SITE INFORMATION

Report Type: Closure Report

General Site Information:						
Site:	**New Mexico CR State #3**					
Company:	**COG Operating LLC**					
Section, Township and Range	**Sec 32**	**T 19S**	**R 32E**			
Lease Number:	**API-30-025-20959**					
County:	**Lea County**					
GPS:	**32 36.961° N**			**104 47.555° W**		
Surface Owner:	State					
Mineral Owner:						
Directions:	From intersection of Carlsbad HWY and HWY 243, go WEST on Hwy 243 for approximately 4.5 miles, turn NORTH onto CR 126A and continue for approximately 3.3 miles, turn EAST onto lease road and continue for apx 0.4 miles, turn SOUTH onto lease road for apx 0.1 miles. Location is apx 0.1 miles NORTHWEST of pad in the pasture					

Release Data:	
Date Released:	9/26/2013
Type Release:	Produced Water and Oil
Source of Contamination:	Flowline failure
Fluid Released:	255 bbl
Fluids Recovered:	193 bbl

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:	**0**	

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

TETRA TECH

September 29, 2014

Mr. Tomas Oberding
Environmental Engineer Specialist
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

RE: Work Plan for the COG Operating LLC., New Mexico CR State #3, Unit L, Section 32, Township 19 South, Range 32 East, Lea County, New Mexico.

Mr. Oberding:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from New Mexico CR State #3, Unit L, Section 32, Township 19 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32 36.961º, W 103 47.555º. 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 September 26, 2013, and released approximately two hundred and fifty (250) barrels of produced water and five (5) barrels of oil from hole in a steel flowline. One hundred and ninety (190) barrels of produced water and three (3) barrels of oil were recovered. The spill affected an area in the pasture measuring 135' x 50'. The initial and final C-141 forms are enclosed in Appendix A.

Groundwater

No water wells were listed within Section 31. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 400' 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 5,000 mg/kg.

Soil Assessment and Analytical Results

Auger holes

On October 21, 2013, Tetra Tech personnel inspected and sampled the spill area. Five (5) auger holes (AH-1 through AH-5) were installed using a stainless steel hand auger to assess the impacted soils. In addition, a background auger hole (Background 1) was also installed to evaluate the chloride concentrations of the native soil. 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 results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, the areas of AH-2, AH-3, AH-4, and AH-5 detected TPH concentrations above the RRAL. The areas of AH-2 and AH-3 and AH-5 showed a shallow impact to the soils, which declined below the RRAL to 1-1.5' below surface and declined below RRAL at 4-4.5' in the area of AH-4. In addition, AH-4 exceeded the total BTEX RRAL, but declined to 0.322 mg/kg at 4.5' below surface.

Elevated chloride concentrations were detected in all of the auger holes with bottom auger samples of (AH-1) 11,200 mg/kg at 6-6.5', (AH-2) 12,000 mg/kg at 6-6.5', (AH-3) 13,600 mg/kg at 4-4.5', (AH-4) 12,800 mg/kg at 6-6.5' and (AH-5) 10,900 mg/kg at 5-5.5'. The chloride impacted soils were not vertically defined. The background samples (Background 1) did not show any significant chloride concentrations in the subsurface soils.

Boreholes

On March 13, 2014, Tetra Tech personnel installed four (4) boreholes (BH-1 through BH-4) using a drilling rig to vertically define the chloride impact. Borehole (BH-2) was installed between the areas of AH-2 and AH-3. The borehole locations are shown on Figure 3. The sampling results are summarized in Table 1. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C.

Boreholes (BH-1 through BH-4) showed an impact to the soils and detected a chloride high of 2,830 mg/kg at 4-5', 1,830 mg/kg at 9-10', 2,260 mg/kg at 9-10', and 1,300 mg/kg at 14-15', respectively. The chloride concentrations detected in the boreholes were significantly lower compared to the auger holes.

TETRA TECH

All of the borehole samples declined with depth. The areas of BH-2 (AH-2 and AH-3) and BH-4 (AH-5) significantly declined with depth at approximately 40' to 50' below surface. In addition, BH-1 (AH-1) and BH-3 (AH-4) declined to 328 mg/kg at 69-70' and 342 mg/kg at 59-60', respectively.

Remedial Activities

On June 23, 2014, Tetra Tech began supervising the excavation of impacted materials as highlighted (green) on Table 1 and shown on Figure 4. As proposed in the work plan, the spill area was excavated to a depth of approximately 7.0' below surface.

The areas of AH-1 through AH-5 were backfilled with caliche material and lined with a 40 mil liner at 4.0' below surface in order to prevent vertical migration of the impacted soil left in place. The area was then backfilled to surface grade. Approximately 2,160 yards of excavated soil was transported offsite for proper disposal and the areas were backfilled with clean material to surface grade.

Conclusion

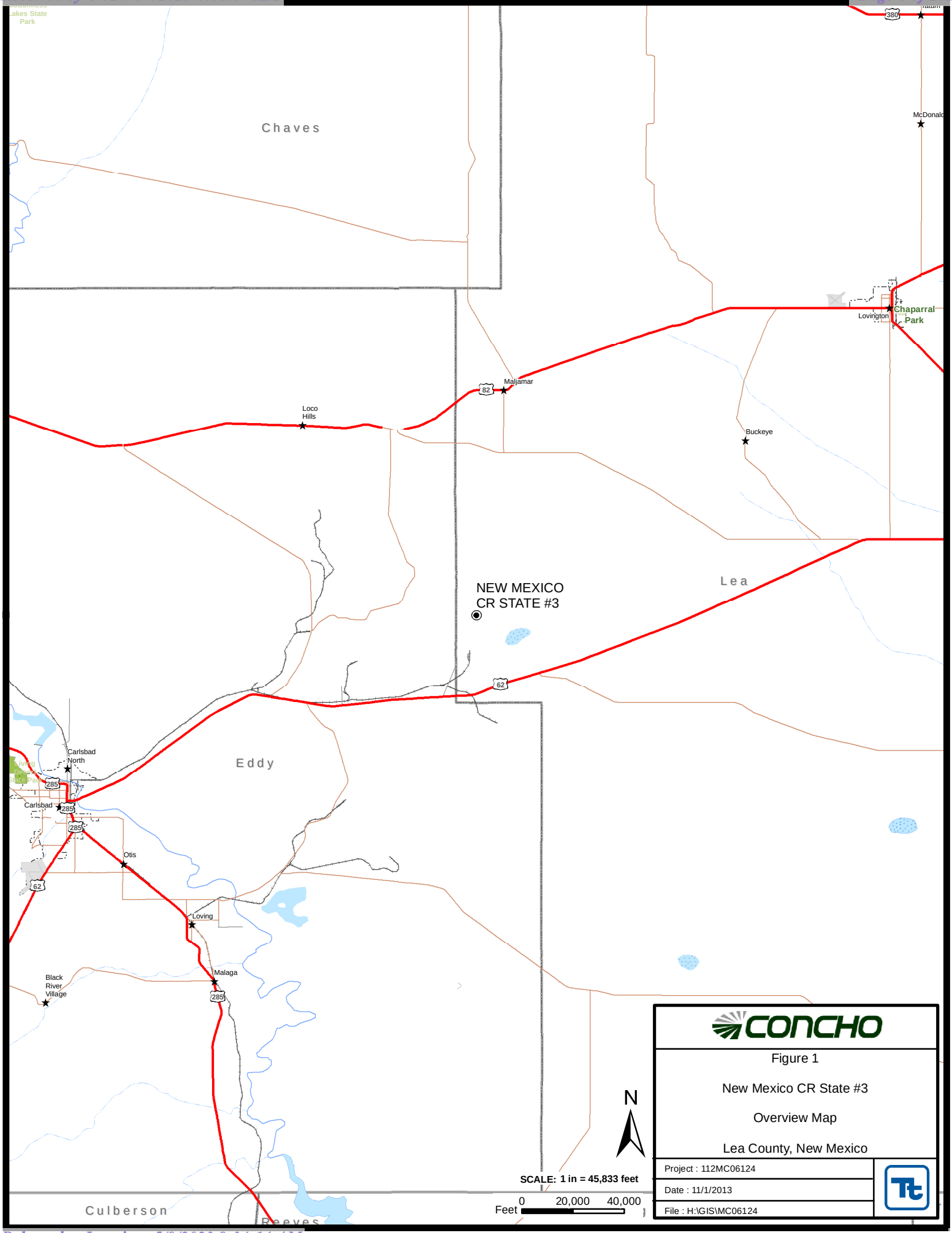
Based on the remedial actions taken, COG requests closure of the site. The Final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Clair Gonzales,
Geologist

cc: Robert McNeil – COG

Figures



CONCHO

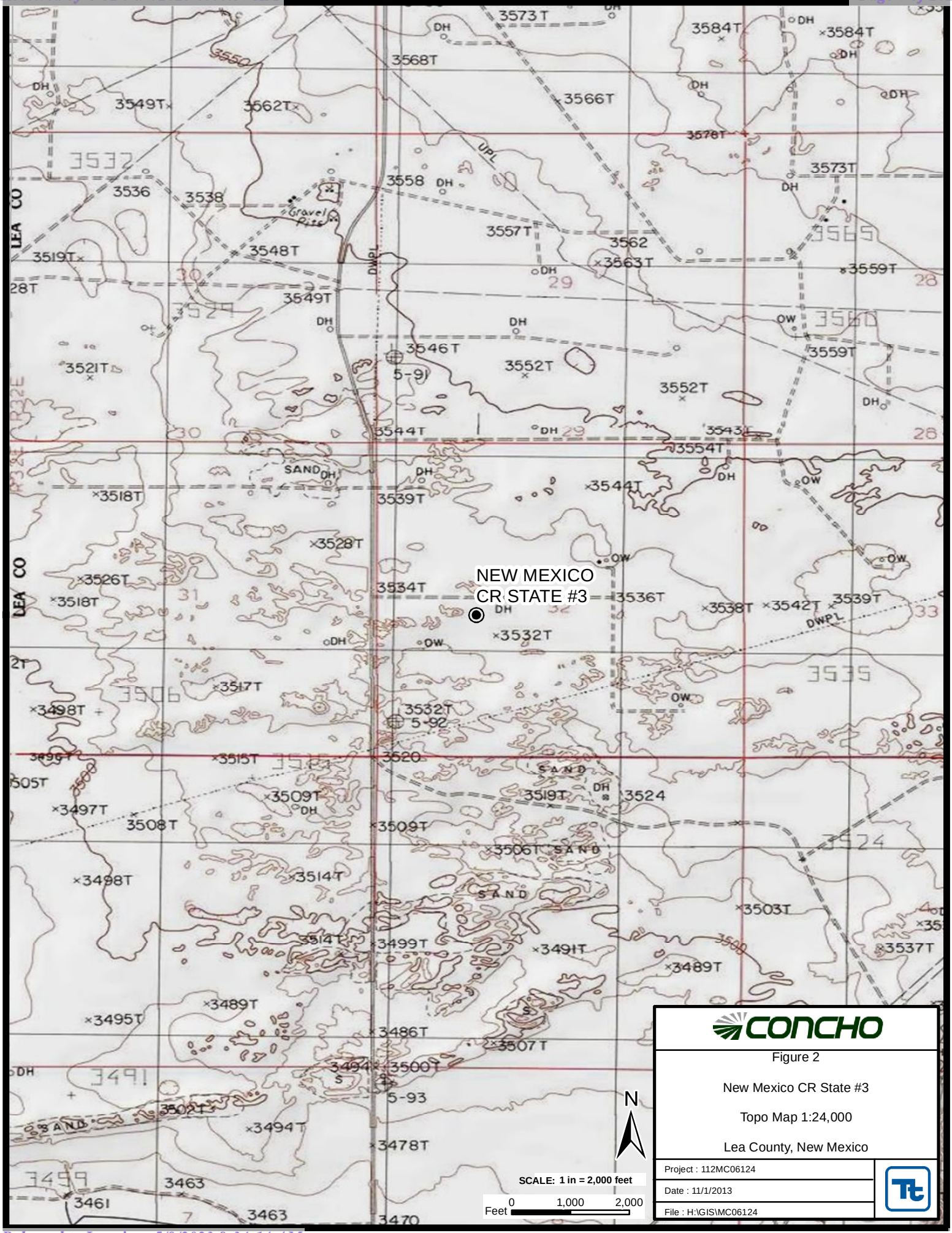
Figure 1

New Mexico CR State #3

Overview Map

Lea County, New Mexico

Project : 112MC06124	
Date : 11/1/2013	
File : H:\GIS\MC06124	



CONCHO

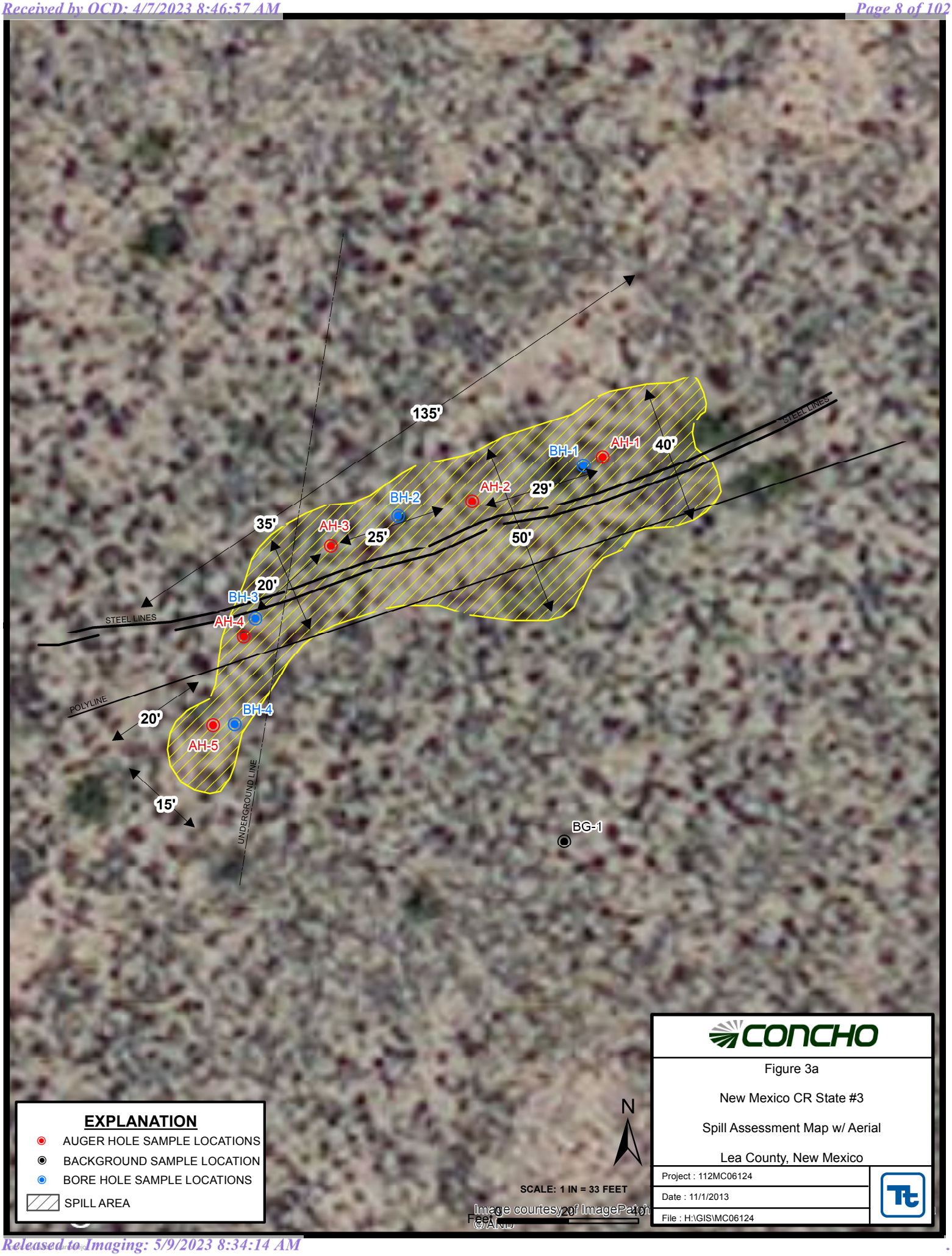
Figure 2

New Mexico CR State #3

Topo Map 1:24,000

Lea County, New Mexico

Project : 112MC06124	
Date : 11/1/2013	
File : H:\GIS\MC06124	



CONCHO

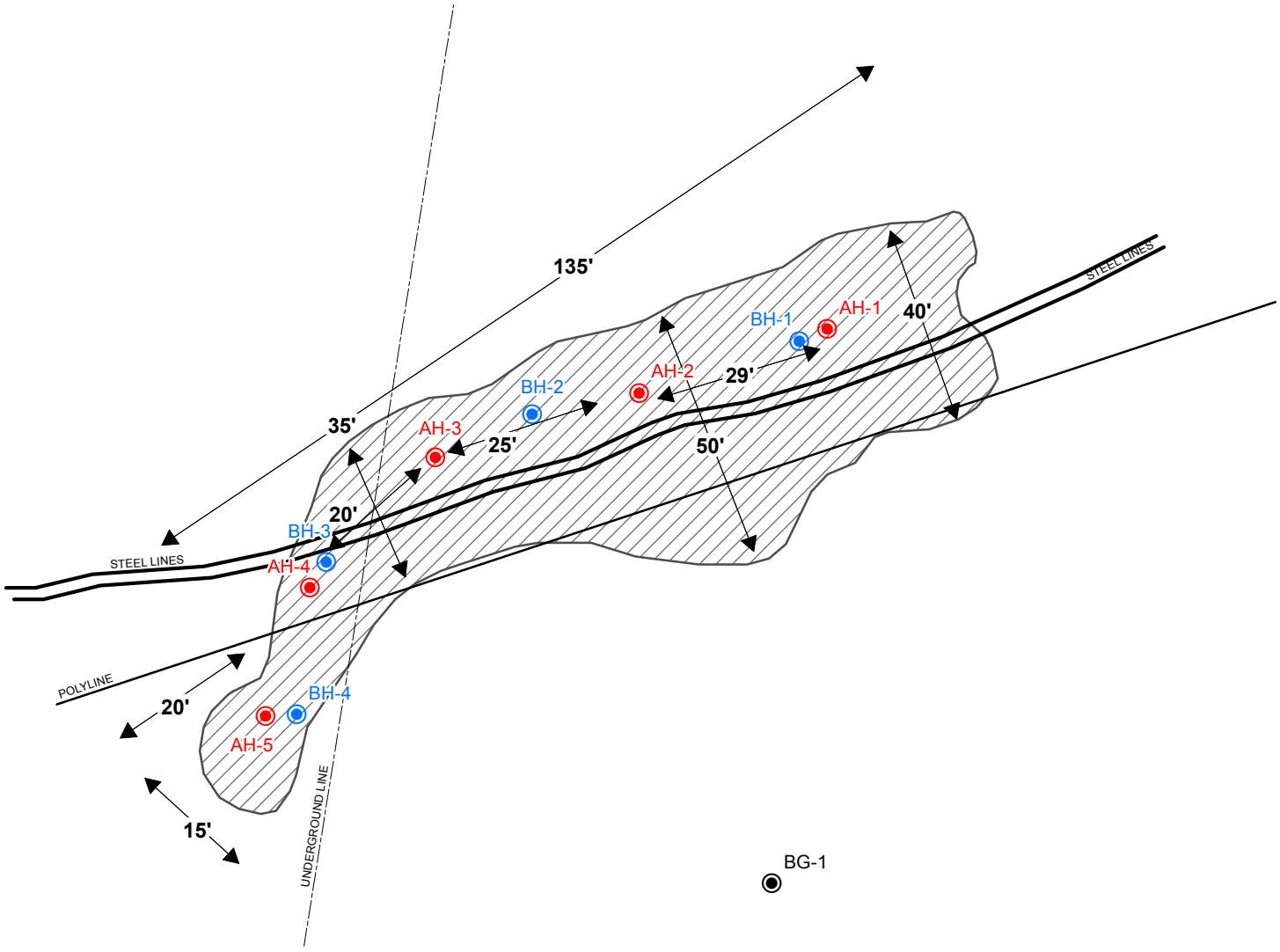
Figure 3a

New Mexico CR State #3

Spill Assessment Map w/ Aerial

Lea County, New Mexico

Project : 112MC06124	
Date : 11/1/2013	
File : H:\GIS\MC06124	



EXPLANATION

- AUGER HOLE SAMPLE LOCATIONS
- BACKGROUND SAMPLE LOCATION
- BORE HOLE SAMPLE LOCATIONS
- SPILL AREA

N

SCALE: 1 IN = 33 FEET

Feet 0 20 40

CONCHO

Figure 3

New Mexico CR State #3

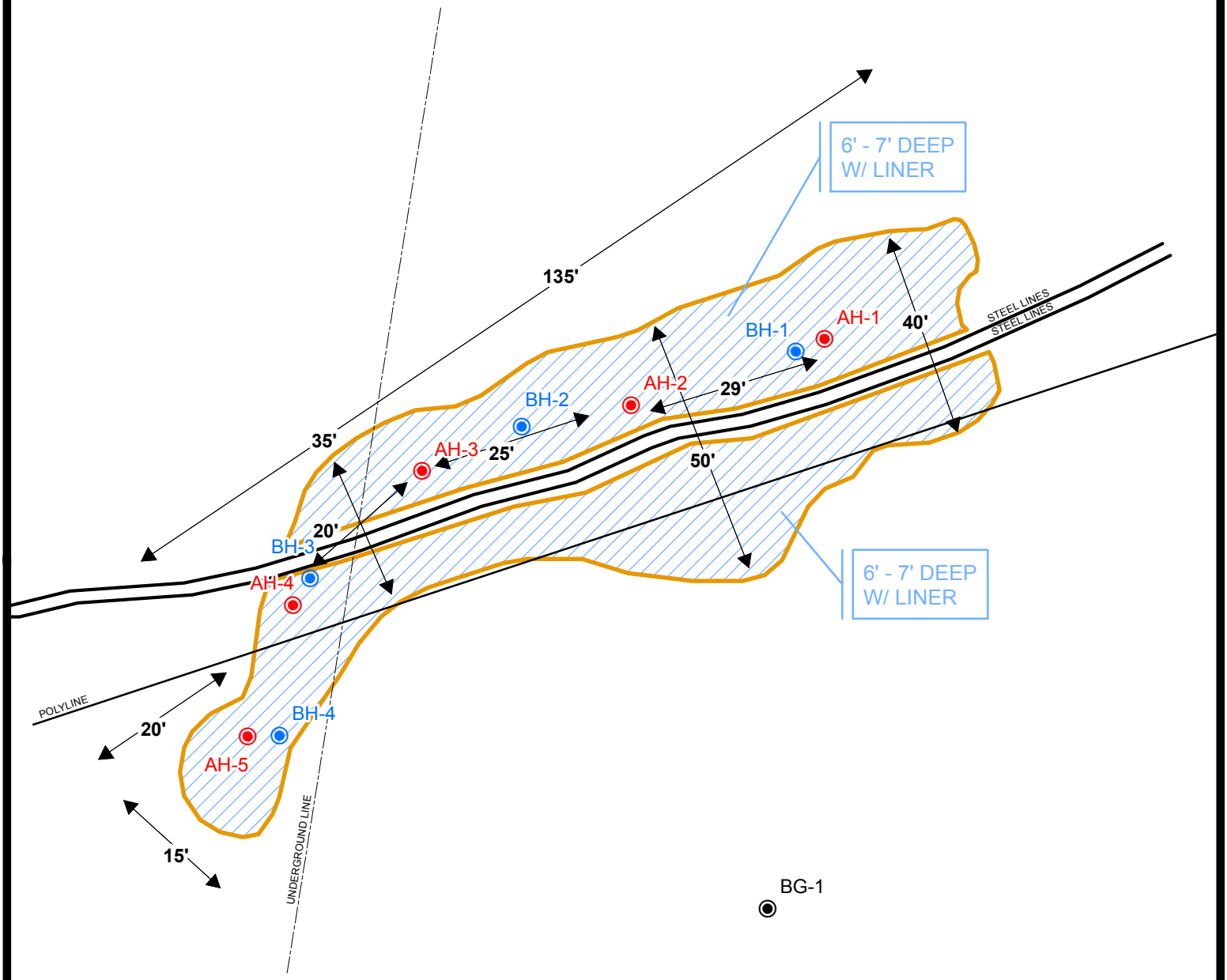
Spill Assessment Map

Lea County, New Mexico

Project : 112MC06124

Date : 11/1/2013

File : H:\GIS\MC06124



EXPLANATION

- AUGER HOLE SAMPLE LOCATIONS
- BACKGROUND SAMPLE LOCATION
- BORE HOLE SAMPLE LOCATIONS
- PROPOSED LINER
- PROPOSED EXCAVATION AREAS

N

SCALE: 1 IN = 29 FEET

Feet 0 10 20

CONCHO

Figure 4

New Mexico CR State #3

Proposed Excavation Areas & Depths Map

Lea County, New Mexico

Project : 112MC06124

Date : 06/04/2014

File : H:\GIS\MC06124

Tables

Table 1
COG Operating LLC.
New Mexico C.R. St #3
Lea County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-1	10/21/2013	0-1	-	X		<4.00	3,420	3,420	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**1,740**
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	**2,110**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	**2,600**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	**13,000**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	**7,150**
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	**9,180**
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	**11,200**
BH-1	3/13/2014	0-1	-	X		<20.0	3,620	3,620	<0.0400	<0.0400	0.330	2.89	3.22	296
	"	2-3	-	X		-	-	-	-	-	-	-	-	368
	"	4-5	-	X		-	-	-	-	-	-	-	-	**2,830**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**1,420**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**2,000**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**1,290**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**1,550**
	"	24-25	-	X		-	-	-	-	-	-	-	-	857
	"	29-30	-	X		-	-	-	-	-	-	-	-	**1,380**
	"	39-40	-	X		-	-	-	-	-	-	-	-	690
	"	49-50	-	X		-	-	-	-	-	-	-	-	**1,030**
	"	59-60	-	X		-	-	-	-	-	-	-	-	551
	"	69-70	-	X		-	-	-	-	-	-	-	-	328

Table 1
COG Operating LLC.
New Mexico C.R. St #3
Lea County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-2	10/21/2013	0-1	-	X		**60.20**	**10,400**	**10,460**	<0.100	<0.100	<0.100	0.850	0.850	**3,300**
	"	1-1.5	-	X		<4.00	<50.0	-	-	-	-	-	-	**4,380**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	**5,590**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	**17,600**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	**13,000**
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	**10,200**
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	**12,000**
BH-2	3/13/2014	0-1	-	X		<4.00	431	431	<0.0200	<0.0200	<0.0200	0.0646	0.0646	595
	"	2-3	-	X		-	-	-	-	-	-	-	-	619
	"	4-5	-	X		-	-	-	-	-	-	-	-	**1,600**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**1,140**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**1,830**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**1,400**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**1,140**
	"	24-25	-	X		-	-	-	-	-	-	-	-	786
	"	29-30	-	X		-	-	-	-	-	-	-	-	**1,310**
	"	39-40	-	X		-	-	-	-	-	-	-	-	643
	"	49-50	-	X		-	-	-	-	-	-	-	-	548
	"	59-60	-	X		-	-	-	-	-	-	-	-	495
	"	69-70	-	X		-	-	-	-	-	-	-	-	280
	"	79-80	-	X		-	-	-	-	-	-	-	-	276
AH-3	10/21/2013	0-1	-	X		72.6	6,570	6,643	<0.100	<0.100	<0.100	0.496	0.496	**2,350**
	"	1-1.5	-	X		<4.00	<50.0	<50.0	-	-	-	-	-	**2,070**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	**21,100**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	**11,100**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	**11,200**
	"	4.5-5	-	X		-	-	-	-	-	-	-	-	**13,600**

Table 1
COG Operating LLC.
New Mexico C.R. St #3
Lea County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-4	10/21/2013	0-1	-	X		**1,340**	**10,200**	**11,540**	<.800	**4.58**	**11.4**	**68.8**	**84.8**	**3,540**
	"	1-1.5	-	X		**2,500**	**3,330**	**5,830**	<1.00	**29.7**	**4.10**	**112**	**146**	**4,990**
	"	2-2.5	-	X		**3,640**	**1,960**	**5,600**	<1.00	**59.0**	**65.9**	**162**	**287**	**8,990**
	"	3-3.5	-	X		**3,550**	**1,870**	**5,420**	<.800	**1.40**	**34.3**	**101**	**137**	**13,300**
	"	4-4.5	-	X		11.5	<50.0	11.5	<0.0200	<0.0200	0.0434	0.279	0.322	**9,130**
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	**3,950**
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	**12,800**
BH-3	3/13/2014	0-1	-	X		381	7,010	**7,391**	<0.100	0.408	7.32	32.8	40.5	660
	"	2-3	-	X		1,320	9,610	**10,930**	-	-	-	-	-	613
	"	4-5	-	X		1,780	6,730	**8,510**	-	-	-	-	-	920
	"	6-7	-	X		6.45	154	160	-	-	-	-	-	**1,420**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**2,260**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**1,270**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**1,300**
	"	24-25	-	X		-	-	-	-	-	-	-	-	896
	"	29-30	-	X		-	-	-	-	-	-	-	-	**1,290**
	"	39-40	-	X		-	-	-	-	-	-	-	-	**1,000**
	"	49-50	-	X		-	-	-	-	-	-	-	-	571
	"	59-60	-	X		-	-	-	-	-	-	-	-	342
	"	64-65	-	X		-	-	-	-	-	-	-	-	394
	"	69-70	-	X		-	-	-	-	-	-	-	-	280

Table 1
COG Operating LLC.
New Mexico C.R. St #3
Lea County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-5	10/21/2013	0-1	-	X		**286**	**9,000**	**9,286**	<0.800	<0.800	<0.800	3.04	3.04	**2,460**
	"	1-1.5	-	X		<4.00	<50.0	<50.0	-	-	-	-	-	**5,030**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	**14,700**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	**4,010**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	**8,590**
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	**10,900**
BH-4	3/13/2014	0-1	-	X		<4.00	464	464	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	429
	"	2-3	-	X		-	-	-	-	-	-	-	-	476
	"	4-5	-	X		-	-	-	-	-	-	-	-	**1,140**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**1,020**
	"	9-10	-	X		-	-	-	-	-	-	-	-	935
	"	14-15	-	X		-	-	-	-	-	-	-	-	**1,300**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**1,010**
	"	24-25	-	X		-	-	-	-	-	-	-	-	887
	"	29-30	-	X		-	-	-	-	-	-	-	-	**1,030**
	"	39-40	-	X		-	-	-	-	-	-	-	-	863
	"	49-50	-	X		-	-	-	-	-	-	-	-	314
	"	59-60	-	X		-	-	-	-	-	-	-	-	361
	"	69-70	-	X		-	-	-	-	-	-	-	-	<250
Background 1	10/21/2013	0-1	-	X		-	-	-	-	-	-	-	-	<20.0
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	<20.0

(-) Not Analyzed
(BEB) Below Excavation Bottom
Excavation Depths
Liner Depth

Date Modified: 04/10/14

112MC06124

Photos

COG Operating LLC
New Mexico CR State #3.
Lea County, New Mexico

TETRA TECH

View West – Area of AH-1

View West – Area of AH-2

COG Operating LLC
New Mexico CR State #3.
Lea County, New Mexico

TETRA TECH

View West – Area of AH-3

View West – Area of AH-4

COG Operating LLC
New Mexico CR State #3.
Lea County, New Mexico

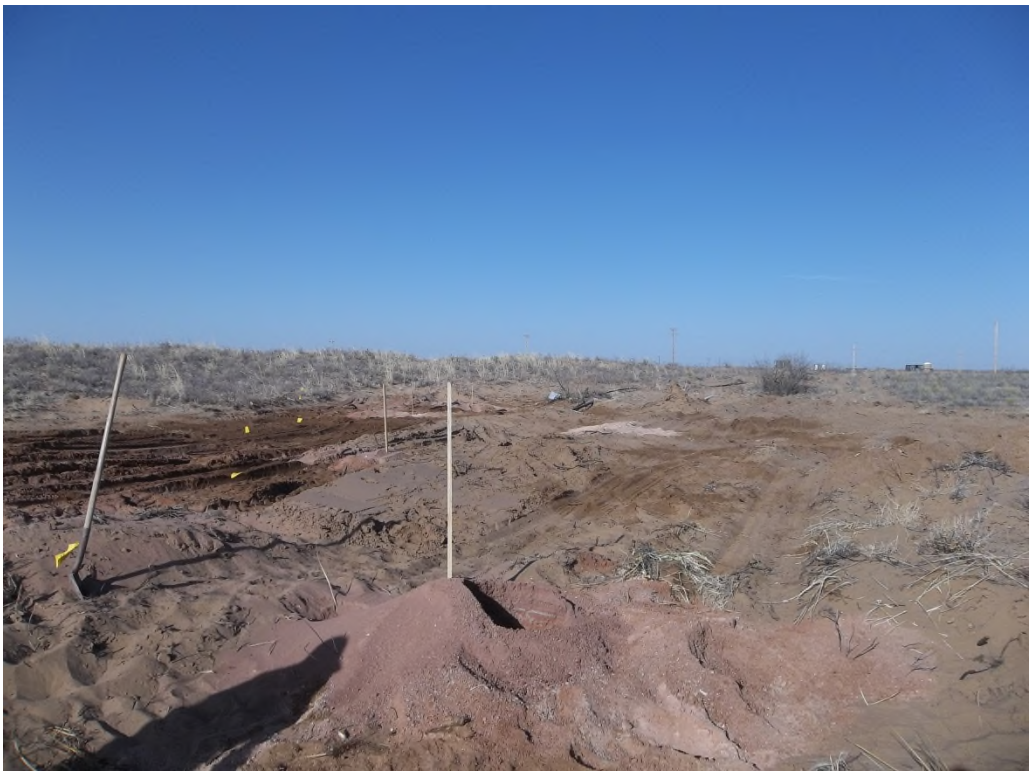
TETRA TECH

View East – Area of AH-5

View West – Area of BH-4

COG Operating LLC
New Mexico CR State #3.
Lea County, New Mexico

TETRA TECH



View East – Areas of BH-1, BH-2, and BH-3

View North – Excavation area of AH-5

COG Operating LLC
New Mexico CR State #3.
Lea County, New Mexico

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View West – Excavation areas of AH-1, AH-2 and AH-3

View West – Excavation area of AH-4

COG Operating LLC
New Mexico CR State #3.
Lea County, New Mexico

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View Northwest – Lined area of AH-4 and AH-5

View West – Lined area of AH-1, AH-2, and AH-3

COG Operating LLC
New Mexico CR State #3.
Lea County, New Mexico

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View North – Backfilled spill area

View East – Backfilled spill area

Appendix A

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pv- 400-506

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	New Mexico CR State #003	Facility Type	SWD

Surface Owner State	Mineral Owner	Lease No. (API#) 30-025-20959

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	32	19S	32E					Lea

Latitude 32 36.961 Longitude 103 47.555

NATURE OF RELEASE

Type of Release Oil and produced water	Volume of Release 5bbls of oil 250bbls of produced water	Volume Recovered 3bbls of oil 190bbls of produced water
Source of Release Steel flowline	Date and Hour of Occurrence 09-26-2013	Date and Hour of Discovery 09-26-2013 10:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffrey R. Leking - NMOCD	
By Whom? Michelle Mullins	Date and Hour 09-27-2013 07:26am	
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 hole developed in a section of the steel pipe due to corrosion. The section of pipe has been removed and replaced with a new section.

Describe Area Affected and Cleanup Action Taken.*

Initially an estimated 5bbls of oil and 205bbls of produced water were released due to a hole that developed in the steel line. The release was a 125X85 in the pasture. We were able to recover 3bbls of oil and 190bbls of produced water using vacuum trucks. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a work plan to the NMOCD 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: 10-3-2013 Phone: 432-661-6601		

* Attach Additional Sheets If Necessary

Received by OCD: 4/7/2023 8:46:57 AM

Released to Imaging: 5/9/2023 8:34:14 AM

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 **600 West Illinois Avenue, Midland, Texas 79701**	Telephone No. **(432) 230-0077**
Facility Name New Mexico CR State #3	Facility Type **SWD**

Surface Owner: State	Mineral Owner	Lease No. (API#) 30-025-20959

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	32	19S	32E					Lea

Latitude N 32 36.961° **Longitude** W 103 47.555°

NATURE OF RELEASE

Type of Release: Oil and Produced Water	Volume of Release 5 **bbls oil** **250 bbls of produced water**	Volume Recovered 3 **bbls of oil** **190 bbls of produced water**
Source of Release **Steel Flowline**	Date and Hour of Occurrence 09/26/2013	Date and Hour of Discovery **09/26/2013 10:00am**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Geoffrey R. Leking - NMOCD**	
By Whom? Michelle Mullins	Date and Hour 09/27/2013 07:26 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A hole developed in a section of the steel pipe due to corrosion. The section of pie has been removed and replaced with a new section.

Describe Area Affected and Cleanup Action Taken.*

Initially an estimated 5 bbls of oil and 250 bbls of produced water were released due to a hole that developed in the steel line. The release was a 125'x85' area in the pasture. We were able to recover 3 bbls of oil and 190 bbls of produced water using vacuum trucks. 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	Approved by ~~District Supervisor~~ Environmental Specialist: Brittany Hall
Title: Senior Project Manager, P.G.	Approval Date: 5/9/2023 Expiration Date: n/a
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval: none Attached ☐
Date: 9/29/2014 Phone: (432) 682-4559	

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - New Mexico CR State #3
Lea County, New Mexico

18 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12 400
18	17	16	15 98	14 317	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35 261	36

18 South 32 East

6	5	4 65	3	2	1
7 460 82	8	9	10	11	12
18	17	16 84	15	14	13
19	20 164	21	22 429	23	24
30	29	28	27	26	25
31	32	33	34 117	35	36

18 South 33 East

6	5	4	3 60	2	1
7	8 100	9	10 62	11 46	12 143 140
18	17 85	16	15	14 36	13 60
19 >140	20	21	22	23	24 195
30 35	29	28	27	26	25
31	32	33 177	34	35	36

19 South 31 East

6	5 SITE	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28 180	27	26	25
31	32	33 101	34	35	36 130

19 South 32 East

6	5	4	3	2	1
7	8 365	9	10	11	12
18	17	16	15	14	13 135 dry
19 102	20 345	21	22	23	24
30	29	28	27	26	25
31	32 SITE	33	34 250	35	36

19 South 33 East

6	5	4	3	2	1
7	8	9	10	11	12
18 340	17 116	16	15	14	13
19	20	21	22	23	24
30	29	28 130 dry	27	26 92 85	25
31	32 185	33	34	35	36

20 South 31 East

6	5	4	3	2	1
7	8	9	10 130	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36 80

20 South 32 East

6	5	4	3	2	1 21.8
7	8	9	10	11	12
18 89	17	16	15	14	13
19	20	21	22	23	24
30 9.9	29	28	27 12.3	26	25
31	32	33	34	35	36 46

20 South 33 East

6	5 325 278	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24 +300
30	29	28	27	26	25
31	32	33	34	35	36

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

(Corrected Report)

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

Report Date: April 16, 2014

Work Order: 14031826

Project Location: Lea Co, NM
Project Name: COG/NM C.R. St #3
Project Number: 112MC06124

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
358211	BH-1 0-1'	soil	2014-03-13	00:00	2014-03-18
358212	BH-1 2-3'	soil	2014-03-13	00:00	2014-03-18
358213	BH-1 4-5'	soil	2014-03-13	00:00	2014-03-18
358214	BH-1 6-7'	soil	2014-03-13	00:00	2014-03-18
358215	BH-1 9-10'	soil	2014-03-13	00:00	2014-03-18
358216	BH-1 14-15'	soil	2014-03-13	00:00	2014-03-18
358217	BH-1 19-20'	soil	2014-03-13	00:00	2014-03-18
358218	BH-1 24-25'	soil	2014-03-13	00:00	2014-03-18
358219	BH-1 29-30'	soil	2014-03-13	00:00	2014-03-18
358220	BH-1 39-40'	soil	2014-03-13	00:00	2014-03-18
358221	BH-1 49-50'	soil	2014-03-13	00:00	2014-03-18
358222	BH-1 59-60'	soil	2014-03-13	00:00	2014-03-18
358223	BH-1 69-70'	soil	2014-03-13	00:00	2014-03-18
358224	BH-2 0-1'	soil	2014-03-13	00:00	2014-03-18
358225	BH-2 2-3'	soil	2014-03-13	00:00	2014-03-18
358226	BH-2 4-5'	soil	2014-03-13	00:00	2014-03-18
358227	BH-2 6-7'	soil	2014-03-13	00:00	2014-03-18
358228	BH-2 9-10'	soil	2014-03-13	00:00	2014-03-18
358229	BH-2 14-15'	soil	2014-03-13	00:00	2014-03-18
358230	BH-2 19-20'	soil	2014-03-13	00:00	2014-03-18
358231	BH-2 24-25'	soil	2014-03-13	00:00	2014-03-18
358232	BH-2 29-30'	soil	2014-03-13	00:00	2014-03-18
358233	BH-2 39-40'	soil	2014-03-13	00:00	2014-03-18
358234	BH-2 49-50'	soil	2014-03-13	00:00	2014-03-18
358235	BH-2 59-60'	soil	2014-03-13	00:00	2014-03-18
358236	BH-2 69-70'	soil	2014-03-13	00:00	2014-03-18
358237	BH-2 79-80'	soil	2014-03-13	00:00	2014-03-18
358238	BH-3 0-1'	soil	2014-03-13	00:00	2014-03-18

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
358239	BH-3 2-3’	soil	2014-03-13	00:00	2014-03-18
358240	BH-3 4-5’	soil	2014-03-13	00:00	2014-03-18
358241	BH-3 6-7’	soil	2014-03-13	00:00	2014-03-18
358242	BH-3 9-10’	soil	2014-03-13	00:00	2014-03-18
358243	BH-3 14-15’	soil	2014-03-13	00:00	2014-03-18
358244	BH-3 19-20’	soil	2014-03-13	00:00	2014-03-18
358245	BH-3 24-25’	soil	2014-03-13	00:00	2014-03-18
358246	BH-3 29-30’	soil	2014-03-13	00:00	2014-03-18
358247	BH-3 39-40’	soil	2014-03-13	00:00	2014-03-18
358248	BH-3 49-50’	soil	2014-03-13	00:00	2014-03-18
358249	BH-3 59-60’	soil	2014-03-13	00:00	2014-03-18
358250	BH-3 64-65’	soil	2014-03-13	00:00	2014-03-18
358251	BH-3 69-70’	soil	2014-03-13	00:00	2014-03-18
358252	BH-4 0-1’	soil	2014-03-13	00:00	2014-03-18
358253	BH-4 2-3’	soil	2014-03-13	00:00	2014-03-18
358254	BH-4 4-5’	soil	2014-03-13	00:00	2014-03-18
358255	BH-4 6-7’	soil	2014-03-13	00:00	2014-03-18
358256	BH-4 9-10’	soil	2014-03-13	00:00	2014-03-18
358257	BH-4 14-15’	soil	2014-03-13	00:00	2014-03-18
358258	BH-4 19-20’	soil	2014-03-13	00:00	2014-03-18
358259	BH-4 24-25’	soil	2014-03-13	00:00	2014-03-18
358260	BH-4 29-30’	soil	2014-03-13	00:00	2014-03-18
358261	BH-4 39-40’	soil	2014-03-13	00:00	2014-03-18
358262	BH-4 49-50’	soil	2014-03-13	00:00	2014-03-18
358263	BH-4 59-60’	soil	2014-03-13	00:00	2014-03-18
358264	BH-4 69-70’	soil	2014-03-13	00:00	2014-03-18

	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)
358211 - BH-1 0-1’	<0.0400 [1]	<0.0400	**0.330**	**2.89**	**3620** Qs	<20.0 [2]
358224 - BH-2 0-1’	<0.0200	<0.0200	<0.0200	**0.0646**	**431** Qs	<4.00
358238 - BH-3 0-1’	<0.100 [3]	**0.408**	**7.32**	**32.8**	**7010** Qs	**381**
358239 - BH-3 2-3’					**9610** Qs	**1320**
358240 - BH-3 4-5’					**6730** Qs	**1780**
358241 - BH-3 6-7’					**154** Qs	**6.45**
358252 - BH-4 0-1’	<0.0200	<0.0200	<0.0200	<0.0200	**464** Qs	<4.00

Sample: 358211 - BH-1 0-1’

Param	Flag	Result	Units	RL
Chloride	Qs	**296**	mg/Kg	5

[1]Dilution due to hydorcarbons.
[2]Dilution due to hydrocarbons.
[3]Dilution due to hydorcarbons.

Sample: 358212 - BH-1 2-3'

Param	Flag	Result	Units	RL
Chloride	Qs	**368**	mg/Kg	5

Sample: 358213 - BH-1 4-5'

Param	Flag	Result	Units	RL
Chloride	Qs	**2830**	mg/Kg	5

Sample: 358214 - BH-1 6-7'

Param	Flag	Result	Units	RL
Chloride	Qs	**1420**	mg/Kg	5

Sample: 358215 - BH-1 9-10'

Param	Flag	Result	Units	RL
Chloride	Qs	**2000**	mg/Kg	5

Sample: 358216 - BH-1 14-15'

Param	Flag	Result	Units	RL
Chloride		**1290**	mg/Kg	5

Sample: 358217 - BH-1 19-20'

Param	Flag	Result	Units	RL
Chloride		**1550**	mg/Kg	5

Sample: 358218 - BH-1 24-25'

Param	Flag	Result	Units	RL
Chloride		**857**	mg/Kg	5

Sample: 358219 - BH-1 29-30'

Param	Flag	Result	Units	RL
Chloride		**1380**	mg/Kg	5

Sample: 358220 - BH-1 39-40'

Param	Flag	Result	Units	RL
Chloride		**690**	mg/Kg	5

Sample: 358221 - BH-1 49-50'

Param	Flag	Result	Units	RL
Chloride		**1030**	mg/Kg	5

Sample: 358222 - BH-1 59-60'

Param	Flag	Result	Units	RL
Chloride		**551**	mg/Kg	5

Sample: 358223 - BH-1 69-70'

Param	Flag	Result	Units	RL
Chloride		**328**	mg/Kg	5

Sample: 358224 - BH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**595**	mg/Kg	5

Sample: 358225 - BH-2 2-3'

Param	Flag	Result	Units	RL
Chloride		**619**	mg/Kg	5

Sample: 358226 - BH-2 4-5'

Param	Flag	Result	Units	RL
Chloride		**1600**	mg/Kg	5

Sample: 358227 - BH-2 6-7'

Param	Flag	Result	Units	RL
Chloride		**1140**	mg/Kg	5

Sample: 358228 - BH-2 9-10'

Param	Flag	Result	Units	RL
Chloride		**1830**	mg/Kg	5

Sample: 358229 - BH-2 14-15'

Param	Flag	Result	Units	RL
Chloride		**1400**	mg/Kg	5

Sample: 358230 - BH-2 19-20'

Param	Flag	Result	Units	RL
Chloride		**1140**	mg/Kg	5

Sample: 358231 - BH-2 24-25'

Param	Flag	Result	Units	RL
Chloride		**786**	mg/Kg	5

Sample: 358232 - BH-2 29-30'

Param	Flag	Result	Units	RL
Chloride		**1310**	mg/Kg	5

Sample: 358233 - BH-2 39-40'

Param	Flag	Result	Units	RL
Chloride		**643**	mg/Kg	5

Sample: 358234 - BH-2 49-50'

Param	Flag	Result	Units	RL
Chloride		**548**	mg/Kg	5

Sample: 358235 - BH-2 59-60'

Param	Flag	Result	Units	RL
Chloride		**495**	mg/Kg	5

Sample: 358236 - BH-2 69-70'

Param	Flag	Result	Units	RL
Chloride		**280**	mg/Kg	5

Sample: 358237 - BH-2 79-80'

Param	Flag	Result	Units	RL
Chloride		**276**	mg/Kg	5

Sample: 358238 - BH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**660**	mg/Kg	5

Sample: 358239 - BH-3 2-3'

Param	Flag	Result	Units	RL
Chloride		**613**	mg/Kg	5

Sample: 358240 - BH-3 4-5'

Param	Flag	Result	Units	RL
Chloride		**920**	mg/Kg	5

Sample: 358241 - BH-3 6-7'

Param	Flag	Result	Units	RL
Chloride		**1420**	mg/Kg	5

Sample: 358242 - BH-3 9-10'

Param	Flag	Result	Units	RL
Chloride		**2260**	mg/Kg	5

Sample: 358243 - BH-3 14-15'

Param	Flag	Result	Units	RL
Chloride		**1270**	mg/Kg	5

Sample: 358244 - BH-3 19-20'

Param	Flag	Result	Units	RL
Chloride		**1300**	mg/Kg	5

Sample: 358245 - BH-3 24-25'

Param	Flag	Result	Units	RL
Chloride		**896**	mg/Kg	5

Sample: 358246 - BH-3 29-30'

Param	Flag	Result	Units	RL
Chloride		**1290**	mg/Kg	5

Sample: 358247 - BH-3 39-40'

Param	Flag	Result	Units	RL
Chloride		**1000**	mg/Kg	5

Sample: 358248 - BH-3 49-50'

Param	Flag	Result	Units	RL
Chloride		**571**	mg/Kg	5

Sample: 358249 - BH-3 59-60'

Param	Flag	Result	Units	RL
Chloride		**342**	mg/Kg	5

Sample: 358250 - BH-3 64-65'

Param	Flag	Result	Units	RL
Chloride		**394**	mg/Kg	5

Sample: 358251 - BH-3 69-70'

Param	Flag	Result	Units	RL
Chloride		**280**	mg/Kg	5

Sample: 358252 - BH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**429**	mg/Kg	5

Sample: 358253 - BH-4 2-3'

Param	Flag	Result	Units	RL
Chloride		**476**	mg/Kg	5

Sample: 358254 - BH-4 4-5'

Param	Flag	Result	Units	RL
Chloride		**1140**	mg/Kg	5

Sample: 358255 - BH-4 6-7'

Param	Flag	Result	Units	RL
Chloride		**1020**	mg/Kg	5

Sample: 358256 - BH-4 9-10'

Param	Flag	Result	Units	RL
Chloride		**935**	mg/Kg	5

Sample: 358257 - BH-4 14-15'

Param	Flag	Result	Units	RL
Chloride		**1300**	mg/Kg	5

Sample: 358258 - BH-4 19-20'

Param	Flag	Result	Units	RL
Chloride		**1010**	mg/Kg	5

Sample: 358259 - BH-4 24-25'

Param	Flag	Result	Units	RL
Chloride		**887**	mg/Kg	5

Sample: 358260 - BH-4 29-30'

Param	Flag	Result	Units	RL
Chloride		**1030**	mg/Kg	5

Sample: 358261 - BH-4 39-40'

Param	Flag	Result	Units	RL
Chloride		**863**	mg/Kg	5

Sample: 358262 - BH-4 49-50'

Param	Flag	Result	Units	RL
Chloride		**314**	mg/Kg	5

Sample: 358263 - BH-4 59-60'

Param	Flag	Result	Units	RL
Chloride		**361**	mg/Kg	5

Sample: 358264 - BH-4 69-70'

Param	Flag	Result	Units	RL
Chloride		<250	mg/Kg	5

TRACEANALYSIS, INC.
6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

(Corrected Report)

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

Report Date: April 16, 2014

Work Order: 14031826

Project Location: Lea Co, NM
Project Name: COG/NM C.R. St #3
Project Number: 112MC06124

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
358211	BH-1 0-1’	soil	2014-03-13	00:00	2014-03-18
358212	BH-1 2-3’	soil	2014-03-13	00:00	2014-03-18
358213	BH-1 4-5’	soil	2014-03-13	00:00	2014-03-18
358214	BH-1 6-7’	soil	2014-03-13	00:00	2014-03-18
358215	BH-1 9-10’	soil	2014-03-13	00:00	2014-03-18
358216	BH-1 14-15’	soil	2014-03-13	00:00	2014-03-18
358217	BH-1 19-20’	soil	2014-03-13	00:00	2014-03-18
358218	BH-1 24-25’	soil	2014-03-13	00:00	2014-03-18
358219	BH-1 29-30’	soil	2014-03-13	00:00	2014-03-18
358220	BH-1 39-40’	soil	2014-03-13	00:00	2014-03-18
358221	BH-1 49-50’	soil	2014-03-13	00:00	2014-03-18
358222	BH-1 59-60’	soil	2014-03-13	00:00	2014-03-18
358223	BH-1 69-70’	soil	2014-03-13	00:00	2014-03-18
358224	BH-2 0-1’	soil	2014-03-13	00:00	2014-03-18
358225	BH-2 2-3’	soil	2014-03-13	00:00	2014-03-18
358226	BH-2 4-5’	soil	2014-03-13	00:00	2014-03-18

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
358227	BH-2 6-7’	soil	2014-03-13	00:00	2014-03-18
358228	BH-2 9-10’	soil	2014-03-13	00:00	2014-03-18
358229	BH-2 14-15’	soil	2014-03-13	00:00	2014-03-18
358230	BH-2 19-20’	soil	2014-03-13	00:00	2014-03-18
358231	BH-2 24-25’	soil	2014-03-13	00:00	2014-03-18
358232	BH-2 29-30’	soil	2014-03-13	00:00	2014-03-18
358233	BH-2 39-40’	soil	2014-03-13	00:00	2014-03-18
358234	BH-2 49-50’	soil	2014-03-13	00:00	2014-03-18
358235	BH-2 59-60’	soil	2014-03-13	00:00	2014-03-18
358236	BH-2 69-70’	soil	2014-03-13	00:00	2014-03-18
358237	BH-2 79-80’	soil	2014-03-13	00:00	2014-03-18
358238	BH-3 0-1’	soil	2014-03-13	00:00	2014-03-18
358239	BH-3 2-3’	soil	2014-03-13	00:00	2014-03-18
358240	BH-3 4-5’	soil	2014-03-13	00:00	2014-03-18
358241	BH-3 6-7’	soil	2014-03-13	00:00	2014-03-18
358242	BH-3 9-10’	soil	2014-03-13	00:00	2014-03-18
358243	BH-3 14-15’	soil	2014-03-13	00:00	2014-03-18
358244	BH-3 19-20’	soil	2014-03-13	00:00	2014-03-18
358245	BH-3 24-25’	soil	2014-03-13	00:00	2014-03-18
358246	BH-3 29-30’	soil	2014-03-13	00:00	2014-03-18
358247	BH-3 39-40’	soil	2014-03-13	00:00	2014-03-18
358248	BH-3 49-50’	soil	2014-03-13	00:00	2014-03-18
358249	BH-3 59-60’	soil	2014-03-13	00:00	2014-03-18
358250	BH-3 64-65’	soil	2014-03-13	00:00	2014-03-18
358251	BH-3 69-70’	soil	2014-03-13	00:00	2014-03-18
358252	BH-4 0-1’	soil	2014-03-13	00:00	2014-03-18
358253	BH-4 2-3’	soil	2014-03-13	00:00	2014-03-18
358254	BH-4 4-5’	soil	2014-03-13	00:00	2014-03-18
358255	BH-4 6-7’	soil	2014-03-13	00:00	2014-03-18
358256	BH-4 9-10’	soil	2014-03-13	00:00	2014-03-18
358257	BH-4 14-15’	soil	2014-03-13	00:00	2014-03-18
358258	BH-4 19-20’	soil	2014-03-13	00:00	2014-03-18
358259	BH-4 24-25’	soil	2014-03-13	00:00	2014-03-18
358260	BH-4 29-30’	soil	2014-03-13	00:00	2014-03-18
358261	BH-4 39-40’	soil	2014-03-13	00:00	2014-03-18
358262	BH-4 49-50’	soil	2014-03-13	00:00	2014-03-18
358263	BH-4 59-60’	soil	2014-03-13	00:00	2014-03-18
358264	BH-4 69-70’	soil	2014-03-13	00:00	2014-03-18

Notes

- **Work Order 14031826:** Reran Chlorides by IC to verify titration. Did not report IC data 358221, 358223, 358236, 358249, 358251, 358255, and 358263.

Report Corrections (Work Order 14031826)

- Corrected the dilution factor for chlorides.
- Reran Chlorides for confirmation on samples 358221, 358222, 358223, 358235, 358236, 358237, 358249, 358250, 358251,

358262, 358263 and 358264.

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

This report consists of a total of 57 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

Report Contents

Case Narrative

Samples for project COG/NM C.R. St #3 were received by TraceAnalysis, Inc. on 2014-03-18 and assigned to work order 14031826. Samples for work order 14031826 were received intact at a temperature of 4.4 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	93408	2014-03-24 at 09:00	110481	2014-03-25 at 08:03
Chloride (Titration)	SM 4500-Cl B	93696	2014-04-02 at 17:00	110812	2014-04-03 at 10:00
Chloride (Titration)	SM 4500-Cl B	93697	2014-04-02 at 17:00	110813	2014-04-03 at 10:00
Chloride (Titration)	SM 4500-Cl B	93699	2014-04-02 at 17:00	110814	2014-04-03 at 12:00
Chloride (Titration)	SM 4500-Cl B	93700	2014-04-02 at 17:00	110815	2014-04-03 at 12:00
Chloride (Titration)	SM 4500-Cl B	93708	2014-04-03 at 15:27	110837	2014-04-03 at 18:41
Chloride (Titration)	SM 4500-Cl B	93744	2014-04-03 at 17:00	110868	2014-04-04 at 10:00
TPH DRO - NEW	S 8015 D	93289	2014-03-19 at 13:30	110333	2014-03-20 at 09:13
TPH DRO - NEW	S 8015 D	93373	2014-03-21 at 13:00	110444	2014-03-24 at 09:29
TPH DRO - NEW	S 8015 D	93416	2014-03-24 at 16:00	110491	2014-03-25 at 11:02
TPH GRO	S 8015 D	93262	2014-03-19 at 10:59	110437	2014-03-24 at 08:35
TPH GRO	S 8015 D	93369	2014-03-21 at 08:40	110439	2014-03-24 at 08:45
TPH GRO	S 8015 D	93409	2014-03-24 at 11:00	110483	2014-03-25 at 08:09

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 14031826 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: 358211 - BH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	110481	Date Analyzed:	2014-03-25	Analyzed By:	AK
Prep Batch:	93408	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene [1]	U	1	<0.0400	mg/Kg	2	0.0200
Toluene	U	1	<0.0400	mg/Kg	2	0.0200
Ethylbenzene		1	**0.330**	mg/Kg	2	0.0200
Xylene		1	**2.89**	mg/Kg	2	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.12	mg/Kg	2	4.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)			4.51	mg/Kg	2	4.00	113	70 - 130

Sample: 358211 - BH-1 0-1'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110837	Date Analyzed:	2014-04-03	Analyzed By:	RL
Prep Batch:	93708	Sample Preparation:	2014-04-03	Prepared By:	AT

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		**296**	mg/Kg	5	5.00

Sample: 358211 - BH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	110333	Date Analyzed:	2014-03-20	Analyzed By:	RG
Prep Batch:	93289	Sample Preparation:	2014-03-19	Prepared By:	RG

Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO	Qs	1	**3620**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	264	mg/Kg	5	100	264	70 - 130

Sample: 358211 - BH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	110437	Date Analyzed:	2014-03-24	Analyzed By:	AK
Prep Batch:	93262	Sample Preparation:	2014-03-19	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.17	mg/Kg	5	2.00	108	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	2.96	mg/Kg	5	2.00	148	70 - 130

Sample: 358212 - BH-1 2-3'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110837	Date Analyzed:	2014-04-03	Analyzed By:	RL
Prep Batch:	93708	Sample Preparation:	2014-04-03	Prepared By:	AT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs		**368**	mg/Kg	5	5.00

Sample: 358213 - BH-1 4-5'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110837	Date Analyzed:	2014-04-03	Analyzed By:	RL
Prep Batch:	93708	Sample Preparation:	2014-04-03	Prepared By:	AT

continued . . .

sample 358213 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs		**2830**	mg/Kg	5	5.00

Sample: 358214 - BH-1 6-7'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110837	Date Analyzed:	2014-04-03	Analyzed By:	RL
Prep Batch:	93708	Sample Preparation:	2014-04-03	Prepared By:	AT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs		**1420**	mg/Kg	5	5.00

Sample: 358215 - BH-1 9-10'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110837	Date Analyzed:	2014-04-03	Analyzed By:	RL
Prep Batch:	93708	Sample Preparation:	2014-04-03	Prepared By:	AT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs		**2000**	mg/Kg	5	5.00

Sample: 358216 - BH-1 14-15'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1290**	mg/Kg	50	5.00

Sample: 358217 - BH-1 19-20'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1550**	mg/Kg	50	5.00

Sample: 358218 - BH-1 24-25'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**857**	mg/Kg	50	5.00

Sample: 358219 - BH-1 29-30'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1380**	mg/Kg	50	5.00

Sample: 358220 - BH-1 39-40'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**690**	mg/Kg	50	5.00

Sample: 358221 - BH-1 49-50'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1030**	mg/Kg	50	5.00

Sample: 358222 - BH-1 59-60'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**551**	mg/Kg	50	5.00

Sample: 358223 - BH-1 69-70'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**328**	mg/Kg	10	5.00

Sample: 358224 - BH-2 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	110481	Date Analyzed:	2014-03-25	Analyzed By:	AK
Prep Batch:	93408	Sample Preparation:	2014-03-25	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		1	<0.0200	mg/Kg	1	0.0200
Xylene	B	1	**0.0646**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.09	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.20	mg/Kg	1	2.00	110	70 - 130

Sample: 358224 - BH-2 0-1'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**595**	mg/Kg	50	5.00

Sample: 358224 - BH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	110333	Date Analyzed:	2014-03-20	Analyzed By:	RG
Prep Batch:	93289	Sample Preparation:	2014-03-19	Prepared By:	RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**431**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	70 - 130

Sample: 358224 - BH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	110437	Date Analyzed:	2014-03-24	Analyzed By:	AK
Prep Batch:	93262	Sample Preparation:	2014-03-19	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)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			1.88	mg/Kg	1	2.00	94	70 - 130

Sample: 358225 - BH-2 2-3'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110812	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93696	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**619**	mg/Kg	50	5.00

Sample: 358226 - BH-2 4-5'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1600**	mg/Kg	50	5.00

Sample: 358227 - BH-2 6-7'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1140**	mg/Kg	50	5.00

Sample: 358228 - BH-2 9-10'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1830**	mg/Kg	50	5.00

Sample: 358229 - BH-2 14-15'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1400**	mg/Kg	50	5.00

Sample: 358230 - BH-2 19-20'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1140**	mg/Kg	50	5.00

Sample: 358231 - BH-2 24-25'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**786**	mg/Kg	50	5.00

Sample: 358232 - BH-2 29-30'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1310**	mg/Kg	50	5.00

Sample: 358233 - BH-2 39-40'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**643**	mg/Kg	50	5.00

Sample: 358234 - BH-2 49-50'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**548**	mg/Kg	50	5.00

Sample: 358235 - BH-2 59-60'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110813	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93697	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**495**	mg/Kg	50	5.00

Sample: 358236 - BH-2 69-70'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**280**	mg/Kg	50	5.00

Sample: 358237 - BH-2 79-80'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**276**	mg/Kg	50	5.00

Sample: 358238 - BH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	110481	Date Analyzed:	2014-03-25	Analyzed By:	AK
Prep Batch:	93408	Sample Preparation:	2014-03-25	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene [3]	U	1	<0.100	mg/Kg	5	0.0200
Toluene		1	**0.408**	mg/Kg	5	0.0200
Ethylbenzene		1	**7.32**	mg/Kg	5	0.0200
Xylene		1	**32.8**	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			10.2	mg/Kg	5	10.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	21.4	mg/Kg	5	10.0	214	70 - 130

Sample: 358238 - BH-3 0-1'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**660**	mg/Kg	50	5.00

Sample: 358238 - BH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	110333	Date Analyzed:	2014-03-20	Analyzed By:	RG
Prep Batch:	93289	Sample Preparation:	2014-03-19	Prepared By:	RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**7010**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		358	mg/Kg	5	100	358	70 - 130

Sample: 358238 - BH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	110437	Date Analyzed:	2014-03-24	Analyzed By:	AK
Prep Batch:	93262	Sample Preparation:	2014-03-19	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**381**	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.85	mg/Kg	5	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB) Qsr	Qsr		20.0	mg/Kg	5	2.00	1000	70 - 130

Sample: 358239 - BH-3 2-3'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**613**	mg/Kg	50	5.00

Sample: 358239 - BH-3 2-3'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	110444	Date Analyzed:	2014-03-24	Analyzed By:	RG
Prep Batch:	93373	Sample Preparation:	2014-03-21	Prepared By:	RG

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
DRO	Qs	1	**9610**		mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		494	mg/Kg	5	100	494	70 - 130

Sample: 358239 - BH-3 2-3'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	110439	Date Analyzed:	2014-03-24	Analyzed By:	AK
Prep Batch:	93369	Sample Preparation:	2014-03-21	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO		1	**1320**		mg/Kg	20	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)				1.79	mg/Kg	20	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		55.1	mg/Kg	20	2.00	2755	70 - 130

Sample: 358240 - BH-3 4-5'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Chloride			**920**		mg/Kg	50	5.00

Sample: 358240 - BH-3 4-5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	110444	Date Analyzed:	2014-03-24	Analyzed By:	RG
Prep Batch:	93373	Sample Preparation:	2014-03-21	Prepared By:	RG

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
DRO	Qs	1	**6730**		mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		336	mg/Kg	5	100	336	70 - 130

Sample: 358240 - BH-3 4-5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	110483	Date Analyzed:	2014-03-25	Analyzed By:	AK
Prep Batch:	93409	Sample Preparation:	2014-03-24	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO		1	**1780**		mg/Kg	20	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)				2.29	mg/Kg	20	2.00	114	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		29.0	mg/Kg	20	2.00	1450	70 - 130

Sample: 358241 - BH-3 6-7'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Chloride			**1420**		mg/Kg	50	5.00

Sample: 358241 - BH-3 6-7'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	110491	Date Analyzed:	2014-03-25	Analyzed By:	RG
Prep Batch:	93416	Sample Preparation:	2014-03-24	Prepared By:	RG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	Qs	1	**154**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			86.9	mg/Kg	1	100	87	70 - 130

Sample: 358241 - BH-3 6-7'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	110483	Date Analyzed:	2014-03-25	Analyzed By:	AK
Prep Batch:	93409	Sample Preparation:	2014-03-24	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		1	**6.45**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.21	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	2.80	mg/Kg	1	2.00	140	70 - 130

Sample: 358242 - BH-3 9-10'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2260**	mg/Kg	50	5.00

Sample: 358243 - BH-3 14-15'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1270**	mg/Kg	50	5.00

Sample: 358244 - BH-3 19-20'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1300**	mg/Kg	50	5.00

Sample: 358245 - BH-3 24-25'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110814	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93699	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**896**	mg/Kg	50	5.00

Sample: 358246 - BH-3 29-30'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1290**	mg/Kg	50	5.00

Sample: 358247 - BH-3 39-40'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1000**	mg/Kg	50	5.00

Sample: 358248 - BH-3 49-50'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**571**	mg/Kg	50	5.00

Sample: 358249 - BH-3 59-60'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**342**	mg/Kg	50	5.00

Sample: 358250 - BH-3 64-65'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**394**	mg/Kg	10	5.00

Sample: 358251 - BH-3 69-70'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**280**	mg/Kg	50	5.00

Sample: 358252 - BH-4 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	110481	Date Analyzed:	2014-03-25	Analyzed By:	AK
Prep Batch:	93408	Sample Preparation:	2014-03-25	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	Jb	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.03	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.18	mg/Kg	1	2.00	109	70 - 130

Sample: 358252 - BH-4 0-1'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**429**	mg/Kg	50	5.00

Sample: 358252 - BH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	110333	Date Analyzed:	2014-03-20	Analyzed By:	RG
Prep Batch:	93289	Sample Preparation:	2014-03-19	Prepared By:	RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**464**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			119	mg/Kg	1	100	119	70 - 130

Sample: 358252 - BH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	110437	Date Analyzed:	2014-03-24	Analyzed By:	AK
Prep Batch:	93262	Sample Preparation:	2014-03-19	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)			1.59	mg/Kg	1	2.00	80	70 - 130
4-Bromofluorobenzene (4-BFB)			1.60	mg/Kg	1	2.00	80	70 - 130

Sample: 358253 - BH-4 2-3'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**476**	mg/Kg	50	5.00

Sample: 358254 - BH-4 4-5'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1140**	mg/Kg	50	5.00

Sample: 358255 - BH-4 6-7'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110815	Date Analyzed:	2014-04-03	Analyzed By:	LM
Prep Batch:	93700	Sample Preparation:	2014-04-02	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1020**	mg/Kg	50	5.00

Sample: 358256 - BH-4 9-10'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110868	Date Analyzed:	2014-04-04	Analyzed By:	LM
Prep Batch:	93744	Sample Preparation:	2014-04-03	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**935**	mg/Kg	50	5.00

Sample: 358257 - BH-4 14-15'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110868	Date Analyzed:	2014-04-04	Analyzed By:	LM
Prep Batch:	93744	Sample Preparation:	2014-04-03	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1300**	mg/Kg	50	5.00

Sample: 358258 - BH-4 19-20'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110868	Date Analyzed:	2014-04-04	Analyzed By:	LM
Prep Batch:	93744	Sample Preparation:	2014-04-03	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1010**	mg/Kg	50	5.00

Sample: 358259 - BH-4 24-25'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110868	Date Analyzed:	2014-04-04	Analyzed By:	LM
Prep Batch:	93744	Sample Preparation:	2014-04-03	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**887**	mg/Kg	50	5.00

Sample: 358260 - BH-4 29-30'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110868	Date Analyzed:	2014-04-04	Analyzed By:	LM
Prep Batch:	93744	Sample Preparation:	2014-04-03	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1030**	mg/Kg	50	5.00

Sample: 358261 - BH-4 39-40'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110868	Date Analyzed:	2014-04-04	Analyzed By:	LM
Prep Batch:	93744	Sample Preparation:	2014-04-03	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**863**	mg/Kg	50	5.00

Sample: 358262 - BH-4 49-50'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110868	Date Analyzed:	2014-04-04	Analyzed By:	LM
Prep Batch:	93744	Sample Preparation:	2014-04-03	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**314**	mg/Kg	50	5.00

Sample: 358263 - BH-4 59-60'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110868	Date Analyzed:	2014-04-04	Analyzed By:	LM
Prep Batch:	93744	Sample Preparation:	2014-04-03	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**361**	mg/Kg	50	5.00

Sample: 358264 - BH-4 69-70'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	110868	Date Analyzed:	2014-04-04	Analyzed By:	LM
Prep Batch:	93744	Sample Preparation:	2014-04-03	Prepared By:	LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			<250	mg/Kg	50	5.00

Method Blanks

Method Blank (1) QC Batch: 110333

QC Batch: 110333 Date Analyzed: 2014-03-20 Analyzed By: RG
Prep Batch: 93289 QC Preparation: 2014-03-19 Prepared By: RG

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	29.7	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			91.6	mg/Kg	1	100	92	70 - 130

Method Blank (1) QC Batch: 110437

QC Batch: 110437 Date Analyzed: 2014-03-24 Analyzed By: AK
Prep Batch: 93262 QC Preparation: 2014-03-19 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)			2.32	mg/Kg	1	2.00	116	70 - 130
4-Bromofluorobenzene (4-BFB)			2.07	mg/Kg	1	2.00	104	70 - 130

Method Blank (1) QC Batch: 110439

QC Batch: 110439 Date Analyzed: 2014-03-24 Analyzed By: AK
Prep Batch: 93369 QC Preparation: 2014-03-21 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)			2.24	mg/Kg	1	2.00	112	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	70 - 130

Method Blank (1) QC Batch: 110444

QC Batch:	110444	Date Analyzed:	2014-03-24	Analyzed By:	RG
Prep Batch:	93373	QC Preparation:	2014-03-21	Prepared By:	RG

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	16.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			91.2	mg/Kg	1	100	91	70 - 130

Method Blank (1) QC Batch: 110481

QC Batch:	110481	Date Analyzed:	2014-03-25	Analyzed By:	AK
Prep Batch:	93408	QC Preparation:	2014-03-24	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	0.0117	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.09	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.12	mg/Kg	1	2.00	106	70 - 130

Method Blank (1) QC Batch: 110483

QC Batch:	110483	Date Analyzed:	2014-03-25	Analyzed By:	AK
Prep Batch:	93409	QC Preparation:	2014-03-24	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)			2.22	mg/Kg	1	2.00	111	70 - 130
4-Bromofluorobenzene (4-BFB)			2.03	mg/Kg	1	2.00	102	70 - 130

Method Blank (1) QC Batch: 110491

QC Batch: 110491 Date Analyzed: 2014-03-25 Analyzed By: RG
Prep Batch: 93416 QC Preparation: 2014-03-24 Prepared By: RG

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			71.9	mg/Kg	1	100	72	70 - 130

Method Blank (1) QC Batch: 110812

QC Batch: 110812 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93696 QC Preparation: 2014-04-02 Prepared By: LM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

Method Blank (1) QC Batch: 110813

QC Batch: 110813 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93697 QC Preparation: 2014-04-02 Prepared By: LM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

Method Blank (1) QC Batch: 110814

QC Batch: 110814 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93699 QC Preparation: 2014-04-02 Prepared By: LM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

Method Blank (1) QC Batch: 110815

QC Batch: 110815 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93700 QC Preparation: 2014-04-02 Prepared By: LM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

Method Blank (1) QC Batch: 110837

QC Batch: 110837 Date Analyzed: 2014-04-03 Analyzed By: RL
Prep Batch: 93708 QC Preparation: 2014-04-03 Prepared By: AT

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

Method Blank (1) QC Batch: 110868

QC Batch: 110868 Date Analyzed: 2014-04-04 Analyzed By: LM
Prep Batch: 93744 QC Preparation: 2014-04-03 Prepared By: LM

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Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 110333 Date Analyzed: 2014-03-20 Analyzed By: RG
Prep Batch: 93289 QC Preparation: 2014-03-19 Prepared By: RG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	207	mg/Kg	1	250	29.7	71	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	220	mg/Kg	1	250	29.7	76	70 - 130	6	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	96.1	99.8	mg/Kg	1	100	96	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110437 Date Analyzed: 2014-03-24 Analyzed By: AK
Prep Batch: 93262 QC Preparation: 2014-03-19 Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.0	mg/Kg	1	20.0	<2.32	85	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	17.8	mg/Kg	1	20.0	<2.32	89	70 - 130	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.08	2.16	mg/Kg	1	2.00	104	108	70 - 130
4-Bromofluorobenzene (4-BFB)	2.13	2.24	mg/Kg	1	2.00	106	112	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110439 Date Analyzed: 2014-03-24 Analyzed By: AK
Prep Batch: 93369 QC Preparation: 2014-03-21 Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	18.2	mg/Kg	1	20.0	<2.32	91	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	19.0	mg/Kg	1	20.0	<2.32	95	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)	2.10	2.19	mg/Kg	1	2.00	105	110	70 - 130
4-Bromofluorobenzene (4-BFB)	2.11	2.25	mg/Kg	1	2.00	106	112	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110444 Date Analyzed: 2014-03-24 Analyzed By: RG
Prep Batch: 93373 QC Preparation: 2014-03-21 Prepared By: RG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	212	mg/Kg	1	250	16.5	78	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	210	mg/Kg	1	250	16.5	77	70 - 130	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	96.4	99.4	mg/Kg	1	100	96	99	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110481 Date Analyzed: 2014-03-25 Analyzed By: AK
Prep Batch: 93408 QC Preparation: 2014-03-24 Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.06	mg/Kg	1	2.00	<0.00354	103	70 - 130
Toluene		1	2.17	mg/Kg	1	2.00	<0.00966	108	70 - 130
Ethylbenzene		1	2.30	mg/Kg	1	2.00	<0.00790	115	70 - 130
Xylene		1	7.03	mg/Kg	1	6.00	0.0117	117	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	2.07	mg/Kg	1	2.00	<0.00354	104	70 - 130	0	20
Toluene		1	2.19	mg/Kg	1	2.00	<0.00966	110	70 - 130	1	20
Ethylbenzene		1	2.31	mg/Kg	1	2.00	<0.00790	116	70 - 130	1	20
Xylene		1	7.05	mg/Kg	1	6.00	0.0117	117	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)	2.15	2.09	mg/Kg	1	2.00	108	104	70 - 130
4-Bromofluorobenzene (4-BFB)	2.44	2.32	mg/Kg	1	2.00	122	116	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110483 Date Analyzed: 2014-03-25 Analyzed By: AK
Prep Batch: 93409 QC Preparation: 2014-03-24 Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.6	mg/Kg	1	20.0	<2.32	88	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	18.7	mg/Kg	1	20.0	<2.32	94	70 - 130	6	20

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

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control spikes continued . . .

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.04	2.21	mg/Kg	1	2.00	102	110	70 - 130
4-Bromofluorobenzene (4-BFB)	2.14	2.39	mg/Kg	1	2.00	107	120	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110491 Date Analyzed: 2014-03-25 Analyzed By: RG
Prep Batch: 93416 QC Preparation: 2014-03-24 Prepared By: RG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		[1]	201	mg/Kg	1	250	<7.41	80	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		[1]	207	mg/Kg	1	250	<7.41	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
n-Tricosane	82.9	80.6	mg/Kg	1	100	83	81	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110812 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93696 QC Preparation: 2014-04-02 Prepared By: LM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2600	mg/Kg	50	2500	<152	104	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2640	mg/Kg	50	2500	<152	106	85 - 115	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: 110813 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93697 QC Preparation: 2014-04-02 Prepared By: LM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2620	mg/Kg	1	2500	<3.05	105	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2690	mg/Kg	1	2500	<3.05	108	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 110814 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93699 QC Preparation: 2014-04-02 Prepared By: LM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2570	mg/Kg	50	2500	<152	103	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2690	mg/Kg	50	2500	<152	108	85 - 115	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: 110815 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93700 QC Preparation: 2014-04-02 Prepared By: LM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2640	mg/Kg	50	2500	<152	106	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2640	mg/Kg	50	2500	<152	106	85 - 115	0	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: 110837 Date Analyzed: 2014-04-03 Analyzed By: RL
Prep Batch: 93708 QC Preparation: 2014-04-03 Prepared By: AT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2670	mg/Kg	1	2500	<3.05	107	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2700	mg/Kg	1	2500	<3.05	108	85 - 115	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: 110868 Date Analyzed: 2014-04-04 Analyzed By: LM
Prep Batch: 93744 QC Preparation: 2014-04-03 Prepared By: LM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2730	mg/Kg	50	2500	<152	109	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2780	mg/Kg	50	2500	<152	111	85 - 115	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: 358211

QC Batch: 110333 Date Analyzed: 2014-03-20 Analyzed By: RG
Prep Batch: 93289 QC Preparation: 2014-03-19 Prepared By: RG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs 1	3380	mg/Kg	5	250	3620	-96	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	Qs	Qs 1	3880	mg/Kg	5	250	3620	1552	70 - 130	14	20

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

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	Qsr	Qsr	238	318	mg/Kg	5	100	238	318	70 - 130

Matrix Spike (MS-1) Spiked Sample:

QC Batch: 110437 Date Analyzed: 2014-03-24 Analyzed By: AK
Prep Batch: 93262 QC Preparation: 2014-03-19 Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	21.8	mg/Kg	2	20.0	<4.64	109	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	18.0	mg/Kg	2	20.0	<4.64	90	70 - 130	19	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)	2.06	2.02	mg/Kg	2	2	103	101	70 - 130
4-Bromofluorobenzene (4-BFB)	2.25	2.25	mg/Kg	2	2	112	112	70 - 130

Matrix Spike (MS-1) Spiked Sample: 358309

QC Batch: 110439 Date Analyzed: 2014-03-24 Analyzed By: AK
Prep Batch: 93369 QC Preparation: 2014-03-21 Prepared By: AK

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

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	18.9	mg/Kg	1	20.0	<2.32	94	70 - 130	10	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)	2.00	2.02	mg/Kg	1	2	100	101	70 - 130
4-Bromofluorobenzene (4-BFB)	2.08	2.14	mg/Kg	1	2	104	107	70 - 130

Matrix Spike (MS-1) Spiked Sample: 358438

QC Batch: 110444 Date Analyzed: 2014-03-24 Analyzed By: RG
Prep Batch: 93373 QC Preparation: 2014-03-21 Prepared By: RG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	206	mg/Kg	1	250	27.2	72	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	Qs	Qs 1	191	mg/Kg	1	250	27.2	66	70 - 130	8	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	78.8	78.7	mg/Kg	1	100	79	79	70 - 130

Matrix Spike (MS-1) Spiked Sample: 358316

QC Batch: 110481 Date Analyzed: 2014-03-25 Analyzed By: AK
Prep Batch: 93408 QC Preparation: 2014-03-24 Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.93	mg/Kg	1	2.00	<0.00354	96	70 - 130
Toluene		1	2.04	mg/Kg	1	2.00	<0.00966	102	70 - 130
Ethylbenzene		1	2.11	mg/Kg	1	2.00	<0.00790	106	70 - 130
Xylene		1	6.42	mg/Kg	1	6.00	<0.00667	107	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	1.96	mg/Kg	1	2.00	<0.00354	98	70 - 130	2	20
Toluene		1	2.07	mg/Kg	1	2.00	<0.00966	104	70 - 130	1	20
Ethylbenzene		1	2.21	mg/Kg	1	2.00	<0.00790	110	70 - 130	5	20
Xylene		1	6.66	mg/Kg	1	6.00	<0.00667	111	70 - 130	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.05	2.05	mg/Kg	1	2	102	102	70 - 130
4-Bromofluorobenzene (4-BFB)	2.29	2.27	mg/Kg	1	2	114	114	70 - 130

Matrix Spike (MS-1) Spiked Sample: 358444

QC Batch: 110483 Date Analyzed: 2014-03-25 Analyzed By: AK
Prep Batch: 93409 QC Preparation: 2014-03-24 Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.0	mg/Kg	1	20.0	<2.32	85	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	17.7	mg/Kg	1	20.0	<2.32	88	70 - 130	4	20

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

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matrix spikes continued . . .

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.97	2.00	mg/Kg	1	2	98	100	70 - 130
4-Bromofluorobenzene (4-BFB)	2.07	2.10	mg/Kg	1	2	104	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 358446

QC Batch: 110491 Date Analyzed: 2014-03-25 Analyzed By: RG
Prep Batch: 93416 QC Preparation: 2014-03-24 Prepared By: RG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs	1	238	mg/Kg	1	250	79.6	63	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	Qs	Qs	1	233	mg/Kg	1	250	79.6	61	70 - 130	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	82.2	81.9	mg/Kg	1	100	82	82	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 358235

QC Batch: 110812 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93696 QC Preparation: 2014-04-02 Prepared By: LM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2920	mg/Kg	50	2500	495	97	75.2 - 127

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2870	mg/Kg	50	2500	495	95	75.2 - 127	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: 358235

QC Batch: 110813 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93697 QC Preparation: 2014-04-02 Prepared By: LM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2920	mg/Kg	50	2500	495	97	75.2 - 127

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2870	mg/Kg	50	2500	495	95	75.2 - 127	2	20

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

Matrix Spike (xMS-1) Spiked Sample: 358255

QC Batch: 110814 Date Analyzed: 2014-04-03 Analyzed By: LM
Prep Batch: 93699 QC Preparation: 2014-04-02 Prepared By: LM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10600	mg/Kg	50	2500	8270	93	75.2 - 127

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10600	mg/Kg	50	2500	8270	93	75.2 - 127	0	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: 358215

QC Batch: 110837 Date Analyzed: 2014-04-03 Analyzed By: RL
Prep Batch: 93708 QC Preparation: 2014-04-03 Prepared By: AT

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Qs	Qs		1800	mg/Kg	5	2500	2000	-8	75.2 - 127

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

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs	Qs		1820	mg/Kg	5	2500	2000	-7	75.2 - 127	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: 358278

QC Batch: 110868 Date Analyzed: 2014-04-04 Analyzed By: LM
Prep Batch: 93744 QC Preparation: 2014-04-03 Prepared By: LM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3320	mg/Kg	50	2500	1090	89	75.2 - 127

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3320	mg/Kg	50	2500	1090	89	75.2 - 127	0	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: 110333 Date Analyzed: 2014-03-20 Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	202	81	80 - 120	2014-03-20

Standard (CCV-2)

QC Batch: 110333 Date Analyzed: 2014-03-20 Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	224	90	80 - 120	2014-03-20

Standard (CCV-1)

QC Batch: 110437 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
GRO		1	mg/Kg	1.00	1.09	109	80 - 120	2014-03-24

Standard (CCV-2)

QC Batch: 110437 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
GRO		1	mg/Kg	1.00	1.03	103	80 - 120	2014-03-24

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Standard (CCV-3)

QC Batch: 110437 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
GRO		1	mg/Kg	1.00	1.15	115	80 - 120	2014-03-24

Standard (CCV-1)

QC Batch: 110439 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
GRO		1	mg/Kg	1.00	1.06	106	80 - 120	2014-03-24

Standard (CCV-2)

QC Batch: 110439 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
GRO		1	mg/Kg	1.00	1.06	106	80 - 120	2014-03-24

Standard (CCV-3)

QC Batch: 110439 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
GRO		1	mg/Kg	1.00	0.952	95	80 - 120	2014-03-24

Standard (CCV-1)

QC Batch: 110444 Date Analyzed: 2014-03-24 Analyzed By: RG

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	203	81	80 - 120	2014-03-24

Standard (CCV-2)

QC Batch: 110444 Date Analyzed: 2014-03-24 Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	200	80	80 - 120	2014-03-24

Standard (CCV-3)

QC Batch: 110444 Date Analyzed: 2014-03-24 Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	202	81	80 - 120	2014-03-24

Standard (CCV-1)

QC Batch: 110481 Date Analyzed: 2014-03-25 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	0.106	106	80 - 120	2014-03-25
Toluene		1	mg/kg	0.100	0.109	109	80 - 120	2014-03-25
Ethylbenzene		1	mg/kg	0.100	0.106	106	80 - 120	2014-03-25
Xylene		1	mg/kg	0.300	0.323	108	80 - 120	2014-03-25

Standard (CCV-2)

QC Batch: 110481 Date Analyzed: 2014-03-25 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	0.105	105	80 - 120	2014-03-25
Toluene		1	mg/kg	0.100	0.106	106	80 - 120	2014-03-25
Ethylbenzene		1	mg/kg	0.100	0.102	102	80 - 120	2014-03-25
Xylene		1	mg/kg	0.300	0.312	104	80 - 120	2014-03-25

Standard (CCV-1)

QC Batch: 110483 Date Analyzed: 2014-03-25 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	1.10	110	80 - 120	2014-03-25

Standard (CCV-2)

QC Batch: 110483 Date Analyzed: 2014-03-25 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	1.06	106	80 - 120	2014-03-25

Standard (CCV-1)

QC Batch: 110491 Date Analyzed: 2014-03-25 Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	209	84	80 - 120	2014-03-25

Standard (CCV-2)

QC Batch: 110491 Date Analyzed: 2014-03-25 Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	224	90	80 - 120	2014-03-25

Standard (ICV-1)

QC Batch: 110812 Date Analyzed: 2014-04-03 Analyzed By: LM

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	2014-04-03

Standard (CCV-1)

QC Batch: 110812 Date Analyzed: 2014-04-03 Analyzed By: LM

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	2014-04-03

Standard (ICV-1)

QC Batch: 110813 Date Analyzed: 2014-04-03 Analyzed By: LM

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	2014-04-03

Standard (CCV-1)

QC Batch: 110813 Date Analyzed: 2014-04-03 Analyzed By: LM

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	2014-04-03

Standard (ICV-1)

QC Batch: 110814 Date Analyzed: 2014-04-03 Analyzed By: LM

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	2014-04-03

Standard (CCV-1)

QC Batch: 110814 Date Analyzed: 2014-04-03 Analyzed By: LM

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	2014-04-03

Standard (ICV-1)

QC Batch: 110815 Date Analyzed: 2014-04-03 Analyzed By: LM

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	2014-04-03

Standard (CCV-1)

QC Batch: 110815 Date Analyzed: 2014-04-03 Analyzed By: LM

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	2014-04-03

Standard (ICV-1)

QC Batch: 110837 Date Analyzed: 2014-04-03 Analyzed By: RL

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	2014-04-03

Standard (CCV-1)

QC Batch: 110837 Date Analyzed: 2014-04-03 Analyzed By: RL

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	2014-04-03

Standard (CCV-2)

QC Batch: 110837 Date Analyzed: 2014-04-03 Analyzed By: RL

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	2014-04-03

Standard (ICV-1)

QC Batch: 110868 Date Analyzed: 2014-04-04 Analyzed By: LM

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	2014-04-04

Standard (CCV-1)

QC Batch: 110868 Date Analyzed: 2014-04-04 Analyzed By: LM

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	2014-04-04

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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

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1 Dilution due to hydorcarbons.
2 Dilution due to hydrocarbons.
3 Dilution due to hydorcarbons.

Attachments

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

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1403182 6

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC06124

PROJECT NAME: New Mexico CR State #3

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 (Ext. to C35)	TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
358211	3/13		S		X	BH-1 Lea Co. 0-1					X		X	X												X				
212						2-3					X															X				
213						4-5					X															X				
214						6-7					X															X				
215						9-10					X															X				
216						14-15					X															X				
217						19-20					X															X				
218						24-25					X															X				
219						29-30					X															X				
220			S		X	39-40					X															X				

RELINQUISHED BY: (Signature)	Date: 3/13/14 Time: 1257	RECEIVED BY: (Signature)	Date: 3/18/14 Time: 1257
SAMPLED BY: (Print & Initial)	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:	Results by:		
RECEIVING LABORATORY: ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 4.40	REMARKS: Run deep samples if Benzene exceeds 10, total BTEX exceeds 50 or TPH exceeds 5,000 mg/kg		

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Midland all

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1409?1826

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 12mcoler24

PROJECT NAME: New Mexico State #3

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
221	3/13		S		X	BH-1 49-56					X													X				
222						59-66					X													X				
223						69-70					X													X				
						[illegible]					X													X				
224						BH-2 0-1					X		X	X										X				
225						2-3					X													X				
226						4-5					X													X				
227						6-7					X													X				
228						9-10					X													X				
229						14-15					X													X				

RELINQUISHED BY: (Signature) Date: 3/18/14 Time: 1257 — RECEIVED BY: (Signature) Date: 3/18/14 Time: 12:57 — SAMPLED BY: (Print & Initial) Date: 3-13-14 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: — Results by:

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

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.4°

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1403/826

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.: 112NC06124

PROJECT NAME: New Mexico "CA" State #3

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
230	3/13		S		X	BH-2 19-20					X													X				
231						24-25					X													X				
232						29-30					X													X				
233						39-40					X													X				
234						49-50					X													X				
235						59-60					X													X				
236						69-70					X													X				
237						79-80					X													X				
238						BH-3 0-1					X		X	X										X				
239						2-3					X													X				

RELINQUISHED BY: (Signature) Date: 3/18/14 Time: 1259

RECEIVED BY: (Signature) Date: 3/18/14 Time: 1259

SAMPLED BY: (Print & Initial) Date: 3-13-14 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:

Results by:

RECEIVING LABORATORY:

ADDRESS:

CITY: STATE: ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.4°

REMARKS:

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1403826

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.: 112MC06124

PROJECT NAME: New Mexico CF State #3

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 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
240	3/12		S		X	BH-3 4-5					X															X				
241						6-7					X															X				
242						9-10					X															X				
243						14-15					X															X				
244						19-20					X															X				
245						24-25					X															X				
246						29-30					X															X				
247						39-40					X															X				
248						49-50					X															X				
249						59-60					X															X				

RELINQUISHED BY: (Signature) Date: 3/16/14 Time: 1257

RECEIVED BY: (Signature) Date: 3/16/14 Time: 1257

SAMPLED BY: (Print & Initial) CG Date: 3/13/14 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:

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY:

ADDRESS:

CITY: STATE: ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 4.4°

REMARKS:

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14031826

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC061124

PROJECT NAME: New Mexico CR State #3

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
250	3/13		S		X	BH-3 64-65					X													X				
251						69-70					X													X				
252						BH-4 0-1					X		X	X										X				
253						2-3					X													X				
254						4-5					X													X				
255						6-7					X													X				
256						9-10					X													X				
257						14-15					X													X				
258						19-20					X													X				
259						24-25					X													X				

RELINQUISHED BY: (Signature)	Date: 3/18/14 Time: 1257	RECEIVED BY: (Signature)	Date: 3/18/14 Time: 1257
SAMPLED BY: (Print & Initial) CG	Date: 3-13-14 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:	Results by:		
RECEIVING LABORATORY: ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 4.40	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.

Released to Imaging: 5/9/2023 8:34:14 AM
Received by OCD: 4/7/2023 8:46:57 AM

1403826

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC01224

PROJECT NAME: New Mexico CL State #3

LAB I.D. NUMBER	DATE 2014	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
260	3/13		S		X	BH-4 29-30					X	
261						39-40					C	
262						49-50					C	
263						59-60					C	
264	↓		↓		↓	69-70					C	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B; TPH 8015 MOD. TX1005 (Ext. to C35); PAH 8270; RCRA Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd Vr Pd Hg Se; TCLP Volatiles; TCLP Semi Volatiles; RCI; GC.MS Vol. 8240/8260/624; GC.MS Semi. Vol. 8270/625; PCB's 8080/608; Pest. 808/608; Chloride; Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature) Date: 3/18/14 Time: 1257
RECEIVED BY: (Signature) Date: 3/18/14 Time: 1257
SAMPLED BY: (Print & Initial) Date: 3-13-14 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:
Results by:

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

SAMPLE CONDITION WHEN RECEIVED: 4.40

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.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 205101

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 205101
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	5/9/2023