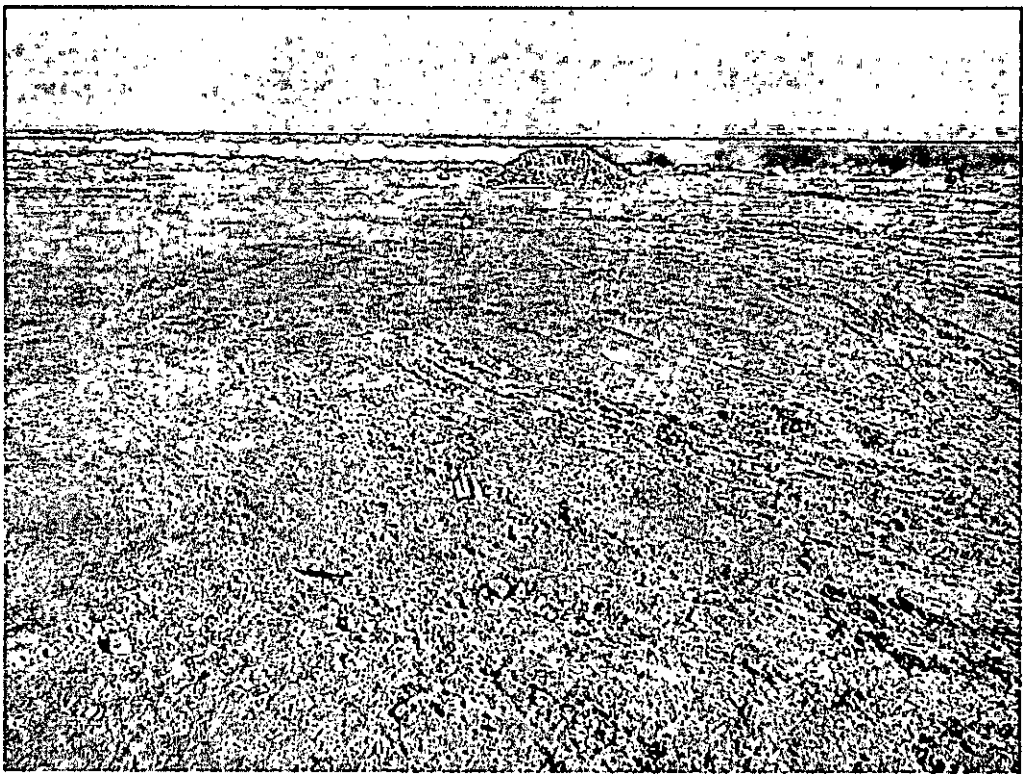


Isabel Marmolejo

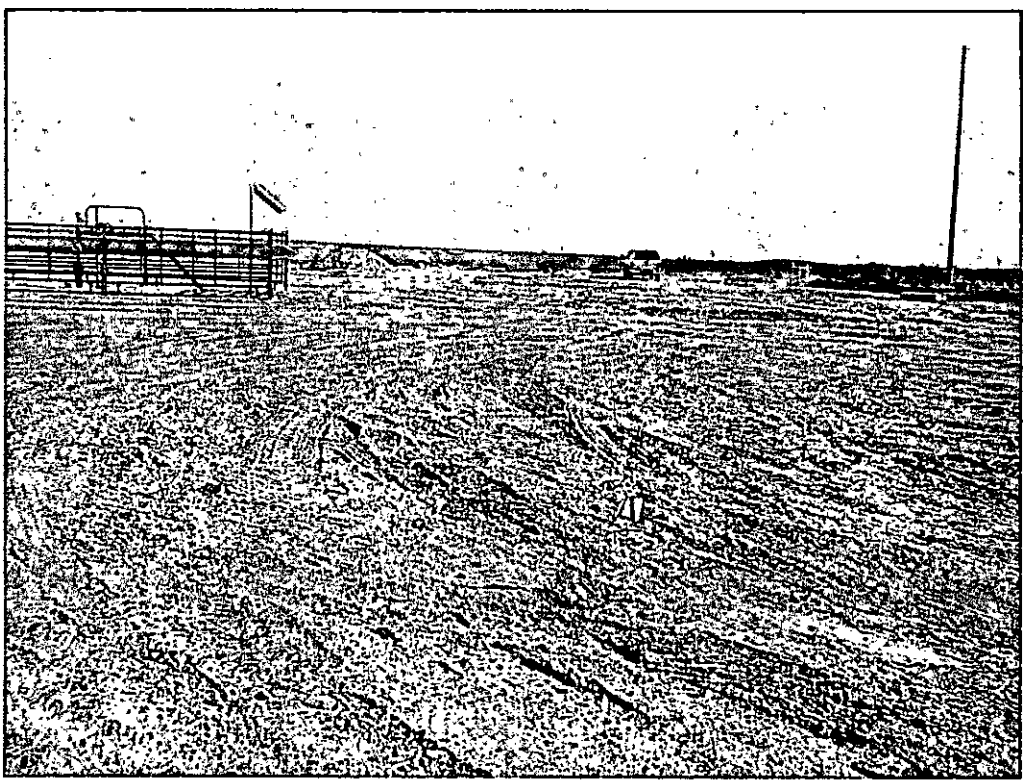
Photos

COG Operating LLC
SRO SWD #101
Eddy County, New Mexico

TETRA TECH



View Northeast –Area of AH-1 and AH-2

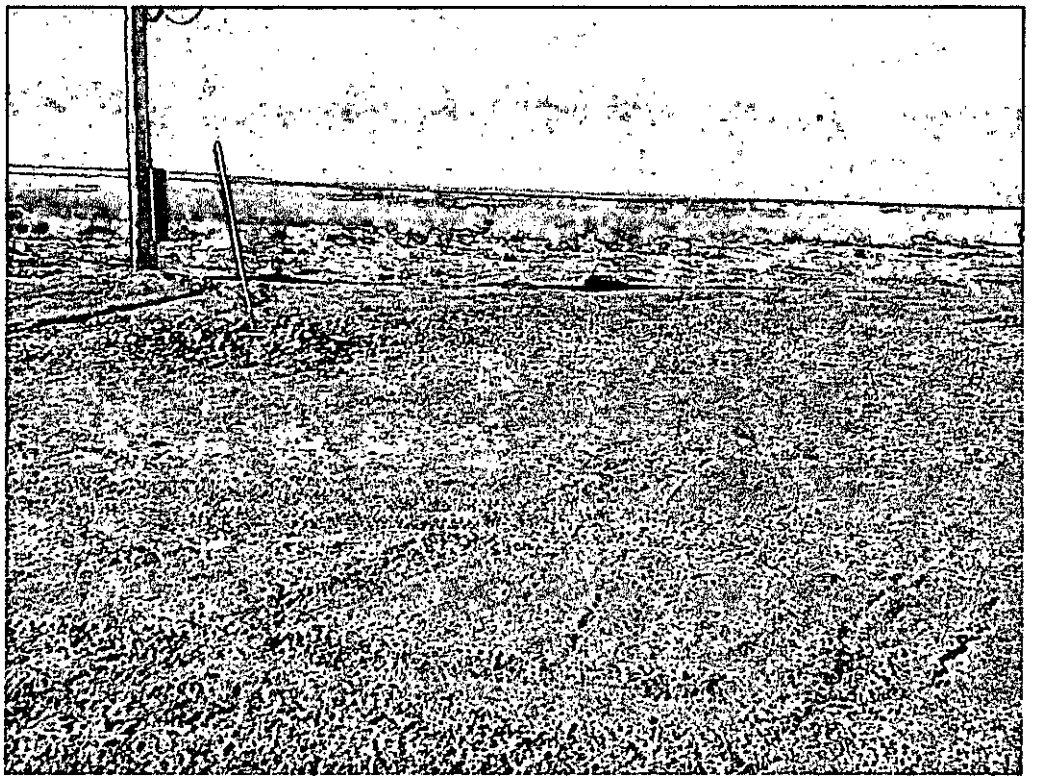


View East – Area of AH-3

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH

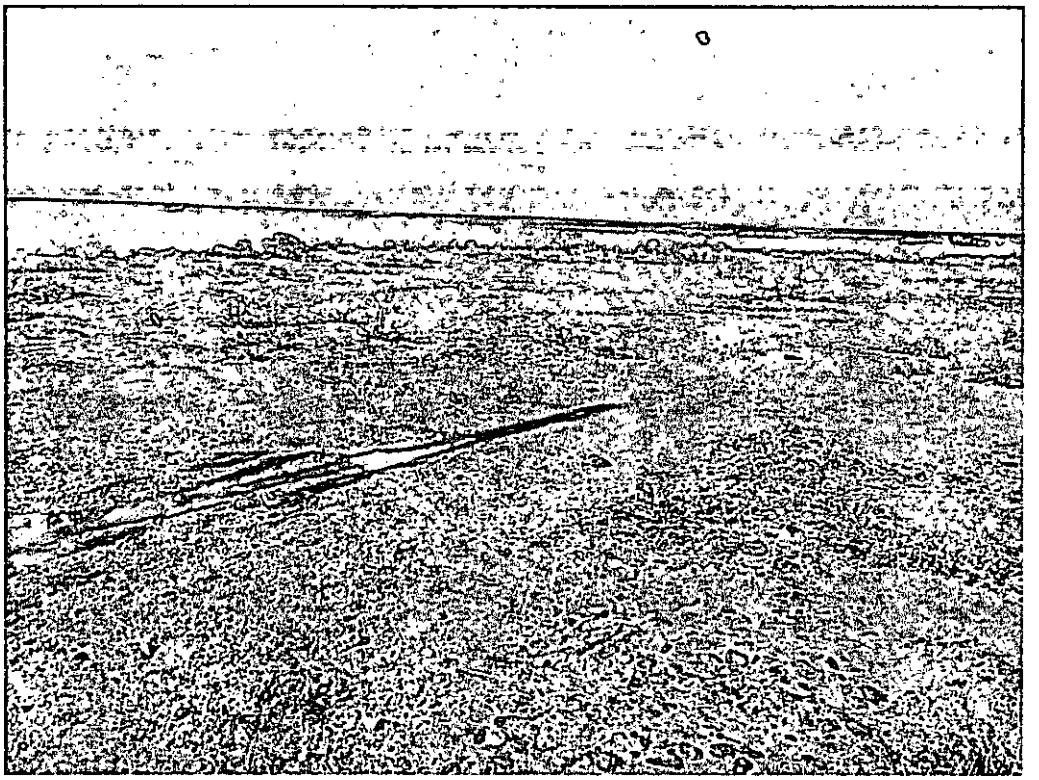
View West - Area of AH-4



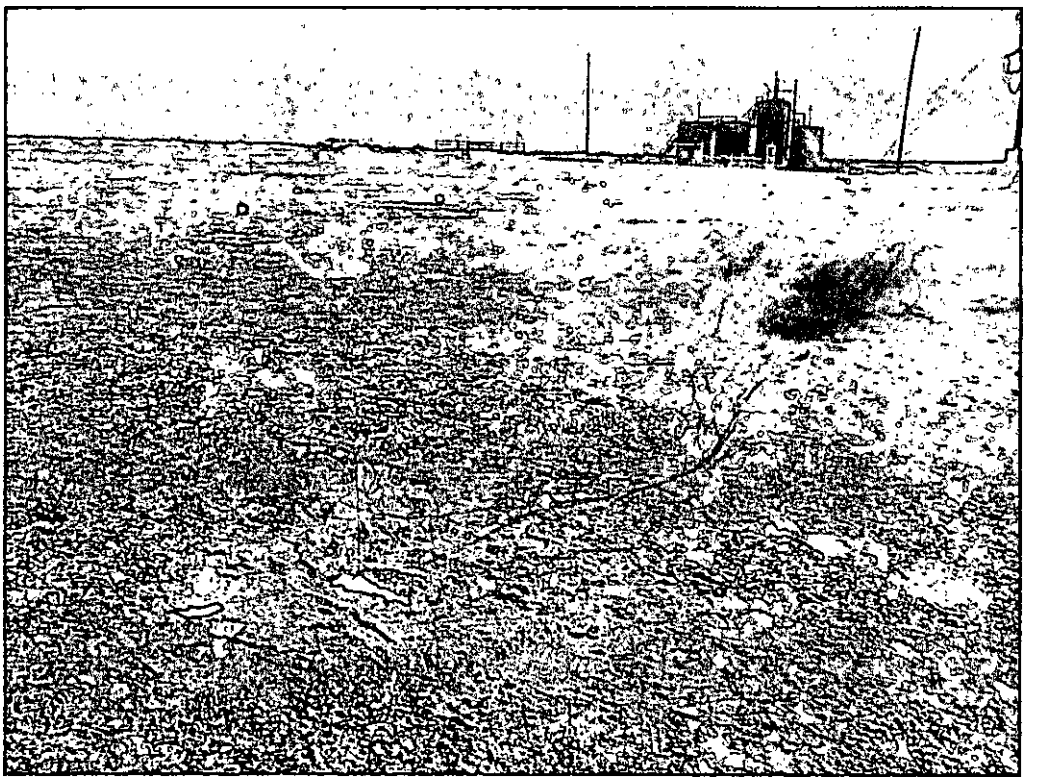
View West – Area of AH-5

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH



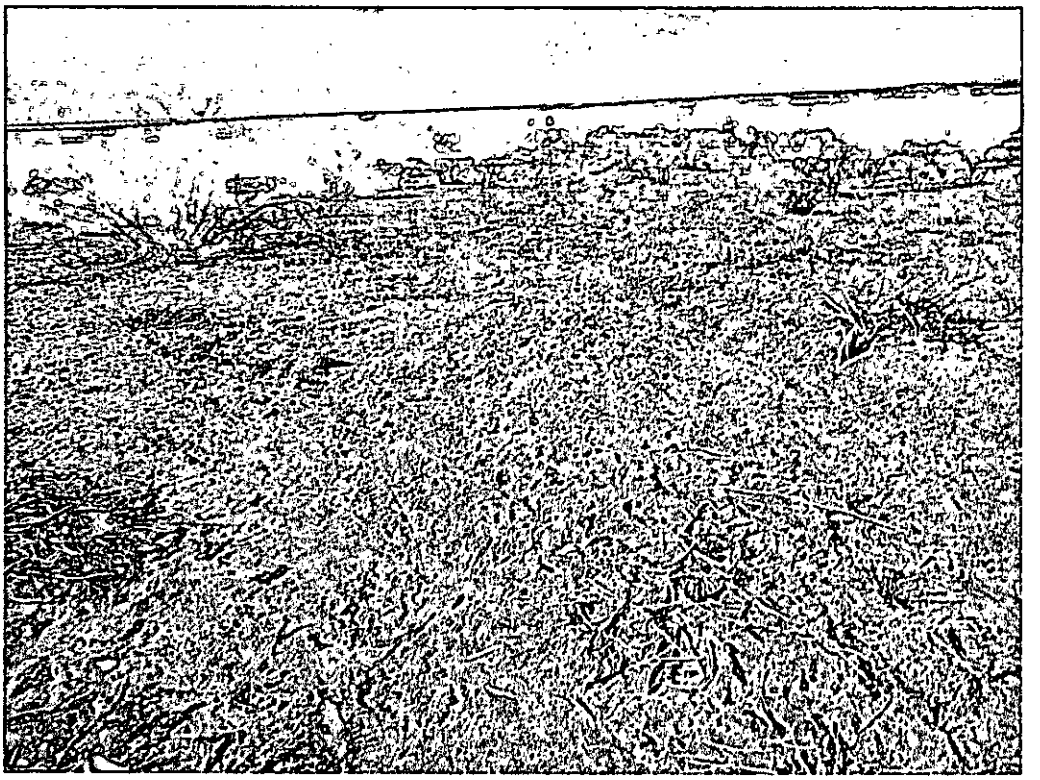
View West – Area of AH-6, AH-7, and AH-8



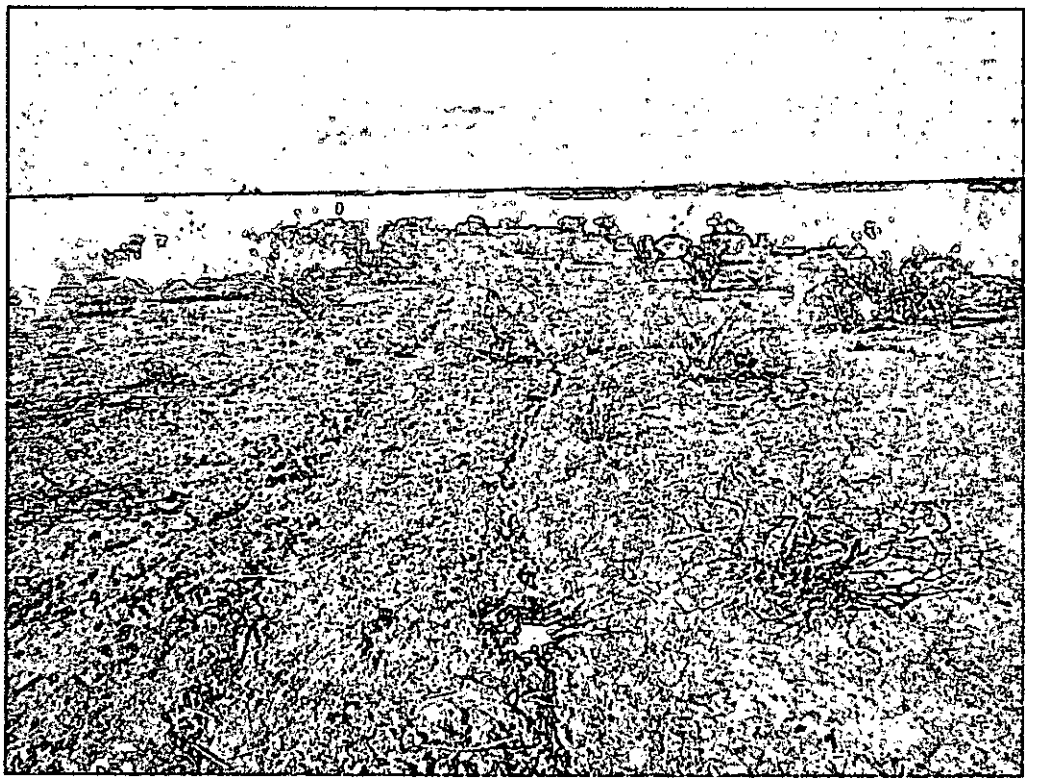
View Southeast – Area of AH-9, AH-10, and AH-11

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH



View North – Area of AH-12

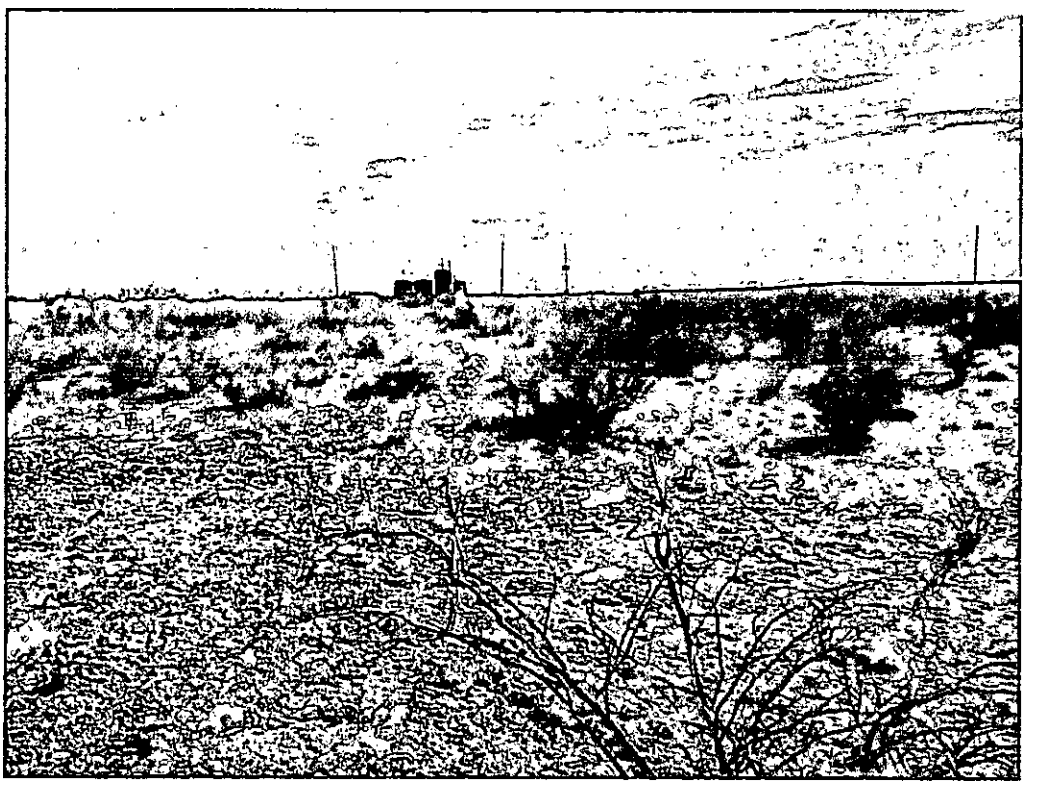


View North – Area of AH-13

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH

View North – Area of AH-14

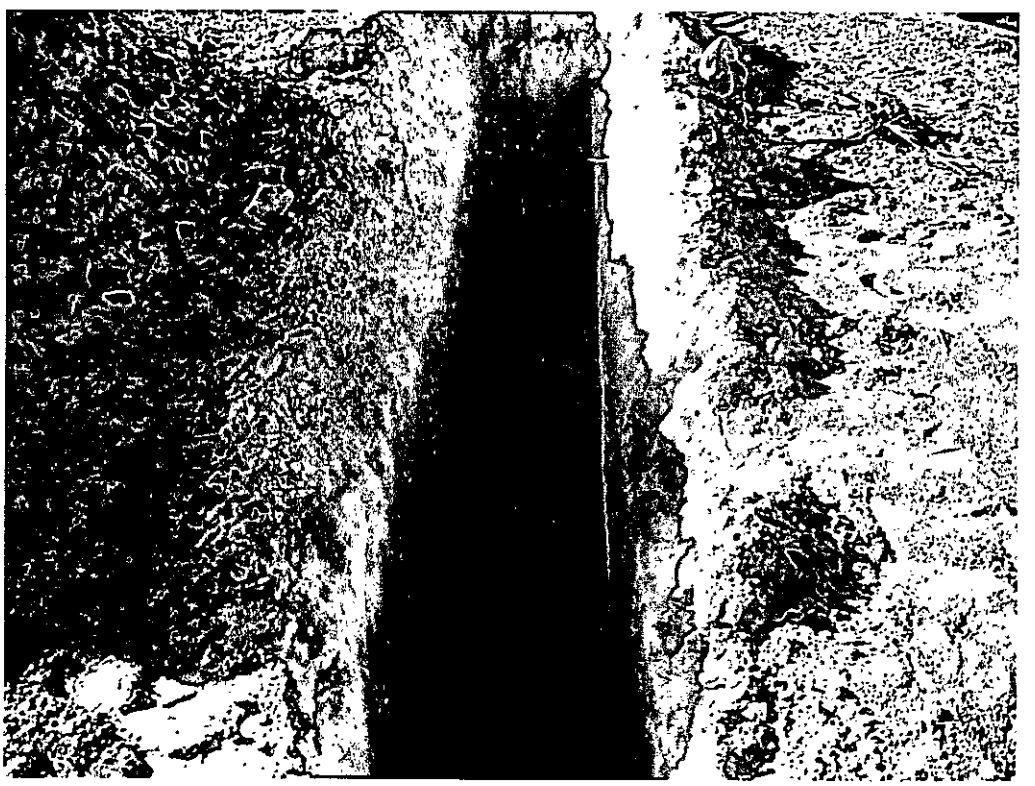


View South – Area of AH-15

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH

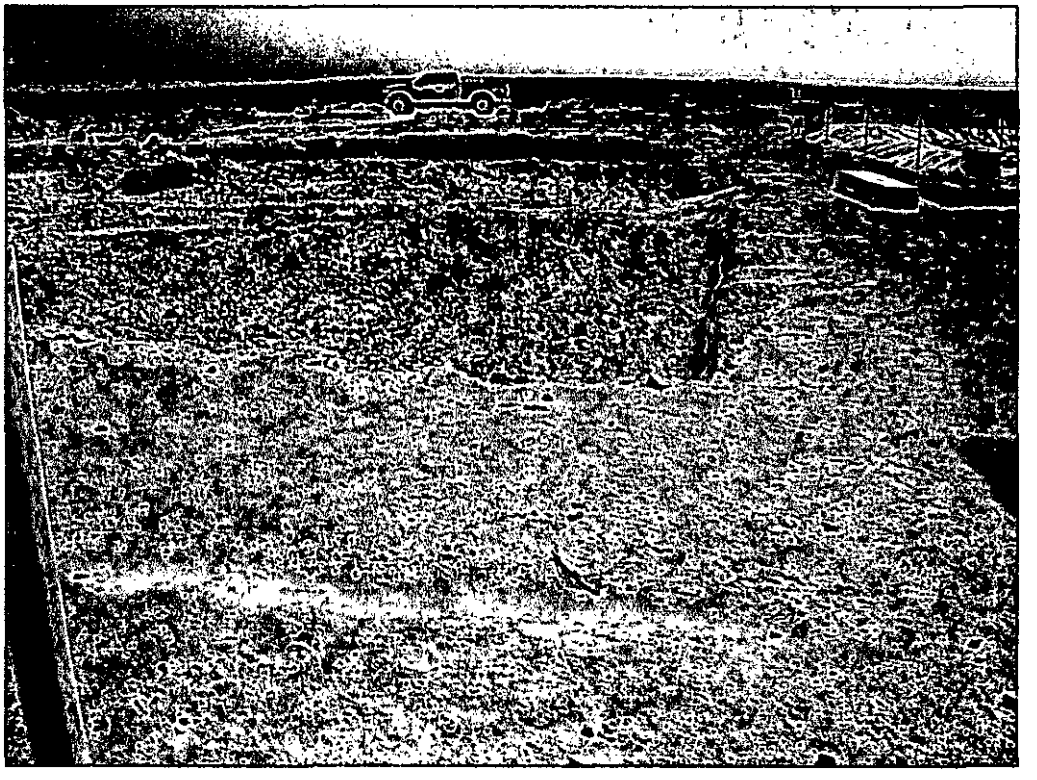
Typical Backhoe Trench



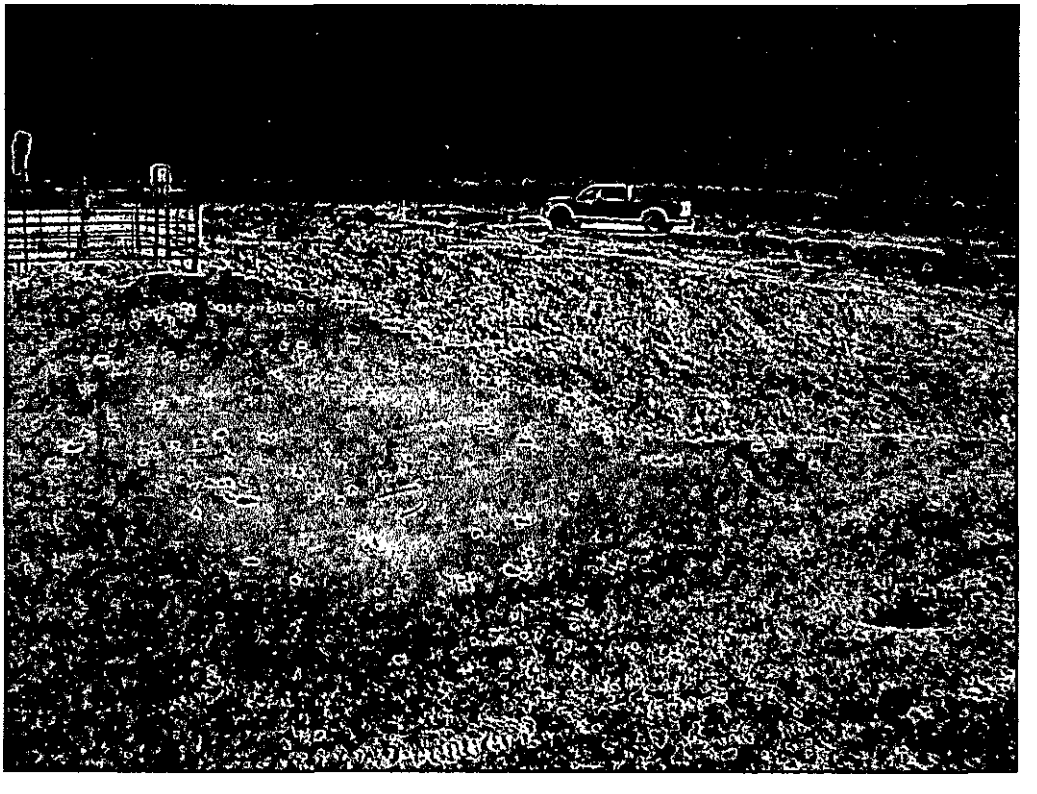
Typical Backhoe Trench

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH



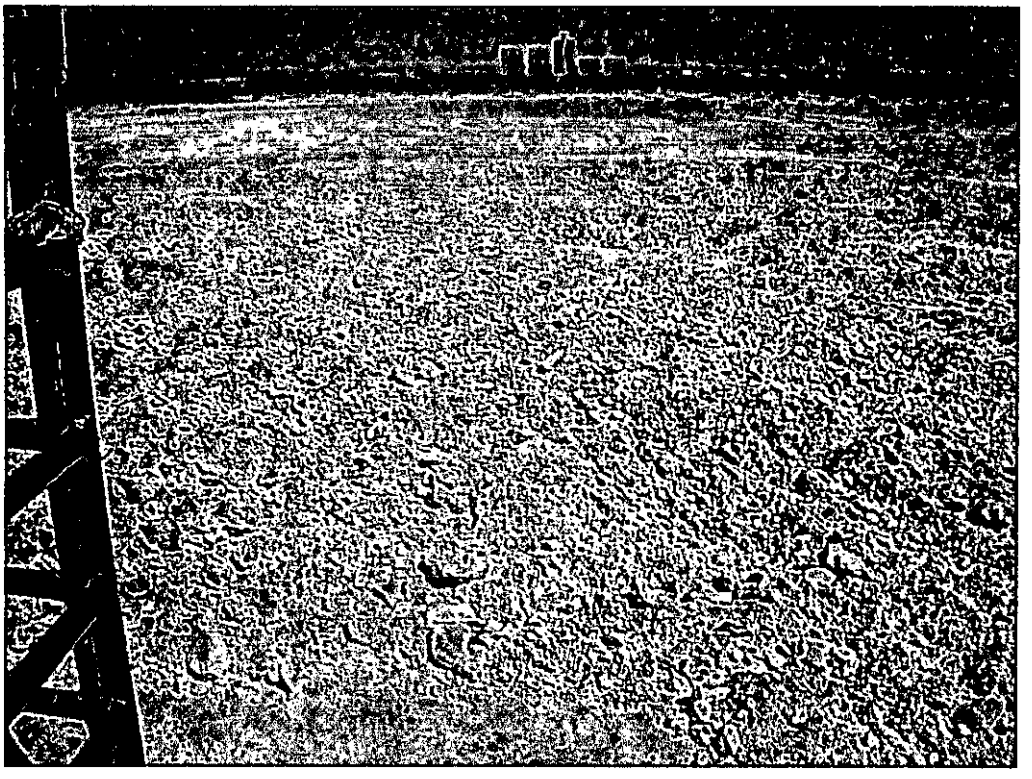
View East – Excavation area of AH-1 and AH-4



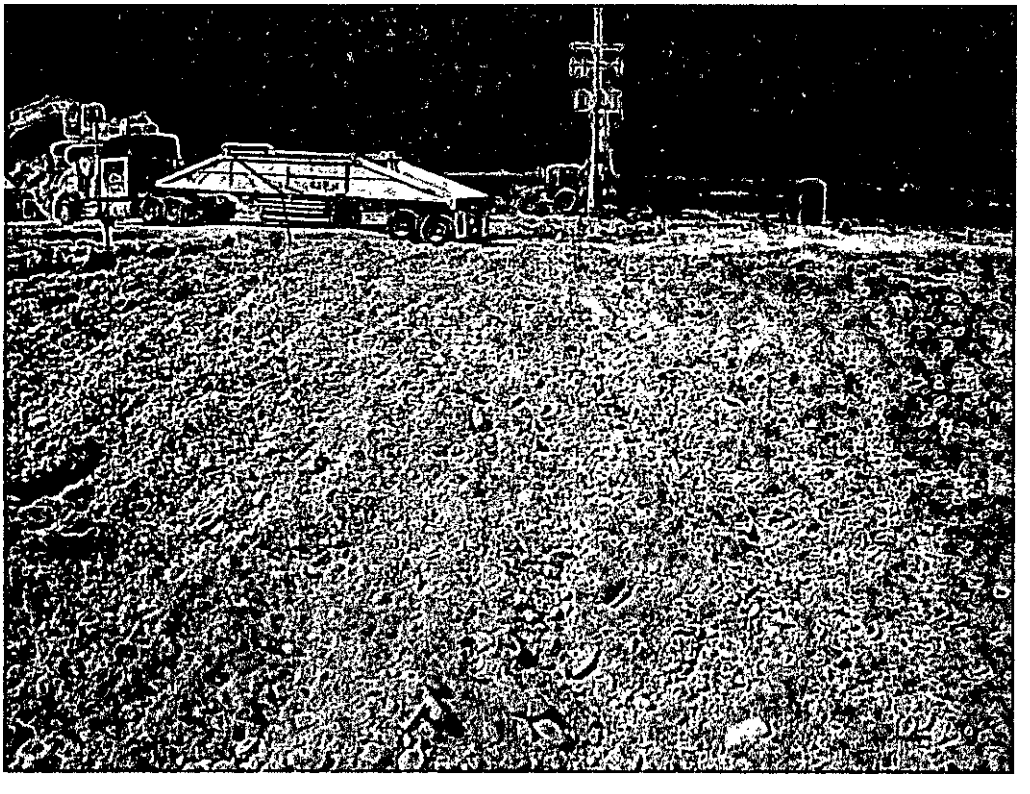
View Northeast – Excavation area of AH-4 and AH-2

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH



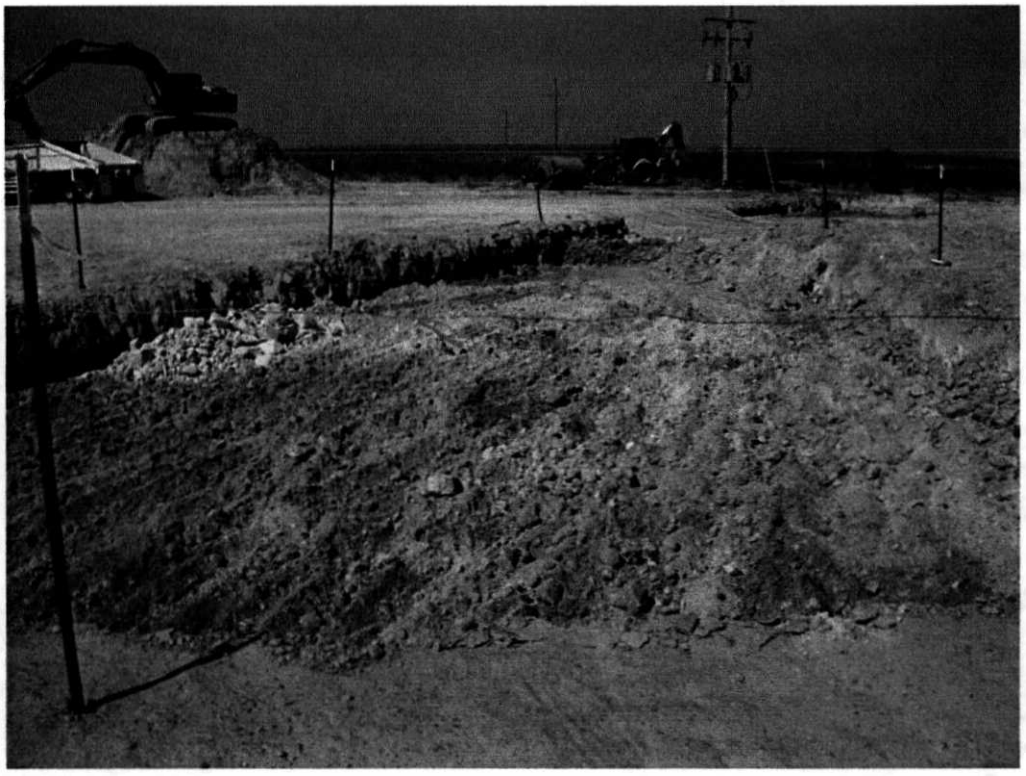
View Northeast – Excavation area of AH-3



View Northwest – Excavation area of AH-6 and AH-7

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH

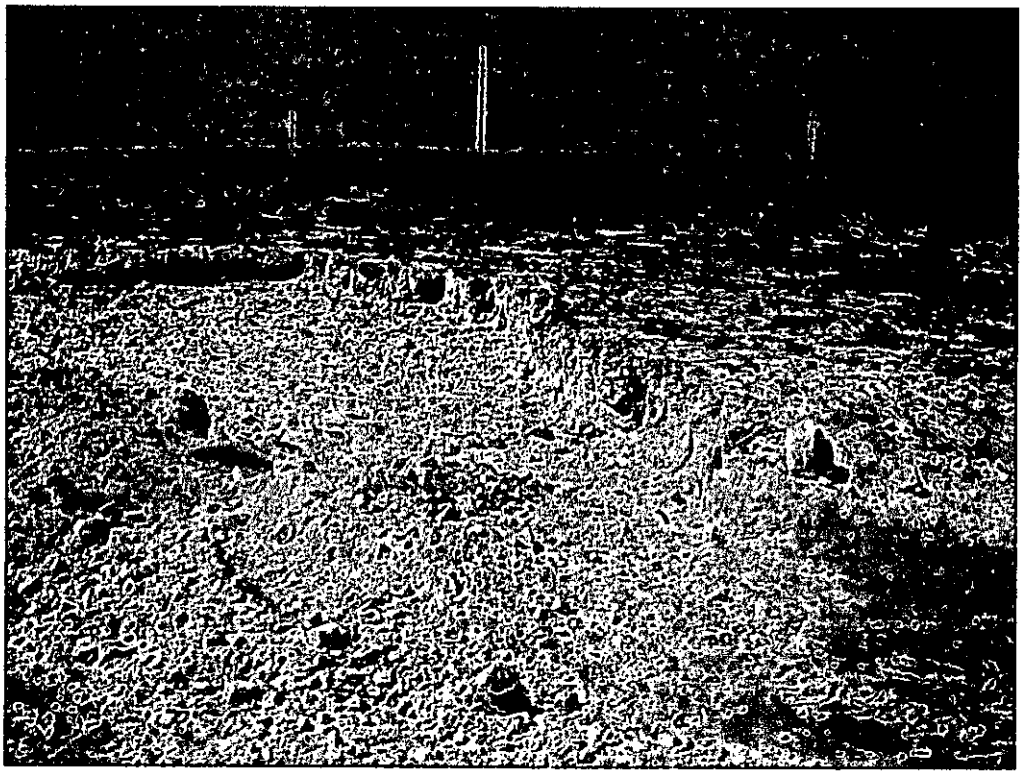


View North – Excavation area of AH-5

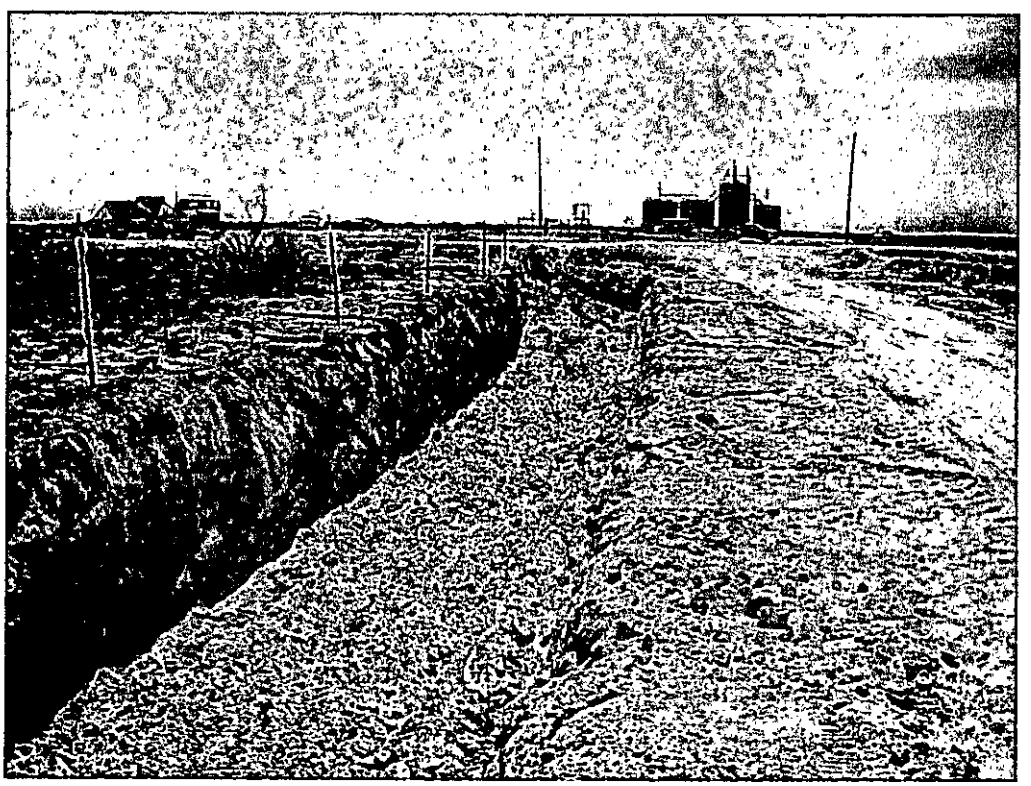
View Northwest – Excavation area of AH-8

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH



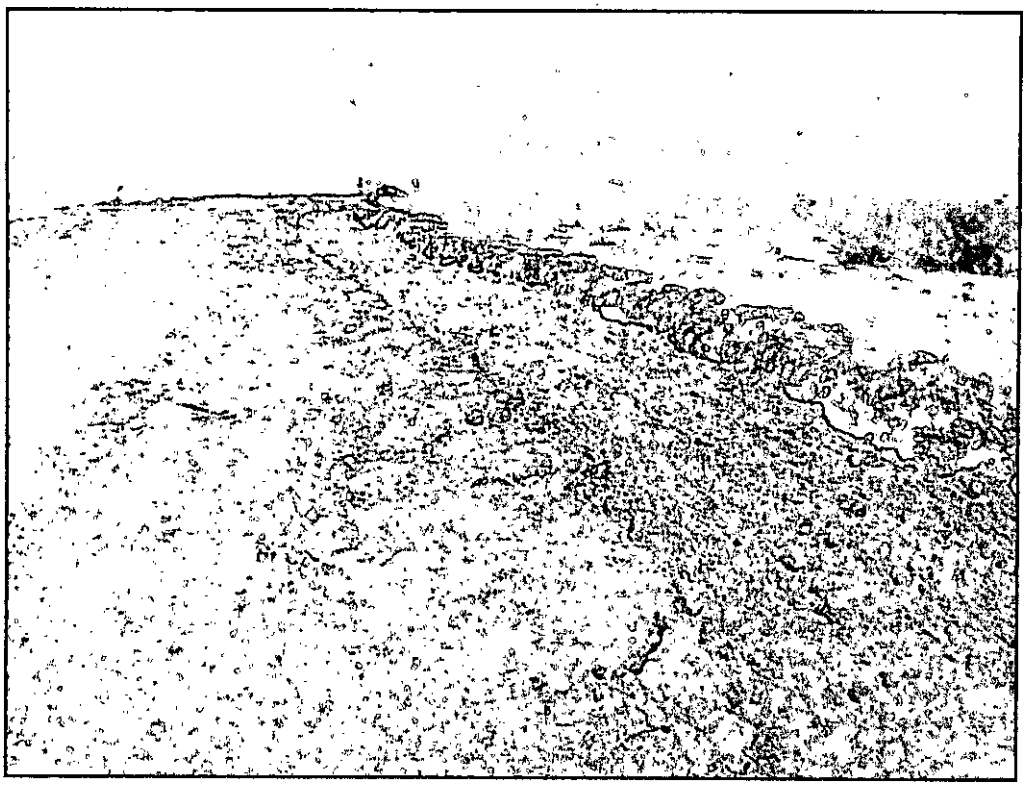
View South – Excavation area of AH-9 and AH-10



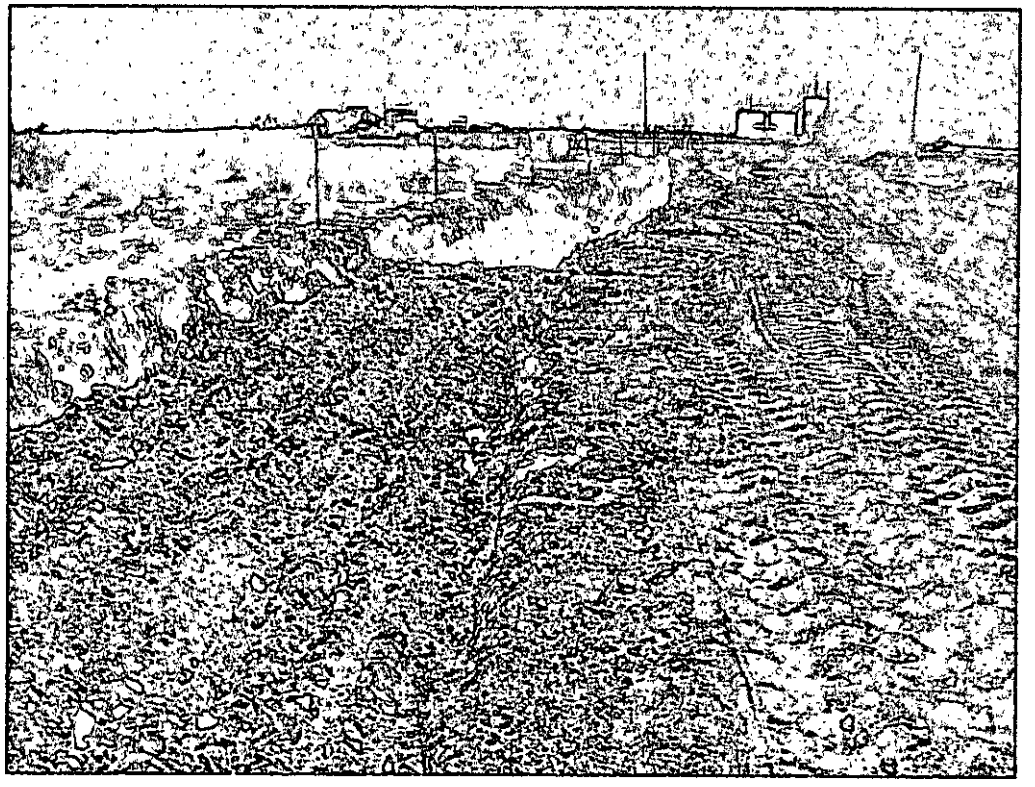
View Southeast – Excavation area of AH-12

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH



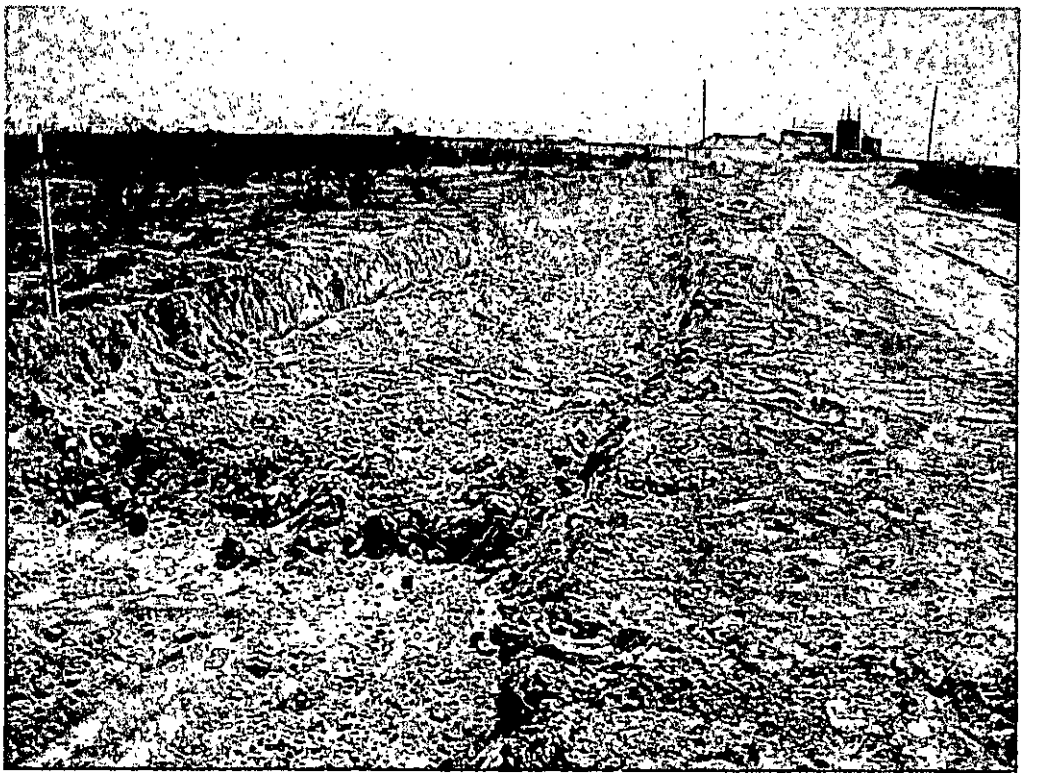
View North – Excavation area of AH-13



View Southeast –Excavation area of AH-14

COG Operating LLC
SRO SWD #1
Eddy County, New Mexico

TETRA TECH



View Southeast – Excavation area of AH-15

Tables

Table 1
COG Operating LLC.
SRO SWD #101
Eddy County, New Mexico

Sample ID	Sample Date	BEB 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						
AH-1	12/17/2013	0-.5		X	26.5	<50.0	26.5	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**8,910**
T-1	3/14/2014	0		X	-	-	-	-	-	-	-	-	**1,360**
	"	2		X	-	-	-	-	-	-	-	-	**2,290**
	"	4	X		-	-	-	-	-	-	-	-	**2,600**
	"	6	x		-	-	-	-	-	-	-	-	**2,380**
	"	8	X		-	-	-	-	-	-	-	-	**2,070**
	"	10	X		-	-	-	-	-	-	-	-	**1,350**
AH-2	12/17/2013	0-.5		X	7.77	<50.0	7.77	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**4,060**
T-2	3/14/2014	0		X	-	-	-	-	-	-	-	-	**1,340**
	"	2	X		-	-	-	-	-	-	-	-	736
	"	4	X		-	-	-	-	-	-	-	-	147
	"	6	x		-	-	-	-	-	-	-	-	58.9
	"	8	X		-	-	-	-	-	-	-	-	49.1
	"	10	X		-	-	-	-	-	-	-	-	255
AH-3	12/17/2013	0-.5	X	X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**13,400**
T-3	3/14/2014	0	X	X	-	-	-	-	-	-	-	-	**2,340**
	"	2	X		-	-	-	-	-	-	-	-	**4,580**
	"	4	X		-	-	-	-	-	-	-	-	**1,220**
	"	6	x		-	-	-	-	-	-	-	-	**1,420**
	"	8	X		-	-	-	-	-	-	-	-	**1,630**
	"	10	X		-	-	-	-	-	-	-	-	**1,500**

Table 1
COG Operating LLC.
SRO SWD #101
Eddy County, New Mexico

Sample ID	Sample Date	BEB 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						
AH-4	12/17/2013	0-.5		X	8.16	<50.0	8.16	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**5,570**
T-4	3/14/2014	0		X	-	-	-	-	-	-	-	-	**1,950**
	"	2		X	-	-	-	-	-	-	-	-	**4,470**
	"	4	X		-	-	-	-	-	-	-	-	**2,210**
	"	6	x		-	-	-	-	-	-	-	-	**1,310**
	"	8	X		-	-	-	-	-	-	-	-	**1,530**
	"	10	X		-	-	-	-	-	-	-	-	742
AH-5	12/17/2013	0-.5		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**6,240**
T-5	3/14/2014	0		X	-	-	-	-	-	-	-	-	**1,850**
	"	2		X	-	-	-	-	-	-	-	-	**5,110**
	"	4	X		-	-	-	-	-	-	-	-	**1,960**
	"	6	x		-	-	-	-	-	-	-	-	**1,230**
	"	8	X		-	-	-	-	-	-	-	-	**2,290**
	"	10	X		-	-	-	-	-	-	-	-	775
AH-6	12/17/2013	0-0.5		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**6,520**
	"	1-1.5		X	-	-	-	-	-	-	-	-	**3,970**
	"	2-2.5		X	-	-	-	-	-	-	-	-	**1,360**
	"	3-3.5	x		-	-	-	-	-	-	-	-	**1,710**
	"	4-4.5	X		-	-	-	-	-	-	-	-	**1,570**
AH-7	12/17/2013	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**7,940**
	"	1-1.5		X	-	-	-	-	-	-	-	-	**2,560**
	"	2-2.5		X	-	-	-	-	-	-	-	-	725
	"	3-3.5	x		-	-	-	-	-	-	-	-	853
	"	4-4.5	X		-	-	-	-	-	-	-	-	**1,450**

Table 1
COG Operating LLC.
SRO SWD #101
Eddy County, New Mexico

Sample ID	Sample Date	BEB 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						
AH-8	12/17/2013	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**10,600**
	"	1-1.5		X	-	-	-	-	-	-	-	-	**1,390**
	"	2-2.5		X	-	-	-	-	-	-	-	-	**2,300**
	"	3-3.5		X	-	-	-	-	-	-	-	-	**2,020**
	"	4-4.5	X		-	-	-	-	-	-	-	-	**1,310**
AH-9	12/17/2013	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**2,420**
	"	1-1.5		X	-	-	-	-	-	-	-	-	**1,330**
	"	2-2.5		X	-	-	-	-	-	-	-	-	982
	"	3-3.5	x		-	-	-	-	-	-	-	-	**1,090**
	"	4-4.5	X		-	-	-	-	-	-	-	-	912
AH-10	12/17/2013	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**6,490**
	"	1-1.5		X	-	-	-	-	-	-	-	-	**3,700**
	"	2-2.5		X	-	-	-	-	-	-	-	-	**1,590**
	"	3-3.5	x		-	-	-	-	-	-	-	-	**1,170**
	"	3.5-4	X		-	-	-	-	-	-	-	-	**1,250**
AH-11	12/17/2013	0-1	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	417
	"	1-1.5	X		-	-	-	-	-	-	-	-	**1,110**
	"	2-2.5	X		-	-	-	-	-	-	-	-	973
	"	3-3.5	x		-	-	-	-	-	-	-	-	879
	"	4-4.5	X		-	-	-	-	-	-	-	-	591

Table 1
COG Operating LLC.
SRO SWD #101
Eddy County, New Mexico

Sample ID	Sample Date	BEB 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						
AH-12	12/17/2013	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**11,200**
	"	1-1.5		X	-	-	-	-	-	-	-	-	**8,200**
	"	2-2.5		X	-	-	-	-	-	-	-	-	**7,360**
	"	3-3.5		X	-	-	-	-	-	-	-	-	**2,910**
	"	4-4.5		X	-	-	-	-	-	-	-	-	**2,270**
T-6	3/14/2014	0		X	-	-	-	-	-	-	-	-	**15,800**
	"	2		X	-	-	-	-	-	-	-	-	**4,960**
	"	4		X	-	-	-	-	-	-	-	-	**2,250**
	"	6		X	-	-	-	-	-	-	-	-	**1,320**
	"	8	X		-	-	-	-	-	-	-	-	981
	"	10	X		-	-	-	-	-	-	-	-	991
AH-13	12/17/2013	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**13,300**
	"	1-1.5		X	-	-	-	-	-	-	-	-	**4,500**
	"	2-2.5		X	-	-	-	-	-	-	-	-	**3,160**
	"	3-3.5	x		-	-	-	-	-	-	-	-	**1,220**
	"	4-4.5	X		-	-	-	-	-	-	-	-	914
AH-14	12/17/2013	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**14,500**
	"	1-1.5		X	-	-	-	-	-	-	-	-	**15,800**
	"	2-2.5		X	-	-	-	-	-	-	-	-	**10,400**
	"	3-3.5		X	-	-	-	-	-	-	-	-	**8,450**
T-7	3/14/2014	0		X	-	-	-	-	-	-	-	-	**2,770**
	"	2		X	-	-	-	-	-	-	-	-	**2,260**
	"	4	X		-	-	-	-	-	-	-	-	416
	"	6	x		-	-	-	-	-	-	-	-	261
	"	8	X		-	-	-	-	-	-	-	-	426
	"	10	X		-	-	-	-	-	-	-	-	522

Table 1
COG Operating LLC.
SRO SWD #101
Eddy County, New Mexico

Sample ID	Sample Date	BEB 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						
AH-15	12/17/2013	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**10,000**
	"	1-1.5		X	-	-	-	-	-	-	-	-	**6,410**
	"	2-2.5		X	-	-	-	-	-	-	-	-	**1,770**
	"	3-3.5		X	-	-	-	-	-	-	-	-	**1,040**
	"	4-4.5		X	-	-	-	-	-	-	-	-	**7,280**
T-8	3/14/2014	0		X	-	-	-	-	-	-	-	-	**14,800**
	"	2		X	-	-	-	-	-	-	-	-	**5,460**
	"	4		X	-	-	-	-	-	-	-	-	870
	"	6	x		-	-	-	-	-	-	-	-	861
	"	8	X		-	-	-	-	-	-	-	-	532
	"	10	X		-	-	-	-	-	-	-	-	665
Background	12/17/2013	0-1	X		-	-	-	-	-	-	-	-	<20.0
	"	1-1.5	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	X		-	-	-	-	-	-	-	-	<20.0
	"	3-3.5	x		-	-	-	-	-	-	-	-	65.0
Background Trench	3/18/2014	0	X		-	-	-	-	-	-	-	-	<16.0
	"	2	X		-	-	-	-	-	-	-	-	224
	"	4	X		-	-	-	-	-	-	-	-	816
	"	6	x		-	-	-	-	-	-	-	-	1,260
	"	8	X		-	-	-	-	-	-	-	-	1,730
	"	10	x		-	-	-	-	-	-	-	-	2,640

(-) Not Analyzed

(BEB) Below Excavation Bottom

Excavation Depth

Date modified:5/6/2014

Appendix A

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Robert McNeill
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	SRO SWD #101	Facility Type	Tank Battery

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-26105

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	05	26S	28E					Eddy

Latitude 32.07351 Longitude 104.1067

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 85bbls	Volume Recovered 35bbls
Source of Release 3" steel line	Date and Hour of Occurrence 11-26-2013	Date and Hour of Discovery 11-26-2013 08:30am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher - NMOCD	
By Whom? Michelle Mullins	Date and Hour 11-27-2013 09:45am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A 3" steel line between the H-pump and the well head corroded due to corrosion.

Describe Area Affected and Cleanup Action Taken.*

Initially 85bbls of produced water were released from a steel line that had developed a hole going from the H- pump to the well. We were able to recover 35bbls with a vacuum truck. The release was contained on the location. All free fluids have been recovered. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for approval prior to any significant remediation work.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Robert Grubbs Jr.	Approved by District Supervisor:
Title: Senior Environmental Coordinator	Approval Date: / Expiration Date:
E-mail Address: rgrubbs@concho.com	Conditions of Approval: / Attached ☐
Date: 12-11-2013 Phone: 432-661-6601	

* Attach Additional Sheets If Necessary

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 04 2014
RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **COG Operating LLC**	Contact **Robert McNeil**
Address **600West Illinois Avenue Midland, Texas 79701**	Telephone No. **(432) 230-0077**
Facility Name SRO SWD #101	Facility Type **Tank Battery**

Surface Owner: State	Mineral Owner	Lease No. (API #) 30-015-26105

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	05	26S	28E					Eddy

Latitude N 32.07351° **Longitude** W 104.1067°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 85 bbls	Volume Recovered 35 bbls
Source of Release: Equalizer	Date and Hour of Occurrence 11/26/2013	Date and Hour of Discovery 11/26/2013 08:30 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☒ Not Required	If YES, To Whom? **Mike Bratcher- NMOCD**	
By Whom? Michelle Mullins	Date and Hour 11-27-2013 09:45 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 04 2014
RECEIVED

Describe Cause of Problem and Remedial Action Taken.*

A 3" steel line between the H-pump and the well head corroded.

Describe Area Affected and Cleanup Action Taken.*

Initially 85 bbls of produced water were released from a steel line that had developed a hole going from the H-pump to the well. We were able to recover 35 bbls with a vacuum truck. All free fluids have been recovered. Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal. Site was then brought up to surface grade with clean backfill material. Tetra Tech prepared closure report and submitted to NMOCD for review.

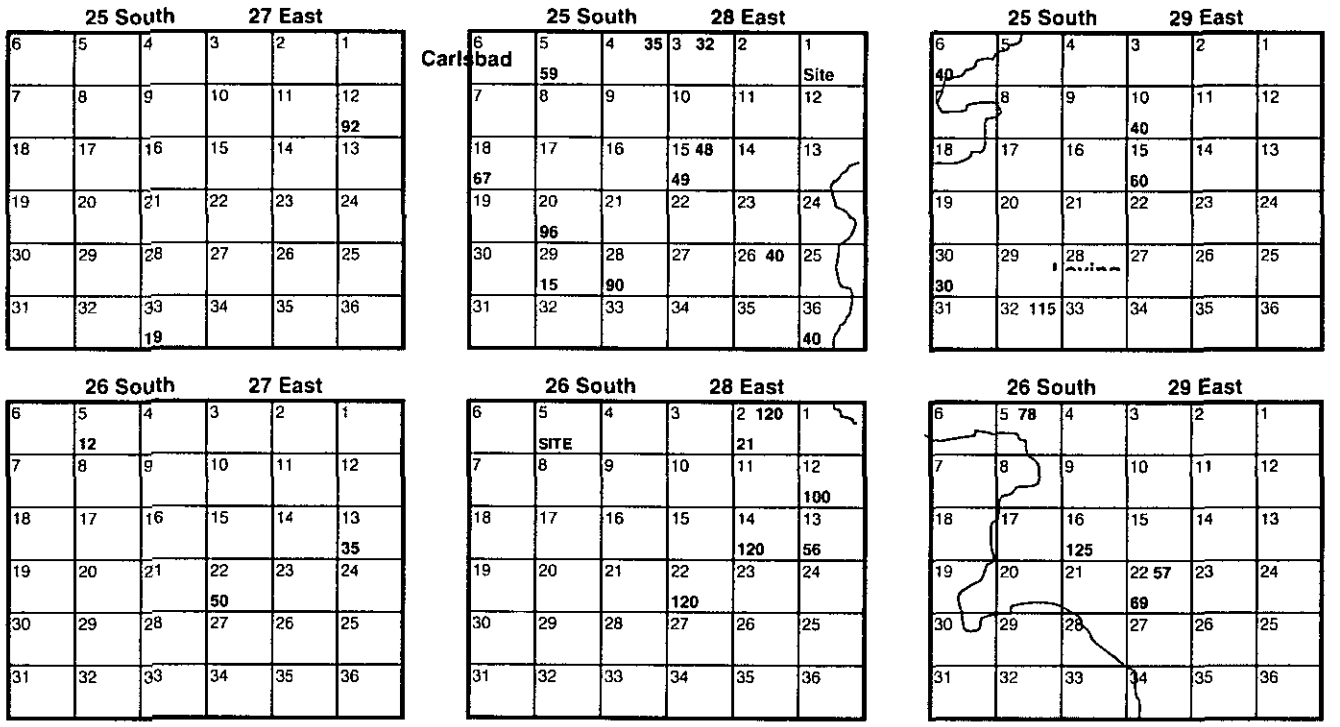
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Ike Tavarez (Agent for COG)	Approved by District Supervisor:
Title: Project Manager	Approval Date: / Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval: / Attached ☐
Date: 5-14-14 Phone: (432) 682-4559	

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - SRO SWD #101
Eddy County, New Mexico



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

Appendix C

Summary Report

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

Report Date: January 6, 2014

Work Order: 13121822

Project Location: Eddy Co, NM
Project Name: COG/SRO 101
Project Number: TBD

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
349304	AH-1 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349305	AH-2 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349306	AH-3 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349307	AH-4 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349308	AH-5 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349309	AH-6 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349310	AH-6 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349311	AH-6 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349312	AH-6 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349313	AH-6 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349314	AH-7 0-1'	soil	2013-12-17	00:00	2013-12-18
349315	AH-7 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349316	AH-7 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349317	AH-7 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349318	AH-7 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349319	AH-8 0-1'	soil	2013-12-17	00:00	2013-12-18
349320	AH-8 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349321	AH-8 2-2.5.5'	soil	2013-12-17	00:00	2013-12-18
349322	AH-8 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349323	AH-8 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349324	AH-9 0-1'	soil	2013-12-17	00:00	2013-12-18
349325	AH-9 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349326	AH-9 2-2.5.5'	soil	2013-12-17	00:00	2013-12-18
349327	AH-9 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349328	AH-9 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349329	AH-10 0-1'	soil	2013-12-17	00:00	2013-12-18
349330	AH-10 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349331	AH-10 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349332	AH-10 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349333	AH-10 3.5-4'	soil	2013-12-17	00:00	2013-12-18

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
349334	AH-11 0-1'	soil	2013-12-17	00:00	2013-12-18
349335	AH-11 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349336	AH-11 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349337	AH-11 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349338	AH-11 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349339	AH-12 0-1'	soil	2013-12-17	00:00	2013-12-18
349340	AH-12 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349341	AH-12 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349342	AH-12 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349343	AH-12 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349344	AH-13 0-1'	soil	2013-12-17	00:00	2013-12-18
349345	AH-13 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349346	AH-13 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349347	AH-13 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349348	AH-13 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349349	AH-14 0-1'	soil	2013-12-17	00:00	2013-12-18
349350	AH-14 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349351	AH-14 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349352	AH-14 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349353	AH-15 0-1'	soil	2013-12-17	00:00	2013-12-18
349354	AH-15 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349355	AH-15 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349356	AH-15 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349357	BG-1 0-1'	soil	2013-12-17	00:00	2013-12-18
349358	BG-1 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349359	BG-1 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349360	BG-1 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349361	AH-15 4-4.5'	soil	2013-12-17	00:00	2013-12-18

	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)
349304 - AH-1 0-0.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	**26.5**
349305 - AH-2 0-0.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	**7.77**
349306 - AH-3 0-0.5'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
349307 - AH-4 0-0.5'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	**8.16**
349308 - AH-5 0-0.5'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
349309 - AH-6 0-0.5'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
349314 - AH-7 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
349319 - AH-8 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
349324 - AH-9 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
349329 - AH-10 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
349334 - AH-11 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
349339 - AH-12 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	<4.00
349344 - AH-13 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
349349 - AH-14 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
349353 - AH-15 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00

Sample: 349304 - AH-1 0-0.5'

Param	Flag	Result	Units	RL
Chloride		**8910**	mg/Kg	4

Sample: 349305 - AH-2 0-0.5'

Param	Flag	Result	Units	RL
Chloride		**4060**	mg/Kg	4

Sample: 349306 - AH-3 0-0.5'

Param	Flag	Result	Units	RL
Chloride		**13400**	mg/Kg	4

Sample: 349307 - AH-4 0-0.5'

Param	Flag	Result	Units	RL
Chloride		**5570**	mg/Kg	4

Sample: 349308 - AH-5 0-0.5'

Param	Flag	Result	Units	RL
Chloride		**6240**	mg/Kg	4

Sample: 349309 - AH-6 0-0.5'

Param	Flag	Result	Units	RL
Chloride		**6520**	mg/Kg	4

Sample: 349310 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**3970**	mg/Kg	4

Sample: 349311 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**1360**	mg/Kg	4

Sample: 349312 - AH-6 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1710**	mg/Kg	4

Sample: 349313 - AH-6 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**1570**	mg/Kg	4

Sample: 349314 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**7940**	mg/Kg	4

Sample: 349315 - AH-7 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**2560**	mg/Kg	4

Sample: 349316 - AH-7 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**725**	mg/Kg	4

Sample: 349317 - AH-7 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**853**	mg/Kg	4

Sample: 349318 - AH-7 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**1450**	mg/Kg	4

Sample: 349319 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		**10600**	mg/Kg	4

Sample: 349320 - AH-8 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**1390**	mg/Kg	4

Sample: 349321 - AH-8 2-2.5.5'

Param	Flag	Result	Units	RL
Chloride		**2300**	mg/Kg	4

Sample: 349322 - AH-8 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**2020**	mg/Kg	4

Sample: 349323 - AH-8 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**1310**	mg/Kg	4

Sample: 349324 - AH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		**2420**	mg/Kg	4

Sample: 349325 - AH-9 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**1330**	mg/Kg	4

Sample: 349326 - AH-9 2-2.5.5'

Param	Flag	Result	Units	RL
Chloride		**982**	mg/Kg	4

Sample: 349327 - AH-9 3-3.5'

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

Sample: 349328 - AH-9 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**912**	mg/Kg	4

Sample: 349329 - AH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		**6490**	mg/Kg	4

Sample: 349330 - AH-10 1-1.5'

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

Sample: 349331 - AH-10 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**1590**	mg/Kg	4

Sample: 349332 - AH-10 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1140**	mg/Kg	4

Sample: 349333 - AH-10 3.5-4'

Param	Flag	Result	Units	RL
Chloride		**1250**	mg/Kg	4

Sample: 349334 - AH-11 0-1'

Param	Flag	Result	Units	RL
Chloride		**417**	mg/Kg	4

Sample: 349335 - AH-11 1-1.5'

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

Sample: 349336 - AH-11 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**973**	mg/Kg	4

Sample: 349337 - AH-11 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**879**	mg/Kg	4

Sample: 349338 - AH-11 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**591**	mg/Kg	4

Sample: 349339 - AH-12 0-1'

Param	Flag	Result	Units	RL
Chloride		**11200**	mg/Kg	4

Sample: 349340 - AH-12 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**8200**	mg/Kg	4

Sample: 349341 - AH-12 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**7360**	mg/Kg	4

Sample: 349342 - AH-12 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**2910**	mg/Kg	4

Sample: 349343 - AH-12 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**2270**	mg/Kg	4

Sample: 349344 - AH-13 0-1'

Param	Flag	Result	Units	RL
Chloride		**13300**	mg/Kg	4

Sample: 349345 - AH-13 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**4500**	mg/Kg	4

Sample: 349346 - AH-13 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**3160**	mg/Kg	4

Sample: 349347 - AH-13 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1220**	mg/Kg	4

Sample: 349348 - AH-13 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**914**	mg/Kg	4

Sample: 349349 - AH-14 0-1'

Param	Flag	Result	Units	RL
Chloride		**14500**	mg/Kg	4

Sample: 349350 - AH-14 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**15800**	mg/Kg	4

Sample: 349351 - AH-14 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**10400**	mg/Kg	4

Sample: 349352 - AH-14 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**8450**	mg/Kg	4

Sample: 349353 - AH-15 0-1'

Param	Flag	Result	Units	RL
Chloride		**10000**	mg/Kg	4

Sample: 349354 - AH-15 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**6410**	mg/Kg	4

Sample: 349355 - AH-15 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**1770**	mg/Kg	4

Sample: 349356 - AH-15 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1040**	mg/Kg	4

Sample: 349357 - BG-1 0-1'

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

Sample: 349358 - BG-1 1-1.5'

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

Sample: 349359 - BG-1 2-2.5'

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

Sample: 349360 - BG-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**65.0**	mg/Kg	4

Sample: 349361 - AH-15 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**7280**	mg/Kg	4

TRACEANALYSIS, INC.

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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: January 6, 2014

Work Order: 13121822

Project Location: Eddy Co, NM
Project Name: COG/SRO 101
Project Number: TBD

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
349304	AH-1 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349305	AH-2 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349306	AH-3 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349307	AH-4 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349308	AH-5 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349309	AH-6 0-0.5'	soil	2013-12-17	00:00	2013-12-18
349310	AH-6 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349311	AH-6 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349312	AH-6 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349313	AH-6 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349314	AH-7 0-1'	soil	2013-12-17	00:00	2013-12-18
349315	AH-7 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349316	AH-7 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349317	AH-7 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349318	AH-7 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349319	AH-8 0-1'	soil	2013-12-17	00:00	2013-12-18
349320	AH-8 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349321	AH-8 2-2.5.5'	soil	2013-12-17	00:00	2013-12-18

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
349322	AH-8 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349323	AH-8 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349324	AH-9 0-1'	soil	2013-12-17	00:00	2013-12-18
349325	AH-9 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349326	AH-9 2-2.5.5'	soil	2013-12-17	00:00	2013-12-18
349327	AH-9 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349328	AH-9 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349329	AH-10 0-1'	soil	2013-12-17	00:00	2013-12-18
349330	AH-10 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349331	AH-10 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349332	AH-10 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349333	AH-10 3.5-4'	soil	2013-12-17	00:00	2013-12-18
349334	AH-11 0-1'	soil	2013-12-17	00:00	2013-12-18
349335	AH-11 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349336	AH-11 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349337	AH-11 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349338	AH-11 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349339	AH-12 0-1'	soil	2013-12-17	00:00	2013-12-18
349340	AH-12 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349341	AH-12 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349342	AH-12 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349343	AH-12 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349344	AH-13 0-1'	soil	2013-12-17	00:00	2013-12-18
349345	AH-13 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349346	AH-13 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349347	AH-13 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349348	AH-13 4-4.5'	soil	2013-12-17	00:00	2013-12-18
349349	AH-14 0-1'	soil	2013-12-17	00:00	2013-12-18
349350	AH-14 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349351	AH-14 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349352	AH-14 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349353	AH-15 0-1'	soil	2013-12-17	00:00	2013-12-18
349354	AH-15 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349355	AH-15 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349356	AH-15 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349357	BG-1 0-1'	soil	2013-12-17	00:00	2013-12-18
349358	BG-1 1-1.5'	soil	2013-12-17	00:00	2013-12-18
349359	BG-1 2-2.5'	soil	2013-12-17	00:00	2013-12-18
349360	BG-1 3-3.5'	soil	2013-12-17	00:00	2013-12-18
349361	AH-15 4-4.5'	soil	2013-12-17	00:00	2013-12-18

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 COG/SRO 101 were received by TraceAnalysis, Inc. on 2013-12-18 and assigned to work order 13121822. Samples for work order 13121822 were received intact at a temperature of 3.9 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	91171	2013-12-19 at 08:26	107765	2013-12-20 at 12:25
BTEX	S 8021B	91224	2013-12-20 at 12:31	107810	2013-12-23 at 09:48
BTEX	S 8021B	91258	2013-12-23 at 12:50	107855	2013-12-24 at 13:15
Chloride (Titration)	SM 4500-Cl B	91351	2013-12-31 at 08:40	107985	2014-01-03 at 10:39
Chloride (Titration)	SM 4500-Cl B	91351	2013-12-31 at 08:40	107994	2014-01-03 at 11:58
Chloride (Titration)	SM 4500-Cl B	91386	2014-01-02 at 15:59	107995	2014-01-03 at 12:05
Chloride (Titration)	SM 4500-Cl B	91386	2014-01-02 at 15:59	108031	2014-01-03 at 09:39
Chloride (Titration)	SM 4500-Cl B	91386	2014-01-02 at 15:59	108032	2014-01-06 at 09:45
Chloride (Titration)	SM 4500-Cl B	91386	2014-01-02 at 15:59	108034	2014-01-06 at 10:14
TPH DRO - NEW	S 8015 D	91215	2013-12-19 at 13:00	107761	2013-12-20 at 09:49
TPH DRO - NEW	S 8015 D	91251	2013-12-23 at 08:35	107808	2013-12-23 at 08:40
TPH GRO	S 8015 D	91171	2013-12-19 at 08:26	107771	2013-12-20 at 12:55
TPH GRO	S 8015 D	91224	2013-12-20 at 12:31	107811	2013-12-23 at 09:51

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 13121822 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: 349304 - AH-1 0-0.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107855	Date Analyzed:	2013-12-24	Analyzed By:	AK
Prep Batch:	91258	Sample Preparation:	2013-12-23	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.03	mg/Kg	1	2.00	102	70 - 130

Sample: 349304 - AH-1 0-0.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			**8910**	mg/Kg	10	4.00

Sample: 349304 - AH-1 0-0.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107808	Date Analyzed:	2013-12-23	Analyzed By:	KC
Prep Batch:	91251	Sample Preparation:		Prepared By:	KC

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			120	mg/Kg	1	100	120	70 - 130

Sample: 349304 - AH-1 0-0.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		1	**26.5**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			2.54	mg/Kg	1	2.00	127	70 - 130

Sample: 349305 - AH-2 0-0.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107855	Date Analyzed:	2013-12-24	Analyzed By:	AK
Prep Batch:	91258	Sample Preparation:	2013-12-23	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	95	70 - 130
4-Bromofluorobenzene (4-BFB)			2.01	mg/Kg	1	2.00	100	70 - 130

Sample: 349305 - AH-2 0-0.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4060**	mg/Kg	10	4.00

Sample: 349305 - AH-2 0-0.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

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

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

Sample: 349305 - AH-2 0-0.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**7.77**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	2.98	mg/Kg	1	2.00	149	70 - 130

Sample: 349306 - AH-3 0-0.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.41	mg/Kg	1	2.00	70	70 - 130
4-Bromofluorobenzene (4-BFB)			1.53	mg/Kg	1	2.00	76	70 - 130

Sample: 349306 - AH-3 0-0.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**13400**	mg/Kg	10	4.00

Sample: 349306 - AH-3 0-0.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		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: 349306 - AH-3 0-0.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.02	mg/Kg	1	2.00	101	70 - 130
4-Bromofluorobenzene (4-BFB)			2.25	mg/Kg	1	2.00	112	70 - 130

Sample: 349307 - AH-4 0-0.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.55	mg/Kg	1	2.00	78	70 - 130
4-Bromofluorobenzene (4-BFB)			1.77	mg/Kg	1	2.00	88	70 - 130

Sample: 349307 - AH-4 0-0.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

continued ...

sample 349307 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**5570**	mg/Kg	10	4.00

Sample: 349307 - AH-4 0-0.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			115	mg/Kg	1	100	115	70 - 130

Sample: 349307 - AH-4 0-0.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**8.16**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.27	mg/Kg	1	2.00	114	70 - 130
4-Bromofluorobenzene (4-BFB)			2.22	mg/Kg	1	2.00	111	70 - 130

Sample: 349308 - AH-5 0-0.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.55	mg/Kg	1	2.00	78	70 - 130
4-Bromofluorobenzene (4-BFB)			1.69	mg/Kg	1	2.00	84	70 - 130

Sample: 349308 - AH-5 0-0.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**6240**	mg/Kg	10	4.00

Sample: 349308 - AH-5 0-0.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

Parameter	Flag	Cert	Result	RL 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			114	mg/Kg	1	100	114	70 - 130

Sample: 349308 - AH-5 0-0.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.19	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			2.45	mg/Kg	1	2.00	122	70 - 130

Sample: 349309 - AH-6 0-0.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.41	mg/Kg	1	2.00	71	70 - 130
4-Bromofluorobenzene (4-BFB)			1.52	mg/Kg	1	2.00	76	70 - 130

Sample: 349309 - AH-6 0-0.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

continued ...

sample 349309 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6520**	mg/Kg	10	4.00

Sample: 349309 - AH-6 0-0.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

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			115	mg/Kg	1	100	115	70 - 130

Sample: 349309 - AH-6 0-0.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.17	mg/Kg	1	2.00	108	70 - 130

Sample: 349310 - AH-6 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3970**	mg/Kg	10	4.00

Sample: 349311 - AH-6 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1360**	mg/Kg	10	4.00

Sample: 349312 - AH-6 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1710**	mg/Kg	10	4.00

Sample: 349313 - AH-6 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107985	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**1570**		mg/Kg	10	4.00

Sample: 349314 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.44	mg/Kg	1	2.00	72	70 - 130
4-Bromofluorobenzene (4-BFB)			1.49	mg/Kg	1	2.00	74	70 - 130

Sample: 349314 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**7940**		mg/Kg	10	4.00

Sample: 349314 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

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			114	mg/Kg	1	100	114	70 - 130

Sample: 349314 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			2.07	mg/Kg	1	2.00	104	70 - 130

Sample: 349315 - AH-7 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2560**	mg/Kg	10	4.00

Sample: 349316 - AH-7 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**725**	mg/Kg	5	4.00

Sample: 349317 - AH-7 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**853**	mg/Kg	5	4.00

Sample: 349318 - AH-7 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1450**	mg/Kg	5	4.00

Sample: 349319 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

continued ...

sample 349319 continued ...

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

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)			1.61	mg/Kg	1	2.00	80	70 - 130

Sample: 349319 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10600**	mg/Kg	10	4.00

Sample: 349319 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

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			116	mg/Kg	1	100	116	70 - 130

Sample: 349319 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.16	mg/Kg	1	2.00	108	70 - 130
4-Bromofluorobenzene (4-BFB)			2.36	mg/Kg	1	2.00	118	70 - 130

Sample: 349320 - AH-8 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1390**	mg/Kg	10	4.00

Sample: 349321 - AH-8 2-2.5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2300**	mg/Kg	10	4.00

Sample: 349322 - AH-8 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2020**	mg/Kg	10	4.00

Sample: 349323 - AH-8 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107994	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91351	Sample Preparation:	2013-12-31	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1310**	mg/Kg	10	4.00

Sample: 349324 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Q#,U	1	<0.0200	mg/Kg	1	0.0200
Toluene	Q#,U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	Q#,U	1	<0.0200	mg/Kg	1	0.0200
Xylene	Q#,U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.46	mg/Kg	1	2.00	73	70 - 130
4-Bromofluorobenzene (4-BFB)			1.57	mg/Kg	1	2.00	78	70 - 130

Sample: 349324 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2420**	mg/Kg	10	4.00

Sample: 349324 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

Parameter	Flag	Cert	Result	RL 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			115	mg/Kg	1	100	115	70 - 130

Sample: 349324 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)			2.18	mg/Kg	1	2.00	109	70 - 130

Sample: 349325 - AH-9 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1330**	mg/Kg	10	4.00

Sample: 349326 - AH-9 2-2.5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**982**	mg/Kg	10	4.00

Sample: 349327 - AH-9 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1090**	mg/Kg	10	4.00

Sample: 349328 - AH-9 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**912**	mg/Kg	10	4.00

Sample: 349329 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.43	mg/Kg	1	2.00	72	70 - 130
4-Bromofluorobenzene (4-BFB)			1.54	mg/Kg	1	2.00	77	70 - 130

Sample: 349329 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**6490**	mg/Kg	10	4.00

Sample: 349329 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

Parameter	Flag	Cert	Result	RL 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			114	mg/Kg	1	100	114	70 - 130

Sample: 349329 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.05	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.16	mg/Kg	1	2.00	108	70 - 130

Sample: 349330 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

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

Sample: 349331 - AH-10 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1590**	mg/Kg	10	4.00

Sample: 349332 - AH-10 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

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

Sample: 349333 - AH-10 3.5-4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	107995	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1250**	mg/Kg	10	4.00

Sample: 349334 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.48	mg/Kg	1	2.00	74	70 - 130
4-Bromofluorobenzene (4-BFB)			1.59	mg/Kg	1	2.00	80	70 - 130

Sample: 349334 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**417**	mg/Kg	5	4.00

Sample: 349334 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

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			116	mg/Kg	1	100	116	70 - 130

Sample: 349334 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.21	mg/Kg	1	2.00	110	70 - 130

Sample: 349335 - AH-11 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

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

Sample: 349336 - AH-11 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**973**	mg/Kg	5	4.00

Sample: 349337 - AH-11 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**879**	mg/Kg	5	4.00

Sample: 349338 - AH-11 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**591**	mg/Kg	5	4.00

Sample: 349339 - AH-12 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107765	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.45	mg/Kg	1	2.00	72	70 - 130
4-Bromofluorobenzene (4-BFB)			1.59	mg/Kg	1	2.00	80	70 - 130

Sample: 349339 - AH-12 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11200**	mg/Kg	10	4.00

Sample: 349339 - AH-12 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107761	Date Analyzed:	2013-12-20	Analyzed By:	KC
Prep Batch:	91215	Sample Preparation:	2013-12-19	Prepared By:	KC

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			120	mg/Kg	1	100	120	70 - 130

Sample: 349339 - AH-12 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107771	Date Analyzed:	2013-12-20	Analyzed By:	AK
Prep Batch:	91171	Sample Preparation:	2013-12-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.26	mg/Kg	1	2.00	113	70 - 130

Sample: 349340 - AH-12 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**8200**	mg/Kg	10	4.00

Sample: 349341 - AH-12 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7360**	mg/Kg	10	4.00

Sample: 349342 - AH-12 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2910**	mg/Kg	10	4.00

Sample: 349343 - AH-12 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108031	Date Analyzed:	2014-01-03	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2270**	mg/Kg	10	4.00

Sample: 349344 - AH-13 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107810	Date Analyzed:	2013-12-23	Analyzed By:	AK
Prep Batch:	91224	Sample Preparation:	2013-12-20	Prepared By:	AK

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

continued ...

sample 349344 continued ...

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.48	mg/Kg	1	2.00	74	70 - 130
4-Bromofluorobenzene (4-BFB)			1.55	mg/Kg	1	2.00	78	70 - 130

Sample: 349344 - AH-13 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**13300**	mg/Kg	10	4.00

Sample: 349344 - AH-13 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107808	Date Analyzed:	2013-12-23	Analyzed By:	KC
Prep Batch:	91251	Sample Preparation:		Prepared By:	KC

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			109	mg/Kg	1	100	109	70 - 130

Sample: 349344 - AH-13 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107811	Date Analyzed:	2013-12-23	Analyzed By:	AK
Prep Batch:	91224	Sample Preparation:	2013-12-20	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.19	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			2.28	mg/Kg	1	2.00	114	70 - 130

Sample: 349345 - AH-13 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4500**	mg/Kg	10	4.00

Sample: 349346 - AH-13 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3160**	mg/Kg	10	4.00

Sample: 349347 - AH-13 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1220**	mg/Kg	10	4.00

Sample: 349348 - AH-13 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**914**	mg/Kg	10	4.00

Sample: 349349 - AH-14 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107810	Date Analyzed:	2013-12-23	Analyzed By:	AK
Prep Batch:	91224	Sample Preparation:	2013-12-20	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.41	mg/Kg	1	2.00	70	70 - 130
4-Bromofluorobenzene (4-BFB)			1.49	mg/Kg	1	2.00	74	70 - 130

Sample: 349349 - AH-14 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**14500**	mg/Kg	10	4.00

Sample: 349349 - AH-14 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107808	Date Analyzed:	2013-12-23	Analyzed By:	KC
Prep Batch:	91251	Sample Preparation:		Prepared By:	KC

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			107	mg/Kg	1	100	107	70 - 130

Sample: 349349 - AH-14 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107811	Date Analyzed:	2013-12-23	Analyzed By:	AK
Prep Batch:	91224	Sample Preparation:	2013-12-20	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.60	mg/Kg	1	2.00	130	70 - 130

Sample: 349350 - AH-14 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**15800**	mg/Kg	10	4.00

Sample: 349351 - AH-14 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10400**	mg/Kg	10	4.00

Sample: 349352 - AH-14 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**8450**	mg/Kg	10	4.00

Sample: 349353 - AH-15 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	107810	Date Analyzed:	2013-12-23	Analyzed By:	AK
Prep Batch:	91224	Sample Preparation:	2013-12-20	Prepared By:	AK

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

continued ...

sample 349353 continued ...

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.44	mg/Kg	1	2.00	72	70 - 130
4-Bromofluorobenzene (4-BFB)			1.47	mg/Kg	1	2.00	74	70 - 130

Sample: 349353 - AH-15 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108032	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10000**	mg/Kg	10	4.00

Sample: 349353 - AH-15 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	107808	Date Analyzed:	2013-12-23	Analyzed By:	KC
Prep Batch:	91251	Sample Preparation:		Prepared By:	KC

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			108	mg/Kg	1	100	108	70 - 130

Sample: 349353 - AH-15 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	107811	Date Analyzed:	2013-12-23	Analyzed By:	AK
Prep Batch:	91224	Sample Preparation:	2013-12-20	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	70 - 130
4-Bromofluorobenzene (4-BFB)			2.28	mg/Kg	1	2.00	114	70 - 130

Sample: 349354 - AH-15 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108034	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6410**	mg/Kg	10	4.00

Sample: 349355 - AH-15 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108034	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1770**	mg/Kg	10	4.00

Sample: 349356 - AH-15 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108034	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1040**	mg/Kg	10	4.00

Sample: 349357 - BG-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108034	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

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

Sample: 349358 - BG-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108034	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

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

Sample: 349359 - BG-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108034	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

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

Sample: 349360 - BG-1 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108034	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**65.0**	mg/Kg	5	4.00

Sample: 349361 - AH-15 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	108034	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	Sample Preparation:	2014-01-06	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7280**	mg/Kg	10	4.00

Method Blanks

Method Blank (1) QC Batch: 107761

QC Batch: 107761 | Date Analyzed: 2013-12-20 | Analyzed By: KC
Prep Batch: 91215 | QC Preparation: 2013-12-19 | Prepared By: KC

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	88.3 - 126.1

Method Blank (1) QC Batch: 107765

QC Batch: 107765 | Date Analyzed: 2013-12-20 | Analyzed By: AK
Prep Batch: 91171 | QC Preparation: 2013-12-19 | Prepared By: AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.68	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			1.54	mg/Kg	1	2.00	77	70 - 130

Method Blank (1) QC Batch: 107771

QC Batch: 107771 | Date Analyzed: 2013-12-20 | Analyzed By: AK
Prep Batch: 91171 | QC Preparation: 2013-12-19 | Prepared By: AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.34	mg/Kg	1	2.00	117	70 - 130
4-Bromofluorobenzene (4-BFB)			2.13	mg/Kg	1	2.00	106	70 - 130

Method Blank (1) QC Batch: 107808

QC Batch: 107808 | Date Analyzed: 2013-12-23 | Analyzed By: KC
Prep Batch: 91251 | QC Preparation: 2013-12-23 | Prepared By: KC

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			109	mg/Kg	1	100	109	88.3 - 126.1

Method Blank (1) QC Batch: 107810

QC Batch: 107810 | Date Analyzed: 2013-12-23 | Analyzed By: AK
Prep Batch: 91224 | QC Preparation: 2013-12-20 | Prepared By: AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.45	mg/Kg	1	2.00	72	70 - 130
4-Bromofluorobenzene (4-BFB)			1.47	mg/Kg	1	2.00	74	70 - 130

Method Blank (1) QC Batch: 107811

QC Batch: 107811 | Date Analyzed: 2013-12-23 | Analyzed By: AK
Prep Batch: 91224 | QC Preparation: 2013-12-20 | Prepared By: AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.13	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			2.20	mg/Kg	1	2.00	110	70 - 130

Method Blank (1) QC Batch: 107855

QC Batch: 107855 | Date Analyzed: 2013-12-24 | Analyzed By: AK
Prep Batch: 91258 | QC Preparation: 2013-12-23 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00354	mg/Kg	0.02
Toluene		1	<0.00966	mg/Kg	0.02
Ethylbenzene		1	<0.00790	mg/Kg	0.02
Xylene		1	<0.00667	mg/Kg	0.02

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)			2.03	mg/Kg	1	2.00	102	70 - 130

Method Blank (1) QC Batch: 107985

QC Batch: 107985 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91351 | QC Preparation: 2013-12-31 | Prepared By: AR

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

Method Blank (1) QC Batch: 107994

QC Batch: 107994 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91351 | QC Preparation: 2013-12-31 | Prepared By: AR

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

Method Blank (1) QC Batch: 107995

QC Batch: 107995 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

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

Method Blank (1) QC Batch: 108031

QC Batch: 108031 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

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

Method Blank (1) QC Batch: 108032

QC Batch: 108032 | Date Analyzed: 2014-01-06 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

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

Method Blank (1) QC Batch: 108034

QC Batch:	108034	Date Analyzed:	2014-01-06	Analyzed By:	AR
Prep Batch:	91386	QC Preparation:	2014-01-02	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: 107761 | Date Analyzed: 2013-12-20 | Analyzed By: KC
Prep Batch: 91215 | QC Preparation: 2013-12-19 | Prepared By: KC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	261	mg/Kg	1	250	<6.88	104	79.4 - 120.1

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	257	mg/Kg	1	250	<6.88	103	79.4 - 120.1	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
n-Tricosane	115	115	mg/Kg	1	100	115	115	92.9 - 137.7

Laboratory Control Spike (LCS-1)

QC Batch: 107765 | Date Analyzed: 2013-12-20 | Analyzed By: AK
Prep Batch: 91171 | QC Preparation: 2013-12-19 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.57	mg/Kg	1	2.00	<0.00533	78	70 - 130
Toluene		1	1.58	mg/Kg	1	2.00	<0.00645	79	70 - 130
Ethylbenzene		1	1.62	mg/Kg	1	2.00	<0.0116	81	70 - 130
Xylene		1	4.91	mg/Kg	1	6.00	<0.00874	82	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.56	mg/Kg	1	2.00	<0.00533	78	70 - 130	1	20
Toluene		1	1.56	mg/Kg	1	2.00	<0.00645	78	70 - 130	1	20
Ethylbenzene		1	1.60	mg/Kg	1	2.00	<0.0116	80	70 - 130	1	20
Xylene		1	4.89	mg/Kg	1	6.00	<0.00874	82	70 - 130	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.51	1.46	mg/Kg	1	2.00	76	73	70 - 130
4-Bromofluorobenzene (4-BFB)	1.59	1.51	mg/Kg	1	2.00	80	76	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 107771 | Date Analyzed: 2013-12-20 | Analyzed By: AK
Prep Batch: 91171 | QC Preparation: 2013-12-19 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	14.8	mg/Kg	1	20.0	<2.32	74	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
GRO		1	14.4	mg/Kg	1	20.0	<2.32	72	70 - 130	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.99	1.96	mg/Kg	1	2.00	100	98	70 - 130
4-Bromofluorobenzene (4-BFB)	2.18	2.19	mg/Kg	1	2.00	109	110	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 107808 | Date Analyzed: 2013-12-23 | Analyzed By: KC
Prep Batch: 91251 | QC Preparation: 2013-12-23 | Prepared By: KC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	292	mg/Kg	1	250	<6.88	117	79.4 - 120.1

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	291	mg/Kg	1	250	<6.88	116	79.4 - 120.1	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	112	112	mg/Kg	1	100	112	112	92.9 - 137.7

Laboratory Control Spike (LCS-1)

QC Batch: 107810 | Date Analyzed: 2013-12-23 | Analyzed By: AK
Prep Batch: 91224 | QC Preparation: 2013-12-20 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.56	mg/Kg	1	2.00	<0.00533	78	70 - 130
Toluene		1	1.74	mg/Kg	1	2.00	<0.00645	87	70 - 130
Ethylbenzene		1	1.66	mg/Kg	1	2.00	<0.0116	83	70 - 130
Xylene		1	5.14	mg/Kg	1	6.00	<0.00874	86	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.60	mg/Kg	1	2.00	<0.00533	80	70 - 130	3	20
Toluene		1	1.60	mg/Kg	1	2.00	<0.00645	80	70 - 130	8	20
Ethylbenzene		1	1.64	mg/Kg	1	2.00	<0.0116	82	70 - 130	1	20
Xylene		1	4.98	mg/Kg	1	6.00	<0.00874	83	70 - 130	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.83	1.46	mg/Kg	1	2.00	92	73	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.59	mg/Kg	1	2.00	97	80	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 107811 | Date Analyzed: 2013-12-23 | Analyzed By: AK
Prep Batch: 91224 | QC Preparation: 2013-12-20 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	15.2	mg/Kg	1	20.0	<2.32	76	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
GRO		1	16.9	mg/Kg	1	20.0	<2.32	84	70 - 130	11	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)	1.94	2.12	mg/Kg	1	2.00	97	106	70 - 130
4-Bromofluorobenzene (4-BFB)	2.42	2.46	mg/Kg	1	2.00	121	123	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 107855 | Date Analyzed: 2013-12-24 | Analyzed By: AK
Prep Batch: 91258 | QC Preparation: 2013-12-23 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.83	mg/Kg	1	2.00	<0.00354	92	70 - 130
Toluene		1	1.84	mg/Kg	1	2.00	<0.00966	92	70 - 130
Ethylbenzene		1	2.09	mg/Kg	1	2.00	<0.00790	104	70 - 130
Xylene		1	6.35	mg/Kg	1	6.00	<0.00667	106	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.75	mg/Kg	1	2.00	<0.00354	88	70 - 130	5	20
Toluene		1	1.77	mg/Kg	1	2.00	<0.00966	88	70 - 130	4	20
Ethylbenzene		1	2.02	mg/Kg	1	2.00	<0.00790	101	70 - 130	4	20
Xylene		1	6.11	mg/Kg	1	6.00	<0.00667	102	70 - 130	4	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)	1.93	1.92	mg/Kg	1	2.00	96	96	70 - 130
4-Bromofluorobenzene (4-BFB)	2.10	2.11	mg/Kg	1	2.00	105	106	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 107985 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91351 | QC Preparation: 2013-12-31 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	1	2500	<3.85	104	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2580	mg/Kg	1	2500	<3.85	103	89.7 - 115.9	1	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: 107994 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91351 | QC Preparation: 2013-12-31 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2440	mg/Kg	1	2500	<3.85	98	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2580	mg/Kg	1	2500	<3.85	103	89.7 - 115.9	6	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: 107995 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2510	mg/Kg	1	2500	<3.85	100	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2340	mg/Kg	1	2500	<3.85	94	89.7 - 115.9	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: 108031 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | 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	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2420	mg/Kg	1	2500	<3.85	97	89.7 - 115.9	5	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 108032 | Date Analyzed: 2014-01-06 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

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

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2430	mg/Kg	1	2500	<3.85	97	89.7 - 115.9	5	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 108034 | Date Analyzed: 2014-01-06 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2500	mg/Kg	1	2500	<3.85	100	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2360	mg/Kg	1	2500	<3.85	94	89.7 - 115.9	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: 349281

QC Batch: 107761 | Date Analyzed: 2013-12-20 | Analyzed By: KC
Prep Batch: 91215 | QC Preparation: 2013-12-19 | Prepared By: KC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	385	mg/Kg	1	250	159	90	64.8 - 149.9

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	369	mg/Kg	1	250	159	84	64.8 - 149.9	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	133	134	mg/Kg	1	100	133	134	85.4 - 147.7

Matrix Spike (MS-1) Spiked Sample: 349283

QC Batch: 107765 | Date Analyzed: 2013-12-20 | Analyzed By: AK
Prep Batch: 91171 | QC Preparation: 2013-12-19 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene [1]	Qs	Qs	1	<0.0107	mg/Kg	2	2.00	<0.0107	0	70 - 130
Toluene	Qs	Qs	1	<0.0129	mg/Kg	2	2.00	<0.0129	0	70 - 130
Ethylbenzene	Qs	Qs	1	<0.0232	mg/Kg	2	2.00	<0.0232	0	70 - 130
Xylene	Qs	Qs	1	<0.0175	mg/Kg	2	6.00	<0.0175	0	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene [2]	Qs	Qs	1	<0.0107	mg/Kg	2	2.00	<0.0107	0	70 - 130	0	20
Toluene	Qs	Qs	1	<0.0129	mg/Kg	2	2.00	<0.0129	0	70 - 130	0	20

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Ethylbenzene	QM	QM	<0.0232	mg/Kg	2	2.00	<0.0232	0	70 - 130	0	20
Xylene	QM	QM	<0.0175	mg/Kg	2	6.00	<0.0175	0	70 - 130	0	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)	1.58	1.59	mg/Kg	2	2	79	80	70 - 130
4-Bromofluorobenzene (4-BFB)	1.62	1.61	mg/Kg	2	2	81	80	70 - 130

Matrix Spike (MS-1) Spiked Sample: 349283

QC Batch: 107771 | Date Analyzed: 2013-12-20 | Analyzed By: AK
Prep Batch: 91171 | QC Preparation: 2013-12-19 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	6.76	mg/Kg	2	8.00	<4.64	84	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	6.02	mg/Kg	2	8.00	<4.64	75	70 - 130	12	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)	2.02	2.04	mg/Kg	2	2	101	102	70 - 130
4-Bromofluorobenzene (4-BFB)	2.14	2.08	mg/Kg	2	2	107	104	70 - 130

Matrix Spike (MS-1) Spiked Sample: 349344

QC Batch: 107808 | Date Analyzed: 2013-12-23 | Analyzed By: KC
Prep Batch: 91251 | QC Preparation: 2013-12-23 | Prepared By: KC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	273	mg/Kg	1	250	<6.88	109	64.8 - 149.9

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	265	mg/Kg	1	250	<6.88	106	64.8 - 149.9	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	108	104	mg/Kg	1	100	108	104	85.4 - 147.7

Matrix Spike (MS-1) Spiked Sample: 349344

QC Batch: 107810 | Date Analyzed: 2013-12-23 | Analyzed By: AK
Prep Batch: 91224 | QC Preparation: 2013-12-20 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.52	mg/Kg	1	2.00	<0.00533	76	70 - 130
Toluene		1	1.54	mg/Kg	1	2.00	<0.00645	77	70 - 130
Ethylbenzene		1	1.57	mg/Kg	1	2.00	<0.0116	78	70 - 130
Xylene		1	4.72	mg/Kg	1	6.00	<0.00874	79	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.47	mg/Kg	1	2.00	<0.00533	74	70 - 130	3	20
Toluene		1	1.50	mg/Kg	1	2.00	<0.00645	75	70 - 130	3	20
Ethylbenzene		1	1.50	mg/Kg	1	2.00	<0.0116	75	70 - 130	5	20
Xylene		1	4.57	mg/Kg	1	6.00	<0.00874	76	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
Trifluorotoluene (TFT)	Qar	Qar	1.33	1.28	mg/Kg	1	2	66	64	70 - 130
4-Bromofluorobenzene (4-BFB)			1.55	1.49	mg/Kg	1	2	78	74	70 - 130

Matrix Spike (MS-1) Spiked Sample: 349344

QC Batch: 107811 | Date Analyzed: 2013-12-23 | Analyzed By: AK
Prep Batch: 91224 | QC Preparation: 2013-12-20 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	15.4	mg/Kg	1	20.0	<2.32	77	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	15.2	mg/Kg	1	20.0	<2.32	76	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.95	1.91	mg/Kg	1	2	98	96	70 - 130
4-Bromofluorobenzene (4-BFB)	2.38	2.41	mg/Kg	1	2	119	120	70 - 130

Matrix Spike (MS-1) Spiked Sample: 349304

QC Batch: 107855 | Date Analyzed: 2013-12-24 | Analyzed By: AK
Prep Batch: 91258 | QC Preparation: 2013-12-23 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.71	mg/Kg	1	2.00	<0.00354	86	70 - 130
Toluene		1	1.75	mg/Kg	1	2.00	<0.00966	88	70 - 130
Ethylbenzene		1	2.00	mg/Kg	1	2.00	<0.00790	100	70 - 130
Xylene		1	6.05	mg/Kg	1	6.00	<0.00667	101	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.66	mg/Kg	1	2.00	<0.00354	83	70 - 130	3	20
Toluene		1	1.68	mg/Kg	1	2.00	<0.00966	84	70 - 130	4	20
Ethylbenzene		1	1.91	mg/Kg	1	2.00	<0.00790	96	70 - 130	5	20
Xylene		1	5.73	mg/Kg	1	6.00	<0.00667	96	70 - 130	5	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	1.92	mg/Kg	1	2	96	96	70 - 130
4-Bromofluorobenzene (4-BFB)	2.10	2.11	mg/Kg	1	2	105	106	70 - 130

Matrix Spike (MS-1) Spiked Sample: 349313

QC Batch: 107985 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91351 | QC Preparation: 2013-12-31 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			4180	mg/Kg	10	2500	1570	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			4360	mg/Kg	10	2500	1570	112	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: 349323

QC Batch: 107994 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91351 | QC Preparation: 2013-12-31 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3690	mg/Kg	10	2500	1310	95	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			3920	mg/Kg	10	2500	1310	104	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: 349333

QC Batch: 107995 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3850	mg/Kg	10	2500	1250	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			3730	mg/Kg	10	2500	1250	99	78.9 - 121	3	20

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

Matrix Spike (MS-1) Spiked Sample: 349343

QC Batch: 108031 | Date Analyzed: 2014-01-03 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			4880	mg/Kg	10	2500	2270	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			4630	mg/Kg	10	2500	2270	94	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: 349353

QC Batch: 108032 | Date Analyzed: 2014-01-06 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			12300	mg/Kg	10	2500	10000	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			12600	mg/Kg	10	2500	10000	104	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: 349361

QC Batch: 108034 | Date Analyzed: 2014-01-06 | Analyzed By: AR
Prep Batch: 91386 | QC Preparation: 2014-01-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10000	mg/Kg	10	2500	7280	109	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			9720	mg/Kg	10	2500	7280	98	78.9 - 121	3	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 107761 Date Analyzed: 2013-12-20 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	265	106	80 - 120	2013-12-20

Standard (CCV-2)

QC Batch: 107761 Date Analyzed: 2013-12-20 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	267	107	80 - 120	2013-12-20

Standard (CCV-3)

QC Batch: 107761 Date Analyzed: 2013-12-20 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	271	108	80 - 120	2013-12-20

Standard (CCV-1)

QC Batch: 107765 Date Analyzed: 2013-12-20 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0879	88	80 - 120	2013-12-20
Toluene		1	mg/kg	0.100	0.0864	86	80 - 120	2013-12-20

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standard continued . . .

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		1	mg/kg	0.100	0.0844	84	80 - 120	2013-12-20
Xylene		1	mg/kg	0.300	0.253	84	80 - 120	2013-12-20

Standard (CCV-2)

QC Batch: 107765 Date Analyzed: 2013-12-20 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0905	90	80 - 120	2013-12-20
Toluene		1	mg/kg	0.100	0.0897	90	80 - 120	2013-12-20
Ethylbenzene		1	mg/kg	0.100	0.0855	86	80 - 120	2013-12-20
Xylene		1	mg/kg	0.300	0.257	86	80 - 120	2013-12-20

Standard (CCV-3)

QC Batch: 107765 Date Analyzed: 2013-12-20 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0801	80	80 - 120	2013-12-20
Toluene		1	mg/kg	0.100	0.0844	84	80 - 120	2013-12-20
Ethylbenzene		1	mg/kg	0.100	0.0808	81	80 - 120	2013-12-20
Xylene		1	mg/kg	0.300	0.244	81	80 - 120	2013-12-20

Standard (CCV-1)

QC Batch: 107771 Date Analyzed: 2013-12-20 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.946	95	80 - 120	2013-12-20

Standard (CCV-2)

QC Batch: 107771 Date Analyzed: 2013-12-20 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.926	93	80 - 120	2013-12-20

Standard (CCV-3)

QC Batch: 107771 Date Analyzed: 2013-12-20 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.852	85	80 - 120	2013-12-20

Standard (CCV-1)

QC Batch: 107808 Date Analyzed: 2013-12-23 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	254	102	80 - 120	2013-12-23

Standard (CCV-2)

QC Batch: 107808 Date Analyzed: 2013-12-23 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	284	114	80 - 120	2013-12-23

Standard (CCV-3)

QC Batch: 107808 Date Analyzed: 2013-12-23 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	273	109	80 - 120	2013-12-23

Standard (CCV-1)

QC Batch: 107810 Date Analyzed: 2013-12-23 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0860	86	80 - 120	2013-12-23
Toluene		1	mg/kg	0.100	0.0847	85	80 - 120	2013-12-23
Ethylbenzene		1	mg/kg	0.100	0.0814	81	80 - 120	2013-12-23
Xylene		1	mg/kg	0.300	0.246	82	80 - 120	2013-12-23

Standard (CCV-2)

QC Batch: 107810 Date Analyzed: 2013-12-23 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0852	85	80 - 120	2013-12-23
Toluene		1	mg/kg	0.100	0.0832	83	80 - 120	2013-12-23
Ethylbenzene		1	mg/kg	0.100	0.0797	80	80 - 120	2013-12-23
Xylene		1	mg/kg	0.300	0.240	80	80 - 120	2013-12-23

Standard (CCV-3)

QC Batch: 107810 Date Analyzed: 2013-12-23 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0864	86	80 - 120	2013-12-23
Toluene		1	mg/kg	0.100	0.0842	84	80 - 120	2013-12-23
Ethylbenzene		1	mg/kg	0.100	0.0796	80	80 - 120	2013-12-23
Xylene		1	mg/kg	0.300	0.240	80	80 - 120	2013-12-23

Standard (CCV-1)

QC Batch: 107811 Date Analyzed: 2013-12-23 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.906	91	80 - 120	2013-12-23

Standard (CCV-2)

QC Batch: 107811 Date Analyzed: 2013-12-23 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.812	81	80 - 120	2013-12-23

Standard (CCV-3)

QC Batch: 107811 Date Analyzed: 2013-12-23 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.837	84	80 - 120	2013-12-23

Standard (CCV-1)

QC Batch: 107855 Date Analyzed: 2013-12-24 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0955	96	80 - 120	2013-12-24
Toluene		1	mg/kg	0.100	0.0931	93	80 - 120	2013-12-24
Ethylbenzene		1	mg/kg	0.100	0.100	100	80 - 120	2013-12-24
Xylene		1	mg/kg	0.300	0.304	101	80 - 120	2013-12-24

Standard (CCV-2)

QC Batch: 107855 Date Analyzed: 2013-12-24 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0909	91	80 - 120	2013-12-24
Toluene		1	mg/kg	0.100	0.0891	89	80 - 120	2013-12-24
Ethylbenzene		1	mg/kg	0.100	0.0962	96	80 - 120	2013-12-24
Xylene		1	mg/kg	0.300	0.291	97	80 - 120	2013-12-24

Standard (CCV-3)

QC Batch: 107855 Date Analyzed: 2013-12-24 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0942	94	80 - 120	2013-12-24
Toluene		1	mg/kg	0.100	0.0918	92	80 - 120	2013-12-24
Ethylbenzene		1	mg/kg	0.100	0.0975	98	80 - 120	2013-12-24
Xylene		1	mg/kg	0.300	0.295	98	80 - 120	2013-12-24

Standard (CCV-1)

QC Batch: 107985 Date Analyzed: 2014-01-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-01-03

Standard (CCV-2)

QC Batch: 107985 Date Analyzed: 2014-01-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.3	99	85 - 115	2014-01-03

Standard (CCV-1)

QC Batch: 107994 Date Analyzed: 2014-01-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-01-03

Standard (CCV-2)

QC Batch: 107994 Date Analyzed: 2014-01-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-01-03

Standard (CCV-1)

QC Batch: 107995 Date Analyzed: 2014-01-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-01-03

Standard (CCV-2)

QC Batch: 107995 Date Analyzed: 2014-01-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-01-03

Standard (CCV-1)

QC Batch: 108031 Date Analyzed: 2014-01-03 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	2014-01-03

Standard (CCV-2)

QC Batch: 108031 Date Analyzed: 2014-01-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-01-03

Standard (CCV-1)

QC Batch: 108032 Date Analyzed: 2014-01-06 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-01-06

Standard (CCV-2)

QC Batch: 108032 Date Analyzed: 2014-01-06 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	98.6	99	85 - 115	2014-01-06

Standard (CCV-1)

QC Batch: 108034 Date Analyzed: 2014-01-06 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	98.2	98	85 - 115	2014-01-06

Standard (CCV-2)

QC Batch: 108034 Date Analyzed: 2014-01-06 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	102	102	85 - 115	2014-01-06

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-13-7	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

1 MS & MSD were not spiked due to prep error. LCS/LCSD show recovery for the batch.
2 MS & MSD were not spiked due to prep error. LCS/LCSD show recovery for the batch.

Attachments

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

1310822

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: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.:

PROJECT NAME: COG - SRO 1d

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	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
249304	12/17		S		X	AH 1 (0-1) 0-.5'	1	N			X		X	X											X				
305						AH 2 (0-1) 0-.5'							X	X															
306						AH 3 (0-1) 0-.5'							X	X															
307						AH 4 (0-1) 0-.5'							X	X															
308						AH 5 (0-1) 0-.5'							X	X															
309						AH 6 (0-1) 0-.5'							X	X															
310						(1-1.5)																							
311						(2-2.5)																							
312						(3-3.5)																							
313						(4-4.5)																							

RELINQUISHED BY: (Signature) Adrian Rivera — Date: 12/18/13 Time: 800 — RECEIVED BY: (Signature) — Date: 12/18/13 Time: 8:25

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

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

SAMPLED BY: (Print & Initial) AG/RR — Date: 12/17/13 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: — RECEIVED BY: (Signature)

ADDRESS: — CITY: — STATE: — ZIP: — CONTACT: — PHONE: — DATE: — TIME:

SAMPLE CONDITION WHEN RECEIVED: 3.90

REMARKS: Run deeper samples if TPH exceeds 100, BTEX exceeds 50 or benzene exceeds 10. - Rec'd 2 jars for AH-1 5 0-1 thru 3-3.5', added AH-1 5 4-4.5', Changed depths AH-1 thru AH-6 per A.G.

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

Modified All

131218122

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.:
PROJECT NAME: COG - SRO 101 Eddy Co. NM

LAB I.D. NUMBER	DATE	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
314	12/13/17		S		X	AH 7 (0-1)	1	N			Y		X	X											X				
315	12/17					(1-1.5)																							
316						(2-2.5)																							
317						(3-3.5)																							
318						(4-4.5)																							
319						AH 8 (0-1)						X	X																
320						(1-1.5)																							
321						(2-2.5)																							
322						(3-3.5)																							
323						(4-4.5)																							

RELINQUISHED BY: (Signature) Adrian Rose — Date: 12/18/13 Time: 830
RECEIVED BY: (Signature) — Date: 12/18/13 Time: 8:30
SAMPLED BY: (Print & Initial) RR / AG — Date: 12/18/13 Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #:
OTHER:

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

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: 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: 390
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.

KC

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: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.:

PROJECT NAME: COG- SRO 101 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
324	12/17		S		X	AH 9 (0-1)	1	N			X		X	X											X				
325						(1.0-1.5)																							
326						(2-2.5)																							
327						(3-3.5)																							
328						(4-4.5)																							
329						AH 10 (0-1)							X	X															
330						(1-1.5)																							
331						(2-2.5)																							
332						(3-3.5)																							
333						(3.5-4.0)				12/18																			

RELINQUISHED BY: (Signature) Adrian Dain — Date: 12/18/13 Time: 130

RECEIVED BY: (Signature) — Date: 12/18/13 Time: 8:32

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: STATE: ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

SAMPLED BY: (Print & Initial) AG/LR — Date: 12/17/13 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: 390

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.

KC

15/21822

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: 4 OF: 6

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.:

PROJECT NAME: COG - SRO 101 Eddy Co. NM

LAB I.D. NUMBER	DATE	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
334	12/17/2013		S		X	AH 11 (0-1)	1	N			X		X	X											X				
335						(1-1.5)																							
336						(2-2.5)																							
337						(3-3.5)																							
338						(4-4.5)																							
339						AH 12 (0-1)							X	X															
340						(1-1.5)																							
341						(2-2.5)																							
342						(3-3.5)																							
343						(4-4.5)																							

RELINQUISHED BY: (Signature) — Date: 12/18/13 Time: 0830 — RECEIVED BY: (Signature) — Date: 12/18/13 Time: 8:30

SAMPLED BY: (Print & Initial) AG RC — Date: 12/17/13 Time:

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

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

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

RECEIVING LABORATORY: Xenco — RECEIVED BY: (Signature)

ADDRESS: CITY: STATE: ZIP:

CONTACT: PHONE: DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.9°

REMARKS:

KC

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

13121822

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: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.:

PROJECT NAME: COG - SRO 101 Eddy Co.

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 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
344	12/17		S		X	AH 13 (0-1)	1	N			X		X	X												X				
345						(1-1.5)																								
346						(2-2.5)																								
347						(3-3.5)																								
348						(4-4.5)																								
349						AH 14 (0-1)							X	X																
350						(1-1.5)																								
351						(2-2.5)																								
352						(3-3.5)																								
353						AH 15 (0-1)							X	X																

RELINQUISHED BY: (Signature) Adrian Dow — Date: 12/18/13 Time: 8:30

RECEIVED BY: (Signature) — Date: 12/18/13 Time: 8:30

SAMPLED BY: (Print & Initial) RR/AG — Date: 12/17/13 Time:

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

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

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RECEIVING LABORATORY: Pace

ADDRESS:

CITY: STATE: ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 390

REMARKS: use "coats Handwriting" on AH-15 (blue ink) other as AH-15

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

Blackmail

12/2/13

Analysis Request of Chain of Custody Record

PAGE: 6 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: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.:
PROJECT NAME: COG. SRO 101

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION (Eddy Co. NM)	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
354	12/17		S		X	AH 15 (1-1.5)	1	N			X													X				
355						(2-2.5)	1																					
356						(3-3.5)	1																					
357						BG 1 (0-1)																						
358						(1-1.5)																						
359						(2-2.5)																						
360						(3-3.5)																						
361						AH-15 4-4.5'																			X				

RELINQUISHED BY: (Signature) Adrian Baron — Date: 12/18/13 Time: 1:30
RECEIVED BY: (Signature) — Date: 12/18/13 Time: 8:30
SAMPLED BY: (Print & Initial) AG/RR — Date: 12/17/13 Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
TETRA TECH CONTACT PERSON: 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: 5°C
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.

CC

Summary Report

Ike Tavarez
Tetra Tech
1901 N. Big Spring St.
Midland, TX 79705

Report Date: March 31, 2014

Work Order: 14031802

Project Location: Eddy Co, NM
Project Name: COG/SRO 101
Project Number: 112MC06179

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
358121	T1 (AH-1) 0'	soil	2014-03-14	00:00	2014-03-17
358122	T1 (AH-1) 2'	soil	2014-03-14	00:00	2014-03-17
358123	T1 (AH-1) 4'	soil	2014-03-14	00:00	2014-03-17
358124	T1 (AH-1) 6'	soil	2014-03-14	00:00	2014-03-17
358125	T1 (AH-1) 8'	soil	2014-03-14	00:00	2014-03-17
358126	T1 (AH-1) 10'	soil	2014-03-14	00:00	2014-03-17
358127	T2 (AH-2) 0'	soil	2014-03-14	00:00	2014-03-17
358128	T2 (AH-2) 2'	soil	2014-03-14	00:00	2014-03-17
358129	T2 (AH-2) 4'	soil	2014-03-14	00:00	2014-03-17
358130	T2 (AH-2) 6'	soil	2014-03-14	00:00	2014-03-17
358131	T2 (AH-2) 8'	soil	2014-03-14	00:00	2014-03-17
358132	T2 (AH-2) 10'	soil	2014-03-14	00:00	2014-03-17
358133	T3 (AH-3) 0'	soil	2014-03-14	00:00	2014-03-17
358134	T3 (AH-3) 2'	soil	2014-03-14	00:00	2014-03-17
358135	T3 (AH-3) 4'	soil	2014-03-14	00:00	2014-03-17
358136	T3 (AH-3) 6'	soil	2014-03-14	00:00	2014-03-17
358137	T3 (AH-3) 8'	soil	2014-03-14	00:00	2014-03-17
358138	T3 (AH-3) 10'	soil	2014-03-14	00:00	2014-03-17
358139	T4 (AH-4) 0'	soil	2014-03-14	00:00	2014-03-17
358140	T4 (AH-4) 2'	soil	2014-03-14	00:00	2014-03-17
358141	T4 (AH-4) 4'	soil	2014-03-14	00:00	2014-03-17
358142	T4 (AH-4) 6'	soil	2014-03-14	00:00	2014-03-17
358143	T4 (AH-4) 8'	soil	2014-03-14	00:00	2014-03-17
358144	T4 (AH-4) 10'	soil	2014-03-14	00:00	2014-03-17
358145	T5 (AH-5) 0'	soil	2014-03-14	00:00	2014-03-17
358146	T5 (AH-5) 2'	soil	2014-03-14	00:00	2014-03-17
358147	T5 (AH-5) 4'	soil	2014-03-14	00:00	2014-03-17
358148	T5 (AH-5) 6'	soil	2014-03-14	00:00	2014-03-17
358149	T5 (AH-5) 8'	soil	2014-03-14	00:00	2014-03-17
358150	T5 (AH-5) 10'	soil	2014-03-14	00:00	2014-03-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
358151	T6 (AH-12) 0'	soil	2014-03-14	00:00	2014-03-17
358152	T6 (AH-12) 2'	soil	2014-03-14	00:00	2014-03-17
358153	T6 (AH-12) 4'	soil	2014-03-14	00:00	2014-03-17
358154	T6 (AH-12) 6'	soil	2014-03-14	00:00	2014-03-17
358155	T6 (AH-12) 8'	soil	2014-03-14	00:00	2014-03-17
358156	T6 (AH-12) 10'	soil	2014-03-14	00:00	2014-03-17
358157	T7 (AH-14) 0'	soil	2014-03-14	00:00	2014-03-17
358158	T7 (AH-14) 2'	soil	2014-03-14	00:00	2014-03-17
358159	T7 (AH-14) 4'	soil	2014-03-14	00:00	2014-03-17
358160	T7 (AH-14) 6'	soil	2014-03-14	00:00	2014-03-17
358161	T7 (AH-14) 8'	soil	2014-03-14	00:00	2014-03-17
358162	T7 (AH-14) 10'	soil	2014-03-14	00:00	2014-03-17
358163	T8 (AH-15) 0'	soil	2014-03-14	00:00	2014-03-17
358164	T8 (AH-15) 2'	soil	2014-03-14	00:00	2014-03-17
358165	T8 (AH-15) 4'	soil	2014-03-14	00:00	2014-03-17
358166	T8 (AH-15) 6'	soil	2014-03-14	00:00	2014-03-17
358167	T8 (AH-15) 8'	soil	2014-03-14	00:00	2014-03-17
358168	T8 (AH-15) 10'	soil	2014-03-14	00:00	2014-03-17

Sample: 358121 - T1 (AH-1) 0'

Param	Flag	Result	Units	RL
Chloride		**1360**	mg/Kg	4

Sample: 358122 - T1 (AH-1) 2'

Param	Flag	Result	Units	RL
Chloride		**2290**	mg/Kg	4

Sample: 358123 - T1 (AH-1) 4'

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

Sample: 358124 - T1 (AH-1) 6'

Param	Flag	Result	Units	RL
Chloride		**2380**	mg/Kg	4

Sample: 358125 - T1 (AH-1) 8'

Param	Flag	Result	Units	RL
Chloride		**2070**	mg/Kg	4

Sample: 358126 - T1 (AH-1) 10'

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

Sample: 358127 - T2 (AH-2) 0'

Param	Flag	Result	Units	RL
Chloride		**1340**	mg/Kg	4

Sample: 358128 - T2 (AH-2) 2'

Param	Flag	Result	Units	RL
Chloride		**736**	mg/Kg	4

Sample: 358129 - T2 (AH-2) 4'

Param	Flag	Result	Units	RL
Chloride		**147**	mg/Kg	4

Sample: 358130 - T2 (AH-2) 6'

Param	Flag	Result	Units	RL
Chloride		**58.9**	mg/Kg	4

Sample: 358131 - T2 (AH-2) 8'

Param	Flag	Result	Units	RL
Chloride		**49.1**	mg/Kg	4

Sample: 358132 - T2 (AH-2) 10'

Param	Flag	Result	Units	RL
Chloride		**255**	mg/Kg	4

Sample: 358133 - T3 (AH-3) 0'

Param	Flag	Result	Units	RL
Chloride		**2340**	mg/Kg	4

Sample: 358134 - T3 (AH-3) 2'

Param	Flag	Result	Units	RL
Chloride		**4580**	mg/Kg	4

Sample: 358135 - T3 (AH-3) 4'

Param	Flag	Result	Units	RL
Chloride		**1220**	mg/Kg	4

Sample: 358136 - T3 (AH-3) 6'

Param	Flag	Result	Units	RL
Chloride		**1420**	mg/Kg	4

Sample: 358137 - T3 (AH-3) 8'

Param	Flag	Result	Units	RL
Chloride		**1630**	mg/Kg	4

Sample: 358138 - T3 (AH-3) 10'

Param	Flag	Result	Units	RL
Chloride		**1500**	mg/Kg	4

Sample: 358139 - T4 (AH-4) 0'

Param	Flag	Result	Units	RL
Chloride		**1950**	mg/Kg	4

Sample: 358140 - T4 (AH-4) 2'

Param	Flag	Result	Units	RL
Chloride		**4470**	mg/Kg	4

Sample: 358141 - T4 (AH-4) 4'

Param	Flag	Result	Units	RL
Chloride		**2210**	mg/Kg	4

Sample: 358142 - T4 (AH-4) 6'

Param	Flag	Result	Units	RL
Chloride		**1310**	mg/Kg	4

Sample: 358143 - T4 (AH-4) 8'

Param	Flag	Result	Units	RL
Chloride		**1530**	mg/Kg	4

Sample: 358144 - T4 (AH-4) 10'

Param	Flag	Result	Units	RL
Chloride		**742**	mg/Kg	4

Sample: 358145 - T5 (AH-5) 0'

Param	Flag	Result	Units	RL
Chloride		**1850**	mg/Kg	4

Sample: 358146 - T5 (AH-5) 2'

Param	Flag	Result	Units	RL
Chloride		**5110**	mg/Kg	4

Sample: 358147 - T5 (AH-5) 4'

Param	Flag	Result	Units	RL
Chloride		**1960**	mg/Kg	4

Sample: 358148 - T5 (AH-5) 6'

Param	Flag	Result	Units	RL
Chloride		**1230**	mg/Kg	4

Sample: 358149 - T5 (AH-5) 8'

Param	Flag	Result	Units	RL
Chloride		**2290**	mg/Kg	4

Sample: 358150 - T5 (AH-5) 10'

Param	Flag	Result	Units	RL
Chloride		**775**	mg/Kg	4

Sample: 358151 - T6 (AH-12) 0'

Param	Flag	Result	Units	RL
Chloride		**15800**	mg/Kg	4

Sample: 358152 - T6 (AH-12) 2'

Param	Flag	Result	Units	RL
Chloride		**4960**	mg/Kg	4

Sample: 358153 - T6 (AH-12) 4'

Param	Flag	Result	Units	RL
Chloride		**2250**	mg/Kg	4

Sample: 358154 - T6 (AH-12) 6'

Param	Flag	Result	Units	RL
Chloride		**1320**	mg/Kg	4

Sample: 358155 - T6 (AH-12) 8'

Param	Flag	Result	Units	RL
Chloride		**981**	mg/Kg	4

Sample: 358156 - T6 (AH-12) 10'

Param	Flag	Result	Units	RL
Chloride		**991**	mg/Kg	4

Sample: 358157 - T7 (AH-14) 0'

Param	Flag	Result	Units	RL
Chloride		**2770**	mg/Kg	4

Sample: 358158 - T7 (AH-14) 2'

Param	Flag	Result	Units	RL
Chloride		**2260**	mg/Kg	4

Sample: 358159 - T7 (AH-14) 4'

Param	Flag	Result	Units	RL
Chloride		**416**	mg/Kg	4

Sample: 358160 - T7 (AH-14) 6'

Param	Flag	Result	Units	RL
Chloride		**261**	mg/Kg	4

Sample: 358161 - T7 (AH-14) 8'

Param	Flag	Result	Units	RL
Chloride		**426**	mg/Kg	4

Sample: 358162 - T7 (AH-14) 10'

Param	Flag	Result	Units	RL
Chloride		**522**	mg/Kg	4

Sample: 358163 - T8 (AH-15) 0'

Param	Flag	Result	Units	RL
Chloride		**14800**	mg/Kg	4

Sample: 358164 - T8 (AH-15) 2'

Param	Flag	Result	Units	RL
Chloride		**5460**	mg/Kg	4

Sample: 358165 - T8 (AH-15) 4'

Param	Flag	Result	Units	RL
Chloride		**870**	mg/Kg	4

Sample: 358166 - T8 (AH-15) 6'

Param	Flag	Result	Units	RL
Chloride		**861**	mg/Kg	4

Sample: 358167 - T8 (AH-15) 8'

Param	Flag	Result	Units	RL
Chloride		**532**	mg/Kg	4

Sample: 358168 - T8 (AH-15) 10'

Param	Flag	Result	Units	RL
Chloride		**665**	mg/Kg	4

TRACEANALYSIS, INC.

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavarez
Tetra Tech
1901 N. Big Spring St.
Midland, TX, 79705

Report Date: March 31, 2014

Work Order: 14031802

Project Location: Eddy Co, NM
Project Name: COG/SRO 101
Project Number: 112MC06179

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
358121	T1 (AH-1) 0'	soil	2014-03-14	00:00	2014-03-17
358122	T1 (AH-1) 2'	soil	2014-03-14	00:00	2014-03-17
358123	T1 (AH-1) 4'	soil	2014-03-14	00:00	2014-03-17
358124	T1 (AH-1) 6'	soil	2014-03-14	00:00	2014-03-17
358125	T1 (AH-1) 8'	soil	2014-03-14	00:00	2014-03-17
358126	T1 (AH-1) 10'	soil	2014-03-14	00:00	2014-03-17
358127	T2 (AH-2) 0'	soil	2014-03-14	00:00	2014-03-17
358128	T2 (AH-2) 2'	soil	2014-03-14	00:00	2014-03-17
358129	T2 (AH-2) 4'	soil	2014-03-14	00:00	2014-03-17
358130	T2 (AH-2) 6'	soil	2014-03-14	00:00	2014-03-17
358131	T2 (AH-2) 8'	soil	2014-03-14	00:00	2014-03-17
358132	T2 (AH-2) 10'	soil	2014-03-14	00:00	2014-03-17
358133	T3 (AH-3) 0'	soil	2014-03-14	00:00	2014-03-17
358134	T3 (AH-3) 2'	soil	2014-03-14	00:00	2014-03-17
358135	T3 (AH-3) 4'	soil	2014-03-14	00:00	2014-03-17
358136	T3 (AH-3) 6'	soil	2014-03-14	00:00	2014-03-17
358137	T3 (AH-3) 8'	soil	2014-03-14	00:00	2014-03-17
358138	T3 (AH-3) 10'	soil	2014-03-14	00:00	2014-03-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
358139	T4 (AH-4) 0'	soil	2014-03-14	00:00	2014-03-17
358140	T4 (AH-4) 2'	soil	2014-03-14	00:00	2014-03-17
358141	T4 (AH-4) 4'	soil	2014-03-14	00:00	2014-03-17
358142	T4 (AH-4) 6'	soil	2014-03-14	00:00	2014-03-17
358143	T4 (AH-4) 8'	soil	2014-03-14	00:00	2014-03-17
358144	T4 (AH-4) 10'	soil	2014-03-14	00:00	2014-03-17
358145	T5 (AH-5) 0'	soil	2014-03-14	00:00	2014-03-17
358146	T5 (AH-5) 2'	soil	2014-03-14	00:00	2014-03-17
358147	T5 (AH-5) 4'	soil	2014-03-14	00:00	2014-03-17
358148	T5 (AH-5) 6'	soil	2014-03-14	00:00	2014-03-17
358149	T5 (AH-5) 8'	soil	2014-03-14	00:00	2014-03-17
358150	T5 (AH-5) 10'	soil	2014-03-14	00:00	2014-03-17
358151	T6 (AH-12) 0'	soil	2014-03-14	00:00	2014-03-17
358152	T6 (AH-12) 2'	soil	2014-03-14	00:00	2014-03-17
358153	T6 (AH-12) 4'	soil	2014-03-14	00:00	2014-03-17
358154	T6 (AH-12) 6'	soil	2014-03-14	00:00	2014-03-17
358155	T6 (AH-12) 8'	soil	2014-03-14	00:00	2014-03-17
358156	T6 (AH-12) 10'	soil	2014-03-14	00:00	2014-03-17
358157	T7 (AH-14) 0'	soil	2014-03-14	00:00	2014-03-17
358158	T7 (AH-14) 2'	soil	2014-03-14	00:00	2014-03-17
358159	T7 (AH-14) 4'	soil	2014-03-14	00:00	2014-03-17
358160	T7 (AH-14) 6'	soil	2014-03-14	00:00	2014-03-17
358161	T7 (AH-14) 8'	soil	2014-03-14	00:00	2014-03-17
358162	T7 (AH-14) 10'	soil	2014-03-14	00:00	2014-03-17
358163	T8 (AH-15) 0'	soil	2014-03-14	00:00	2014-03-17
358164	T8 (AH-15) 2'	soil	2014-03-14	00:00	2014-03-17
358165	T8 (AH-15) 4'	soil	2014-03-14	00:00	2014-03-17
358166	T8 (AH-15) 6'	soil	2014-03-14	00:00	2014-03-17
358167	T8 (AH-15) 8'	soil	2014-03-14	00:00	2014-03-17
358168	T8 (AH-15) 10'	soil	2014-03-14	00:00	2014-03-17

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 COG/SRO 101 were received by TraceAnalysis, Inc. on 2014-03-17 and assigned to work order 14031802. Samples for work order 14031802 were received intact at a temperature of 6.0 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	93398	2014-03-24 at 14:27	110470	2014-03-24 at 14:27
Chloride (Titration)	SM 4500-Cl B	93480	2014-03-25 at 11:15	110658	2014-03-27 at 14:00
Chloride (Titration)	SM 4500-Cl B	93480	2014-03-25 at 11:15	110659	2014-03-28 at 11:00
Chloride (Titration)	SM 4500-Cl B	93480	2014-03-25 at 11:15	110660	2014-03-28 at 14:00
Chloride (Titration)	SM 4500-Cl B	93559	2014-03-28 at 13:00	110669	2014-03-30 at 15:00
Chloride (Titration)	SM 4500-Cl B	93568	2014-03-28 at 09:00	110661	2014-03-28 at 15:00
Chloride (Titration)	SM 4500-Cl B	93568	2014-03-28 at 09:00	110662	2014-03-28 at 15:30

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 14031802 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: 358121 - T1 (AH-1) 0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110470	Date Analyzed:	2014-03-24	Analyzed By:	AK
Prep Batch:	93398	Sample Preparation:	2014-03-24	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1360**	mg/Kg	5	4.00

Sample: 358122 - T1 (AH-1) 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110470	Date Analyzed:	2014-03-24	Analyzed By:	AK
Prep Batch:	93398	Sample Preparation:	2014-03-24	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2290**	mg/Kg	5	4.00

Sample: 358123 - T1 (AH-1) 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110470	Date Analyzed:	2014-03-24	Analyzed By:	AK
Prep Batch:	93398	Sample Preparation:	2014-03-24	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2600**	mg/Kg	5	4.00

Sample: 358124 - T1 (AH-1) 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110470	Date Analyzed:	2014-03-24	Analyzed By:	AK
Prep Batch:	93398	Sample Preparation:	2014-03-24	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2380**	mg/Kg	5	4.00

Sample: 358125 - T1 (AH-1) 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110658	Date Analyzed:	2014-03-27	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2070**	mg/Kg	5	4.00

Sample: 358126 - T1 (AH-1) 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110658	Date Analyzed:	2014-03-27	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1350**	mg/Kg	5	4.00

Sample: 358127 - T2 (AH-2) 0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110658	Date Analyzed:	2014-03-27	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1340**	mg/Kg	5	4.00

Sample: 358128 - T2 (AH-2) 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**736**	mg/Kg	5	4.00

Sample: 358129 - T2 (AH-2) 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**147**	mg/Kg	5	4.00

Sample: 358130 - T2 (AH-2) 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**58.9**	mg/Kg	1	4.00

Sample: 358131 - T2 (AH-2) 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**49.1**	mg/Kg	5	4.00

Sample: 358132 - T2 (AH-2) 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**255**	mg/Kg	5	4.00

Sample: 358133 - T3 (AH-3) 0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2340**	mg/Kg	5	4.00

Sample: 358134 - T3 (AH-3) 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4580**	mg/Kg	5	4.00

Sample: 358135 - T3 (AH-3) 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1220**	mg/Kg	5	4.00

Sample: 358136 - T3 (AH-3) 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1420**	mg/Kg	5	4.00

Sample: 358137 - T3 (AH-3) 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110659	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1630**	mg/Kg	5	4.00

Sample: 358138 - T3 (AH-3) 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1500**	mg/Kg	5	4.00

Sample: 358139 - T4 (AH-4) 0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1950**	mg/Kg	5	4.00

Sample: 358140 - T4 (AH-4) 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4470**	mg/Kg	5	4.00

Sample: 358141 - T4 (AH-4) 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2210**	mg/Kg	5	4.00

Sample: 358142 - T4 (AH-4) 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1310**	mg/Kg	5	4.00

Sample: 358143 - T4 (AH-4) 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1530**	mg/Kg	5	4.00

Sample: 358144 - T4 (AH-4) 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**742**	mg/Kg	5	4.00

Sample: 358145 - T5 (AH-5) 0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1850**	mg/Kg	5	4.00

Sample: 358146 - T5 (AH-5) 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**5110**	mg/Kg	5	4.00

Sample: 358147 - T5 (AH-5) 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110660	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93480	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1960**	mg/Kg	5	4.00

Sample: 358148 - T5 (AH-5) 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1230**	mg/Kg	5	4.00

Sample: 358149 - T5 (AH-5) 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2290**	mg/Kg	5	4.00

Sample: 358150 - T5 (AH-5) 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**775**	mg/Kg	5	4.00

Sample: 358151 - T6 (AH-12) 0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**15800**	mg/Kg	5	4.00

Sample: 358152 - T6 (AH-12) 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4960**	mg/Kg	5	4.00

Sample: 358153 - T6 (AH-12) 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2250**	mg/Kg	5	4.00

Sample: 358154 - T6 (AH-12) 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1320**	mg/Kg	5	4.00

Sample: 358155 - T6 (AH-12) 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**981**		mg/Kg	5	4.00

Sample: 358156 - T6 (AH-12) 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**991**		mg/Kg	5	4.00

Sample: 358157 - T7 (AH-14) 0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110661	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**2770**		mg/Kg	5	4.00

Sample: 358158 - T7 (AH-14) 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**2260**		mg/Kg	5	4.00

Sample: 358159 - T7 (AH-14) 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**416**	mg/Kg	5	4.00

Sample: 358160 - T7 (AH-14) 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**261**	mg/Kg	5	4.00

Sample: 358161 - T7 (AH-14) 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**426**	mg/Kg	5	4.00

Sample: 358162 - T7 (AH-14) 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**522**	mg/Kg	5	4.00

Sample: 358163 - T8 (AH-15) 0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**14800**	mg/Kg	5	4.00

Sample: 358164 - T8 (AH-15) 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**5460**	mg/Kg	5	4.00

Sample: 358165 - T8 (AH-15) 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**870**	mg/Kg	5	4.00

Sample: 358166 - T8 (AH-15) 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**861**	mg/Kg	5	4.00

Sample: 358167 - T8 (AH-15) 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110662	Date Analyzed:	2014-03-28	Analyzed By:	AK
Prep Batch:	93568	Sample Preparation:	2014-03-28	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**532**	mg/Kg	5	4.00

Sample: 358168 - T8 (AH-15) 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110669	Date Analyzed:	2014-03-30	Analyzed By:	AK
Prep Batch:	93559	Sample Preparation:	2014-03-28	Prepared By:	RG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**665**	mg/Kg	5	4.00

Method Blanks

Method Blank (1) QC Batch: 110470

QC Batch: 110470 | Date Analyzed: 2014-03-24 | Analyzed By: AK
Prep Batch: 93398 | QC Preparation: 2014-03-24 | Prepared By: AK

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

Method Blank (1) QC Batch: 110658

QC Batch: 110658 | Date Analyzed: 2014-03-27 | Analyzed By: AK
Prep Batch: 93480 | QC Preparation: 2014-03-25 | Prepared By: AK

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

Method Blank (1) QC Batch: 110659

QC Batch: 110659 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93480 | QC Preparation: 2014-03-25 | Prepared By: AK

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

Method Blank (1) QC Batch: 110660

QC Batch: 110660 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93480 | QC Preparation: 2014-03-25 | Prepared By: AK

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

Method Blank (1) QC Batch: 110661

QC Batch: 110661 Date Analyzed: 2014-03-28 Analyzed By: AK
Prep Batch: 93568 QC Preparation: 2014-03-28 Prepared By: AK

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

Method Blank (1) QC Batch: 110662

QC Batch: 110662 Date Analyzed: 2014-03-28 Analyzed By: AK
Prep Batch: 93568 QC Preparation: 2014-03-28 Prepared By: AK

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

Method Blank (1) QC Batch: 110669

QC Batch: 110669 Date Analyzed: 2014-03-30 Analyzed By: AK
Prep Batch: 93559 QC Preparation: 2014-03-28 Prepared By: RG

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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 110470 | Date Analyzed: 2014-03-24 | Analyzed By: AK
Prep Batch: 93398 | QC Preparation: 2014-03-24 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2460	mg/Kg	1	2500	<3.85	98	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2430	mg/Kg	1	2500	<3.85	97	89.7 - 115.9	1	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: 110658 | Date Analyzed: 2014-03-27 | Analyzed By: AK
Prep Batch: 93480 | QC Preparation: 2014-03-25 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2550	mg/Kg	5	2500	<19.2	102	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2580	mg/Kg	5	2500	<19.2	103	89.7 - 115.9	1	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: 110659 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93480 | QC Preparation: 2014-03-25 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2570	mg/Kg	5	2500	<19.2	103	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2500	mg/Kg	5	2500	<19.2	100	89.7 - 115.9	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: 110660 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93480 | QC Preparation: 2014-03-25 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2580	mg/Kg	5	2500	<19.2	103	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2620	mg/Kg	5	2500	<19.2	105	89.7 - 115.9	2	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: 110661 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93568 | QC Preparation: 2014-03-28 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2560	mg/Kg	5	2500	<19.2	102	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2590	mg/Kg	5	2500	<19.2	104	89.7 - 115.9	1	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: 110662 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93568 | QC Preparation: 2014-03-28 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2540	mg/Kg	5	2500	<19.2	102	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2580	mg/Kg	5	2500	<19.2	103	89.7 - 115.9	2	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: 110669 | Date Analyzed: 2014-03-30 | Analyzed By: AK
Prep Batch: 93559 | QC Preparation: 2014-03-28 | Prepared By: RG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2550	mg/Kg	5	2500	<19.2	102	89.7 - 115.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2520	mg/Kg	5	2500	<19.2	101	89.7 - 115.9	1	20

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

Matrix Spike (MS-1) Spiked Sample: 358001

QC Batch: 110470 | Date Analyzed: 2014-03-24 | Analyzed By: AK
Prep Batch: 93398 | QC Preparation: 2014-03-24 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2560	mg/Kg	5	2500	76.9	99	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			2480	mg/Kg	5	2500	76.9	96	78.9 - 121	3	20

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

Matrix Spike (MS-1) Spiked Sample: 357962

QC Batch: 110658 | Date Analyzed: 2014-03-27 | Analyzed By: AK
Prep Batch: 93480 | QC Preparation: 2014-03-25 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2630	mg/Kg	5	2500	29	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			2660	mg/Kg	5	2500	29	105	78.9 - 121	1	20

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

Matrix Spike (MS-1) Spiked Sample: 358131

QC Batch: 110659 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93480 | QC Preparation: 2014-03-25 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2760	mg/Kg	5	2500	49.1	108	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			2690	mg/Kg	5	2500	49.1	106	78.9 - 121	3	20

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

Matrix Spike (MS-1) Spiked Sample: 358144

QC Batch: 110660 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93480 | QC Preparation: 2014-03-25 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3100	mg/Kg	5	2500	742	94	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			3160	mg/Kg	5	2500	742	97	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: 358150

QC Batch: 110661 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93568 | QC Preparation: 2014-03-28 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3350	mg/Kg	5	2500	775	103	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			3260	mg/Kg	5	2500	775	99	78.9 - 121	3	20

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

Matrix Spike (MS-1) Spiked Sample: 358160

QC Batch: 110662 | Date Analyzed: 2014-03-28 | Analyzed By: AK
Prep Batch: 93568 | QC Preparation: 2014-03-28 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2720	mg/Kg	5	2500	261	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			2810	mg/Kg	5	2500	261	102	78.9 - 121	3	20

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

Matrix Spike (MS-1) Spiked Sample: 358177

QC Batch: 110669 | Date Analyzed: 2014-03-30 | Analyzed By: AK
Prep Batch: 93559 | QC Preparation: 2014-03-28 | Prepared By: RG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	5	2500	<19.2	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			2500	mg/Kg	5	2500	<19.2	100	78.9 - 121	4	20

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

Calibration Standards

Standard (ICV-1)

QC Batch: 110470 | Date Analyzed: 2014-03-24 | Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2014-03-24

Standard (CCV-2)

QC Batch: 110470 | Date Analyzed: 2014-03-24 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.0	98	85 - 115	2014-03-24

Standard (ICV-1)

QC Batch: 110658 | Date Analyzed: 2014-03-27 | Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2014-03-27

Standard (CCV-1)

QC Batch: 110658 | Date Analyzed: 2014-03-27 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-03-27

Standard (ICV-1)

QC Batch: 110659 Date Analyzed: 2014-03-28 Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-03-28

Standard (CCV-1)

QC Batch: 110659 Date Analyzed: 2014-03-28 Analyzed By: AK

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	2014-03-28

Standard (ICV-1)

QC Batch: 110660 Date Analyzed: 2014-03-28 Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-03-28

Standard (CCV-1)

QC Batch: 110660 Date Analyzed: 2014-03-28 Analyzed By: AK

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	2014-03-28

Standard (ICV-1)

QC Batch: 110661 Date Analyzed: 2014-03-28 Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-03-28

Standard (CCV-1)

QC Batch: 110661 Date Analyzed: 2014-03-28 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.3	99	85 - 115	2014-03-28

Standard (ICV-1)

QC Batch: 110662 Date Analyzed: 2014-03-28 Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-03-28

Standard (CCV-1)

QC Batch: 110662 Date Analyzed: 2014-03-28 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2014-03-28

Standard (ICV-1)

QC Batch: 110669 Date Analyzed: 2014-03-30 Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-03-30

Standard (CCV-1)

QC Batch: 110669 Date Analyzed: 2014-03-30 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2014-03-30

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.

1403802

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: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC06179

PROJECT NAME: COG - SRO State Unit #101 Eddy Co. NM

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
358121	3/14		S		X	T1 (AH 1) 0'	1	N			X	
122						2'						
123						4'						
124						6'						
125						8'						
126						10'						
127						T2 (AH 2) 0'						
128						2'						
129						4'						
130						6'						

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 (X); Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature) Adrian Garcia — Date: 3/17/14 — Time: 1615
RECEIVED BY: (Signature) — Date: 3/17/14 — Time: 1615
SAMPLED BY: (Print & Initial) Adrian Garcia — Date: 3/14/14 — Time:

RELINQUISHED BY: (Signature) — Date: 3/17/14 — Time: 1645
RECEIVED BY: (Signature) AKeyman — Date: 3-17-14 — Time: 1645
SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS — AIRBILL #: — OTHER:

RELINQUISHED BY: (Signature) — Date: — Time:
RECEIVED BY: (Signature) — Date: — Time:
TETRA TECH CONTACT PERSON: Ike Tavarez — Results by: — RUSH Charges Authorized: Yes No

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

SAMPLE CONDITION WHEN RECEIVED: 6°C

REMARKS: Midland DW

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

140378.2

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: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112NC06179

PROJECT NAME: COG-SRO State Unit #101 Eddy Co. NM

LAB I.D. NUMBER	DATE 2014	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
131	3/14		S		X	T2 (AH 2) 8'	1	N			X														X				
132						10'																							
133						T3 (AH 3) 0'																								
134						2'																							
135						4'																							
136						6'																							
137						8'																							
138						10'																							
139						T4 (AH 4) 0'																								
140						2'																							

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date:	Time:	RECEIVED BY: (Signature)	Date:	Time:
Adrian Garcia	3/17/14	1615	Todd Wells	3/17/14	1615
Todd Wells	3/17/14	1645	AReyman	3-17-14	1645
RELINQUISHED BY: (Signature)	Date:	Time:	RECEIVED BY: (Signature)	Date:	Time:

SAMPLED BY: (Print & Initial) Aaron Garcia Date: 3/14/14 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:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 6°C

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.

1405100?

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: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC06179

PROJECT NAME: COG - 3RD State Unit #101 Eddy Co. NM

LAB I.D. NUMBER	DATE 2014	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
141	3/14		S		X	T4 (AH 4) 4'	1	N			X													X				
142						6'																						
143						8'																						
144						10'																						
145						T5 (AH 5) 0'																							
146						2'																						
147						4'																						
148						6'																						
149						8'																						
150						10'																						

RELINQUISHED BY: (Signature) Adrian Garcia	Date: 3/13/14 Time: 1615	RECEIVED BY: (Signature)	Date: 3/17/14 Time: 1615
RELINQUISHED BY: (Signature)	Date: 3/17/14 Time: 1645	RECEIVED BY: (Signature) AKepman	Date: 3-17-14 Time: 1645
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) Adrian Garcia — Date: 3/13/14 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:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE: DATE: TIME:
RECEIVED BY: (Signature)

SAMPLE CONDITION WHEN RECEIVED: 6°C

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.

H0?408

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: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC06179

PROJECT NAME: COG-SRO State Unit #101 Eddy Co. NM

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 (circled); Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	Chloride
151	3/13		S		X	T6 (AH 12) 0'	1	N			X		X
152	↓		↓		↓	2'	↓	↓			↓		↓
153	↓		↓		↓	4'	↓	↓			↓		↓
154	↓		↓		↓	6'	↓	↓			↓		↓
155	↓		↓		↓	8'	↓	↓			↓		↓
156	↓		↓		↓	10'	↓	↓			↓		↓
157	↓		↓		↓	T7 (AH 14) 0'	↓	↓			↓		↓
158	↓		↓		↓	2'	↓	↓			↓		↓
159	↓		↓		↓	4'	↓	↓			↓		↓
160	↓		↓		↓	6'	↓	↓			↓		↓

RELINQUISHED BY: (Signature) Adra Davis Date: 3/17/14 Time: 1615 — RECEIVED BY: (Signature) [signature] Date: 3/17/14 Time: 1615

RELINQUISHED BY: (Signature) [signature] Date: 3/17/14 Time: 1645 — RECEIVED BY: (Signature) A. Kipman Date: 3-17-14 Time: 1645

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

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

SAMPLED BY: (Print & Initial) Adra Garza Date: 3/13/13 Time:

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

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2 °C — 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.

1403100?

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: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC06179

PROJECT NAME: COG - SRO State Unit # 101 Eddy Co NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	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 (circled)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
161	3/13		S		X	T7 (AH 14) 8'	1	N			X														X				
162	↓		↓		↓	10'	↓	↓			↓														↓				
163	↓		↓		↓	T8 (AH 15) 0'	↓	↓			↓														↓				
164	↓		↓		↓	2'	↓	↓			↓														↓				
165	↓		↓		↓	4'	↓	↓			↓														↓				
166	↓		↓		↓	6'	↓	↓			↓														↓				
167	↓		↓		↓	8'	↓	↓			↓														↓				
168	↓		↓		↓	10'	↓	↓			↓														↓				

RELINQUISHED BY: (Signature) Adrian Garcia Date: 3/17/14 Time: 1615
RECEIVED BY: (Signature) [signature] Date: 3/17/14 Time: 1615

RELINQUISHED BY: (Signature) [signature] Date: 3/17/14 Time: 1645
RECEIVED BY: (Signature) A Lipman Date: 3.17.14 Time: 1645

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

SAMPLED BY: (Print & Initial) Adrian Garcia Date: 3/13/14 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:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 6°C

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.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 26, 2014

IKE TAVAREZ

TETRA TECH

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

RE: CONCHO SRO STATE UNIT #101

Enclosed are the results of analyses for samples received by the laboratory on 03/18/14 17:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
IKE TAVAREZ
1910 N. BIG SPRING STREET
MIDLAND TX, 79705
Fax To: (432) 682-3946

Received:	03/18/2014	Sampling Date:	03/18/2014
Reported:	03/26/2014	Sampling Type:	Soil
Project Name:	CONCHO SRO STATE UNIT #101	Sampling Condition:	Cool & Intact
Project Number:	112MC06176	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: BG TRENCH 0' (H400831-01)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/25/2014	ND	416	104	400	3.92	

Sample ID: BG TRENCH 2' (H400831-02)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	03/25/2014	ND	416	104	400	3.92	

Sample ID: BG TRENCH 4' (H400831-03)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**816**	16.0	03/25/2014	ND	416	104	400	3.92	

Sample ID: BG TRENCH 6' (H400831-04)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1260**	16.0	03/25/2014	ND	432	108	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
IKE TAVAREZ
1910 N. BIG SPRING STREET
MIDLAND TX, 79705
Fax To: (432) 682-3946

Received:	03/18/2014	Sampling Date:	03/18/2014
Reported:	03/26/2014	Sampling Type:	Soil
Project Name:	CONCHO SRO STATE UNIT #101	Sampling Condition:	Cool & Intact
Project Number:	112MC06176	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: BG TRENCH 8' (H400831-05)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1730**	16.0	03/25/2014	ND	432	108	400	3.77	

Sample ID: BG TRENCH 10' (H400831-06)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2640**	16.0	03/25/2014	ND	432	108	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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: 1

H400831

CLIENT NAME: CONCHO

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MCD6176

PROJECT NAME: Concho SRO State Unit #101 Eddy Co. NM

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
1	3/18		S		X	BG Trench 0'	1	N			X	
2						2'						
3						4'						
4						6'						
5						8'						
6						10'						

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
												X				

RELINQUISHED BY: (Signature) Adrian Garcia — Date: 3/18/14 Time: 1400

RECEIVED BY: (Signature) Jodi Henson — Date: 3/18/14 Time: 15:50

SAMPLED BY: (Print & Initial) Adrian Garcia — Date: _____ Time: _____

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

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

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

AIRBILL #: _____

OTHER: _____

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

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Cardinal Labs

ADDRESS: _____

CITY: Hobbs STATE: NM ZIP: _____

CONTACT: _____ PHONE: _____ DATE: _____ TIME: _____

RECEIVED BY: (Signature) _____

SAMPLE CONDITION WHEN RECEIVED: 1.4°C #54

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.