

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

HOBBS OCD

APR 23 2013

RECEIVED

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

PHXK 1600435255
4004

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	Pat Ellis
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	MC Federal #6	Facility Type	Tank Battery
Surface Owner	Federal	Mineral Owner	
		Lease No. (API#)	30-025-35252

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	21	17S	32E					Lea

Latitude 32.82018 Longitude 103.76537

NATURE OF RELEASE

Type of Release	Produced water / Oil	Volume of Release	350bbls pw 100bbls oil	Volume Recovered	340bbls pw 95bbls oil
Source of Release	Oil tank	Date and Hour of Occurrence	12/04/2012	Date and Hour of Discovery	12/04/2012 7:00 a.m.
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Geoffrey Leking-OCD Jim Amos-BLM Terry Gregston-BLM		
By Whom?	Michelle Mullins	Date and Hour	12/04/2012 5:06 p.m.		
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

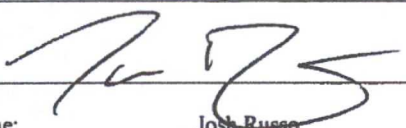
Describe Cause of Problem and Remedial Action Taken.*

Produced water was diverted into Oil tanks causing the oil tanks to overflow.

Describe Area Affected and Cleanup Action Taken.*

Initially 450bbls were released from the oil tank and we were able to recover 435bbls with a vacuum truck. The spill originated inside the lined facility and traveled outside of the facility wall on the northwest corner and into the adjacent pasture area. The release area inside the facility will be cleaned up per our standard lined facility cleanup protocol. Tetra Tech will sample the spill site area in the pasture to delineate any possible contamination from the release and we will present a work plan to the NMOCD/BLM for approval prior to any significant remediation work.

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

Signature: 		<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Josh Russo		Approved by District Supervisor:	
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:	
E-mail Address: jrusso@concho.com	Conditions of Approval:		Attached ☐
Date: 12/11/2012	Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

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

HOBBS OCD

APR 23 2013

RECEIVED

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

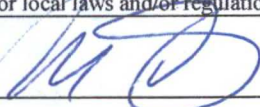
Name of Company	COG Operating LLC	Contact	Pat Ellis
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	(432) 230-0077
Facility Name	MC Federal #6	Facility Type	Tank Battery
Surface Owner: Federal		Mineral Owner	Lease No. (API#)30-025-35252

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	21	17S	32E					Lea

Latitude N32.81993 ° Longitude W103.76579 °

NATURE OF RELEASE

Type of Release: Produced Water/Oil	Volume of Release 350bbls pw 100bbls oil	Volume Recovered 340bbls pw 95bbls oil
Source of Release: Oil Tank	Date and Hour of Occurrence 12/04/2012	Date and Hour of Discovery 10/04/2012 7:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffrey Leking-OCD Jim Amos-BLM Terry Gregston-BLM	
By Whom? Michelle Mullins	Date and Hour 10/04/2012 5:06 p.m.	
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.* Produced water was diverted into the Oil Tanks causing the Oil Tanks to overflow.		
Describe Area Affected and Cleanup Action Taken.* Tetra Tech personnel inspected the site and collected samples to define the spill extents. Soil that exceeded the RRAL was removed and hauled away for proper disposal. The site was then brought up to surface grade with clean backfill material. Tetra Tech prepared a closure report and submitted it to NMOCD for review.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 		OIL CONSERVATION DIVISION
Printed Name: Ike Tavarez (agent for COG)		Approved by District Supervisor:
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: 4-15-13 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	MC Federal #6 Tank Battery					
Company:	COG Operating LLC					
Section, Township and Range	Unit H	Sec 21	T17S	R32E		
Lease Number:	API-30-025-35252					
County:	Lea County					
GPS:	32.81993° N			103.76579° W		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	At the intersection of Hwy 529 and CR126, travel north on CR126 for 1.9 miles. Turn left and travel 0.3 miles, turn right and travel 0.2 miles, turn right and travel 0.1 miles, turn right to site.					

Release Data:

Date Released:	12/4/2012
Type Release:	Produced Water and Oil
Source of Contamination:	Oil Tank
Fluid Released:	350 bbls pw 100 bbls oil
Fluids Recovered:	340 bbls pw 95 bbls oil

Official Communication:

Name:	Pat Ellis	Ike Tavaréz
Company:	COG Operating, LLC	Tetra Tech
Address:	One Concho Center	1910 N. Big Spring
	600 W. Illinois Ave.	
City:	Midland Texas, 79701	Midland, Texas
Phone number:	(432) 686-3023	(432) 682-4559
Fax:	(432) 684-7137	
Email:	pellis@conchoresources.com	ike.tavarez@tetrattech.com

Ranking Criteria

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

Acceptable Soil RRAL (mg/kg)		
Benzene	Total BTEX	TPH
10	50	1,000

HOBBS OCD

APR 23 2013

RECEIVED



TETRA TECH

April 15, 2013

HOBBS OCD

APR 23 2013

RECEIVED

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

**Re: Closure Report for the COG Operating LLC., MC Federal #6
Tank Battery, Unit H, Section 21, Township 17 South, Range 32
East, Lea County, New Mexico.**

Mr. Leking:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the MC Federal #6 Tank Battery, Unit H, Section 21, Township 17 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.81993°, W 103.76579°. 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 December 4, 2012, and released approximately four hundred and fifty (450) barrels of oil and produced water from the oil tank with four hundred and thirty five (435) barrels of standing fluids recovered. The spill originated inside the lined facility and breached the northwest tank battery firewall. The spill migrated into the pasture south of the tank battery measuring approximately 25' x 165'. The initial C-141 form is enclosed in Appendix C.

Groundwater

No water wells were listed within Section 21. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 75' to 100' below surface. The average depth to groundwater map is shown in Appendix A.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com



Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 1,000 mg/kg.

Soil Assessment and Analytical Results

On January 24, 2013, Tetra Tech personnel inspected and sampled the spill area. Six (6) auger holes (AH-1 through AH-6) were installed using a stainless steel hand auger to assess the impacted soils. 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 B. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, auger holes (AH-2, AH-3, AH-4 and AH-5 and AH-6) showed TPH concentrations exceeding the RRAL at 0-1', but declined at 1.5' below the RRAL. A deeper impact was detected in the area of AH-1 and decline below the RRAL at 2.0' below surface. The chloride concentrations ranged from <20 mg/kg to 625 mg/kg. The chloride concentrations detected do not appear to be environmental concern.

Remediation and Conclusion

On April 3, 2013, Tetra Tech personnel supervised the excavation of the impacted soils. The excavated areas and depths are highlighted in Table 1 and shown on Figure 4. In order to remove the hydrocarbon and elevated chloride concentrations, the proposed excavation depths ranged from 1.0' to 1.5' below surface. As requested by the NMOCD, additional sampling was requested in the areas of AH-2, AH-5 and AH-6 and the results are shown in Table 1.



TETRA TECH

Approximately 180 cubic yards³ of soil were removed and transported to R360 facility for proper disposal. The site was then backfilled with clean material to surface grade, ripped and seeded.

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

Respectfully submitted,
TETRA TECH

Ike Tavaréz, PG
Senior Project Manager

cc: Pat Ellis – COG
cc: Jim Amos - BLM

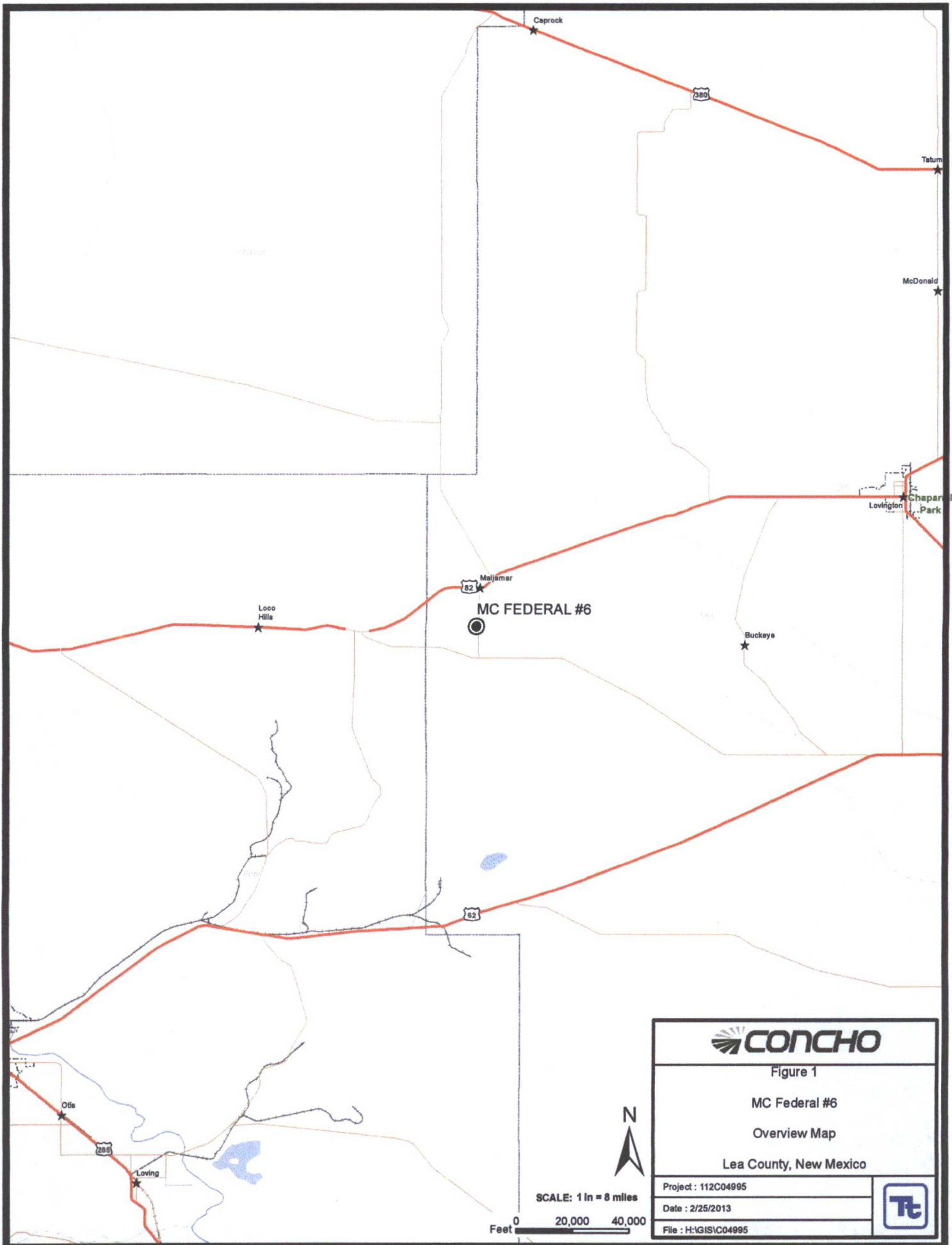


Figure 1

MC Federal #6

Overview Map

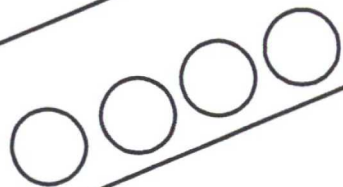
Lea County, New Mexico

Project : 112C04995

Date : 2/25/2013

File : H:\GIS\IC04995





MC SOUTH EAST TB

PAD

INJ WELL

MC #6

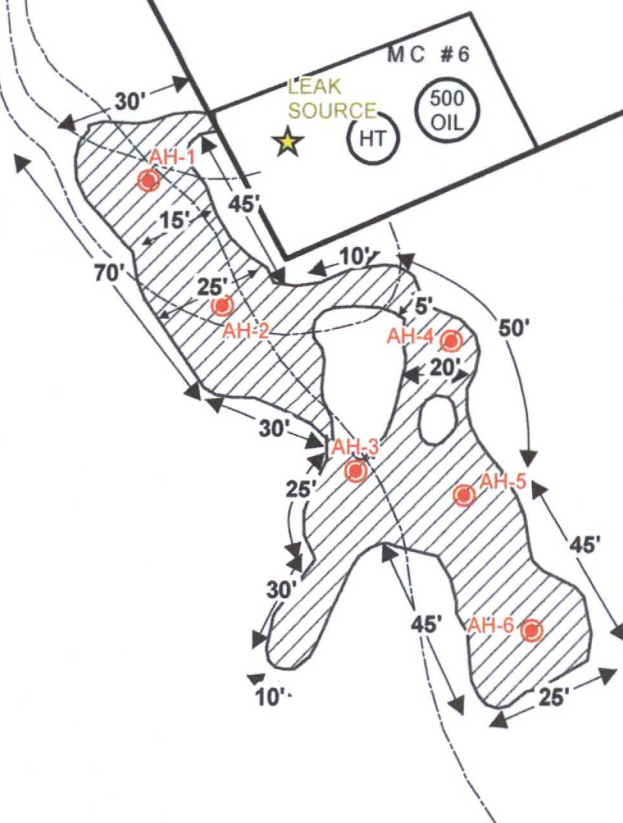
LEAK
SOURCE



HT

500
OIL

PASTURE



EXPLANATION

- AUGER HOLE SAMPLE LOCATIONS
- ★ LEAK SOURCE
- ▨ SPILL AREA



SCALE: 1 IN = 48 FEET

Feet 0 20 40



Figure 3

MC Federal #6

Spill Assessment Map

Lea County, New Mexico

Project : 112C04995

Date : 2/25/2013

File : H:\GIS\1C04995



MC SOUTH EAST TB

PAD

INJ WELL

2' DEEP

MC #6

LEAK
SOURCE

HT

500
OIL

PASTURE

1' DEEP

EXPLANATION

- AUGER HOLE SAMPLE LOCATIONS
- ★ LEAK SOURCE
- ▨ EXCAVATED AREAS

SCALE: 1 IN = 48 FEET

Feet 0 20 40



Figure 4

MC Federal #6

Excavation Areas & Depths Map

Lea County, New Mexico

Project : 112C04995

Date : 2/25/2013

File : H:\GIS\112C04995



Table 1
COG Operating LLC.
MC Federal #6
Lea County, New Mexico

[illegible]

Table 1
COG Operating LLC.
MC Federal #6
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-5	1/24/2013	0-1		X	1,410	5,360	6,770	<0.400	3.06	10.1	2.96	16.1	<20.0
	"	1-1.5	X		166	803	969	-	-	-	-	-	<20.0
	"	2-2.5	X		-	-	-	-	-	-	-	-	285
AH-5	4/4/2013	2-2.5	X		-	-	-	-	-	-	-	-	76
	"	3-3.5	X		-	-	-	-	-	-	-	-	119
AH-6	1/24/2013	0-1		X	880	1,610	2,490	<0.400	<0.400	4.75	<0.400	4.75	<20.0
	"	1-1.5	X		<4.00	<50.0	<50.0	-	-	-	-	-	625
	"	2-2.5	X		-	-	-	-	-	-	-	-	<20.0
AH-6	4/4/2013	1-1.5	X		-	-	-	-	-	-	-	-	95.6
	"	2-2.5	X		-	-	-	-	-	-	-	-	100

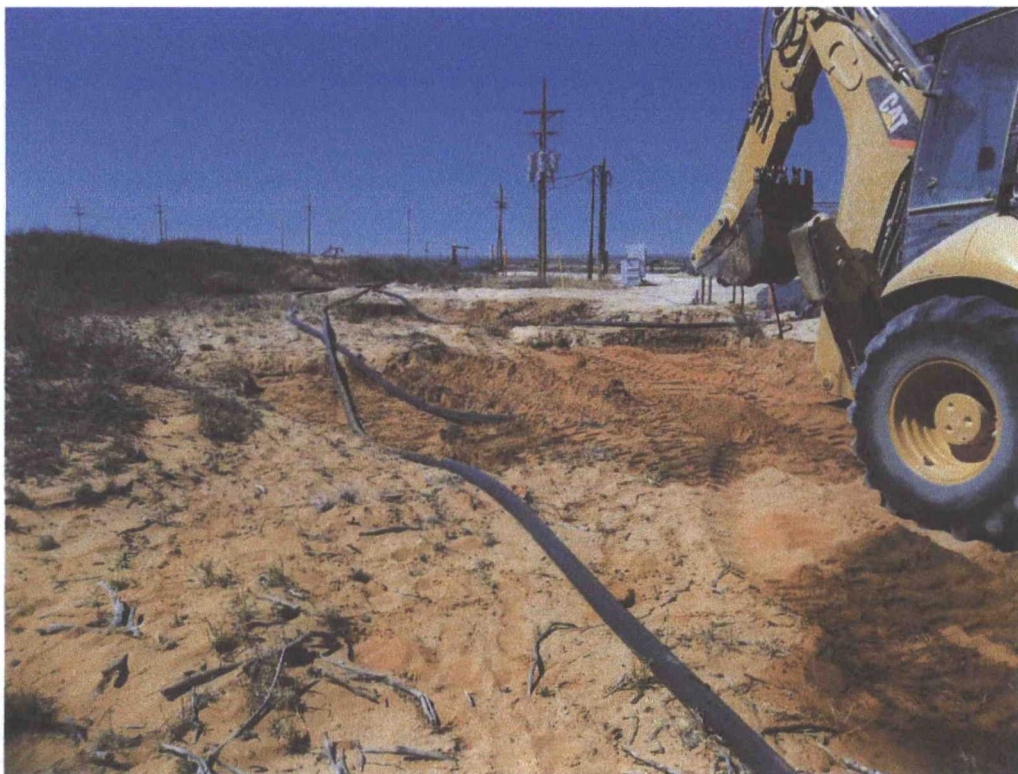
Excavated Areas and Depths

(-) Not Analyzed

COG Operating LLC
MC Federal #6
Lea County, New Mexico



View South – Area of AH-1 and AH-2



View North – Area of AH-3 and AH-4

COG Operating LLC
MC Federal #6
Lea County, New Mexico



TETRA TECH



View South – Area of AH-5 and AH-6



Backfill

COG Operating LLC
MC Federal #6
Lea County, New Mexico



Backfill



Ripped and Seeded

Water Well Data
Average Depth to Groundwater (ft)
COG-MC Federal #6
Lea County, New Mexico

16 South			31 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
290					

17 South			31 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
			271		

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

16 South			32 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
				260	

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

18 South			32 East		
6	5	4	3	2	1
7	460	8	9	10	11
18	82	17	16	15	14
19		20	21	22	23
30		29	28	27	26
31		32	33	34	35

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

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

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

- 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

Summary Report

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

Report Date: February 4, 2013

Work Order: 13012802



Project Location: Lea Co., NM
Project Name: COG/MC Fed. #6
Project Number: 112C04995

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
319434	AH-1 0-1'	soil	2013-01-24	00:00	2013-01-25
319435	AH-1 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319436	AH-1 2-2.5'	soil	2013-01-24	00:00	2013-01-25
319437	AH-1 3-3.5'	soil	2013-01-24	00:00	2013-01-25
319438	AH-1 4-4.5'	soil	2013-01-24	00:00	2013-01-25
319440	AH-2 0-1'	soil	2013-01-24	00:00	2013-01-25
319441	AH-2 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319442	AH-2 2-2.5'	soil	2013-01-24	00:00	2013-01-25
319443	AH-2 3-3.5'	soil	2013-01-24	00:00	2013-01-25
319445	AH-3 0-1'	soil	2013-01-24	00:00	2013-01-25
319446	AH-3 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319447	AH-3 2-2.5'	soil	2013-01-24	00:00	2013-01-25
319449	AH-4 0-1'	soil	2013-01-24	00:00	2013-01-25
319450	AH-4 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319451	AH-4 2-2.5'	soil	2013-01-24	00:00	2013-01-25
319453	AH-5 0-1'	soil	2013-01-24	00:00	2013-01-25
319454	AH-5 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319455	AH-5 2-2.5'	soil	2013-01-24	00:00	2013-01-25
319456	AH-6 0-1'	soil	2013-01-24	00:00	2013-01-25
319457	AH-6 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319458	AH-6 2-2.5'	soil	2013-01-24	00:00	2013-01-25

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
319434 - AH-1 0-1'	<0.400 ¹ Qs	<0.400 ² Qs	10.6 Qs	4.03 Qs	5270	4260 Qs

continued ...

¹Dilution due to hydrocarbons.²Dilution due to hydrocarbons.

... continued

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
319435 - AH-1 1-1.5'					2030 Qs	428 Qs
319436 - AH-1 2-2.5'					<50.0 Qs	<4.00 Qs
319440 - AH-2 0-1'	<0.200 ³ Qs	<0.200 ⁴ Qs	4.88 Qs	1.34 Qs	4160	1160 Qs
319441 - AH-2 1-1.5'					<50.0 Qs	<4.00 Qs
319445 - AH-3 0-1'	<0.200 ⁵ Qs	<0.200 ⁶ Qs	1.70 Qs	<0.200 ⁷ Qs	2100	514 Qs
319446 - AH-3 1-1.5'					<50.0	<4.00 Qs
319449 - AH-4 0-1'	<0.200 ⁸ Qs	1.75 Qs	6.45 Qs	2.72 Qs	3600	1070 Qs
319450 - AH-4 1-1.5'					178	33.6 Qs
319453 - AH-5 0-1'	<0.400 ⁹ Qs	3.06 Qs	10.1 Qs	2.96 Qs	5360	1410 Qs
319454 - AH-5 1-1.5'					803	166 Qs
319456 - AH-6 0-1'	<0.400 ¹⁰ Qs	<0.400 ¹¹ Qs	4.75 Qs	<0.400 ¹² Qs	1610	880 Qs
319457 - AH-6 1-1.5'					<50.0	<4.00 Qs

Sample: 319434 - AH-1 0-1'

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

Sample: 319435 - AH-1 1-1.5'

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

Sample: 319436 - AH-1 2-2.5'

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

Sample: 319437 - AH-1 3-3.5'

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

³Dilution due to hydrocarbons.⁴Dilution due to hydrocarbons.⁵Dilution due to hydrocarbons.⁶Dilution due to hydrocarbons.⁷Dilution due to hydrocarbons.⁸Dilution due to hydrocarbons.⁹Dilution due to hydrocarbons.¹⁰Dilution due to hydrocarbons.¹¹Dilution due to hydrocarbons.¹²Dilution due to hydrocarbons.

Sample: 319438 - AH-1 4-4.5'

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

Sample: 319440 - AH-2 0-1'

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

Sample: 319441 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		73.4	mg/Kg	4

Sample: 319442 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		762	mg/Kg	4

Sample: 319443 - AH-2 3-3.5'

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

Sample: 319445 - AH-3 0-1'

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

Sample: 319446 - AH-3 1-1.5'

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

Sample: 319447 - AH-3 2-2.5'

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

Sample: 319449 - AH-4 0-1'

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

Sample: 319450 - AH-4 1-1.5'

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

Sample: 319451 - AH-4 2-2.5'

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

Sample: 319453 - AH-5 0-1'

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

Sample: 319454 - AH-5 1-1.5'

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

Sample: 319455 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		285	mg/Kg	4

Sample: 319456 - AH-6 0-1'

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

Sample: 319457 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		625	mg/Kg	4

Report Date: February 4, 2013

Work Order: 13012802

Page Number: 5 of 5

Sample: 319458 - AH-6 2-2.5'

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



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

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

800-378-1296

806-794-1296

915-585-3443

432-689-6301

972-242-7750

FAX 806-794-1298

FAX 915-585-4944

FAX 432-689-6313

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

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: February 4, 2013

Work Order: 13012802



Project Location: Lea Co., NM
Project Name: COG/MC Fed. #6
Project Number: 112C04995

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
319434	AH-1 0-1'	soil	2013-01-24	00:00	2013-01-25
319435	AH-1 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319436	AH-1 2-2.5'	soil	2013-01-24	00:00	2013-01-25
319437	AH-1 3-3.5'	soil	2013-01-24	00:00	2013-01-25
319438	AH-1 4-4.5'	soil	2013-01-24	00:00	2013-01-25
319440	AH-2 0-1'	soil	2013-01-24	00:00	2013-01-25
319441	AH-2 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319442	AH-2 2-2.5'	soil	2013-01-24	00:00	2013-01-25
319443	AH-2 3-3.5'	soil	2013-01-24	00:00	2013-01-25
319445	AH-3 0-1'	soil	2013-01-24	00:00	2013-01-25
319446	AH-3 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319447	AH-3 2-2.5'	soil	2013-01-24	00:00	2013-01-25
319449	AH-4 0-1'	soil	2013-01-24	00:00	2013-01-25
319450	AH-4 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319451	AH-4 2-2.5'	soil	2013-01-24	00:00	2013-01-25
319453	AH-5 0-1'	soil	2013-01-24	00:00	2013-01-25
319454	AH-5 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319455	AH-5 2-2.5'	soil	2013-01-24	00:00	2013-01-25

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
319456	AH-6 0-1'	soil	2013-01-24	00:00	2013-01-25
319457	AH-6 1-1.5'	soil	2013-01-24	00:00	2013-01-25
319458	AH-6 2-2.5'	soil	2013-01-24	00:00	2013-01-25

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 47 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	5
Analytical Report	6
Sample 319434 (AH-1 0-1')	6
Sample 319435 (AH-1 1-1.5')	7
Sample 319436 (AH-1 2-2.5')	8
Sample 319437 (AH-1 3-3.5')	9
Sample 319438 (AH-1 4-4.5')	9
Sample 319440 (AH-2 0-1')	10
Sample 319441 (AH-2 1-1.5')	11
Sample 319442 (AH-2 2-2.5')	12
Sample 319443 (AH-2 3-3.5')	12
Sample 319445 (AH-3 0-1')	13
Sample 319446 (AH-3 1-1.5')	14
Sample 319447 (AH-3 2-2.5')	15
Sample 319449 (AH-4 0-1')	15
Sample 319450 (AH-4 1-1.5')	17
Sample 319451 (AH-4 2-2.5')	18
Sample 319453 (AH-5 0-1')	18
Sample 319454 (AH-5 1-1.5')	20
Sample 319455 (AH-5 2-2.5')	21
Sample 319456 (AH-6 0-1')	21
Sample 319457 (AH-6 1-1.5')	22
Sample 319458 (AH-6 2-2.5')	23
Method Blanks	25
QC Batch 98464 - Method Blank (1)	25
QC Batch 98511 - Method Blank (1)	25
QC Batch 98567 - Method Blank (1)	25
QC Batch 98568 - Method Blank (1)	26
QC Batch 98569 - Method Blank (1)	26
QC Batch 98579 - Method Blank (1)	26
QC Batch 98586 - Method Blank (1)	26
QC Batch 98600 - Method Blank (1)	27
QC Batch 98602 - Method Blank (1)	27
QC Batch 98603 - Method Blank (1)	27
Laboratory Control Spikes	29
QC Batch 98464 - LCS (1)	29
QC Batch 98511 - LCS (1)	29
QC Batch 98567 - LCS (1)	30
QC Batch 98568 - LCS (1)	30
QC Batch 98569 - LCS (1)	30
QC Batch 98579 - LCS (1)	31
QC Batch 98586 - LCS (1)	31
QC Batch 98600 - LCS (1)	32

QC Batch 98602 - LCS (1)	32
QC Batch 98603 - LCS (1)	33
QC Batch 98464 - MS (1)	33
QC Batch 98511 - MS (1)	34
QC Batch 98567 - MS (1)	34
QC Batch 98568 - MS (1)	35
QC Batch 98569 - MS (1)	35
QC Batch 98579 - MS (1)	35
QC Batch 98586 - MS (1)	36
QC Batch 98600 - MS (1)	36
QC Batch 98602 - MS (1)	37
QC Batch 98603 - MS (1)	37

Calibration Standards

QC Batch 98464 - CCV (1)	39
QC Batch 98464 - CCV (2)	39
QC Batch 98464 - CCV (3)	39
QC Batch 98464 - CCV (4)	39
QC Batch 98511 - CCV (1)	39
QC Batch 98511 - CCV (2)	40
QC Batch 98511 - CCV (3)	40
QC Batch 98567 - CCV (1)	40
QC Batch 98567 - CCV (2)	41
QC Batch 98568 - CCV (1)	41
QC Batch 98568 - CCV (2)	41
QC Batch 98569 - CCV (1)	41
QC Batch 98569 - CCV (2)	42
QC Batch 98579 - CCV (1)	42
QC Batch 98579 - CCV (2)	42
QC Batch 98579 - CCV (3)	42
QC Batch 98586 - CCV (1)	43
QC Batch 98586 - CCV (2)	43
QC Batch 98600 - CCV (1)	43
QC Batch 98600 - CCV (2)	43
QC Batch 98600 - CCV (3)	44
QC Batch 98602 - CCV (1)	44
QC Batch 98602 - CCV (2)	44
QC Batch 98603 - CCV (1)	44
QC Batch 98603 - CCV (2)	45
QC Batch 98603 - CCV (3)	45

Appendix

Report Definitions	46
Laboratory Certifications	46
Standard Flags	46
Result Comments	46
Attachments	47

Case Narrative

Samples for project COG/MC Fed. #6 were received by TraceAnalysis, Inc. on 2013-01-25 and assigned to work order 13012802. Samples for work order 13012802 were received intact at a temperature of 0.1 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	83472	2013-01-30 at 13:03	98511	2013-01-30 at 13:06
Chloride (Titration)	SM 4500-Cl B	83441	2013-01-29 at 08:55	98567	2013-01-31 at 13:47
Chloride (Titration)	SM 4500-Cl B	83441	2013-01-29 at 08:55	98568	2013-01-31 at 13:48
Chloride (Titration)	SM 4500-Cl B	83441	2013-01-29 at 08:55	98569	2013-01-31 at 13:49
TPH DRO - NEW	S 8015 D	83432	2013-01-28 at 10:00	98464	2013-01-29 at 09:35
TPH DRO - NEW	S 8015 D	83537	2013-01-31 at 09:00	98586	2013-02-01 at 10:15
TPH DRO - NEW	S 8015 D	83555	2013-01-29 at 11:00	98600	2013-02-04 at 08:35
TPH DRO - NEW	S 8015 D	83557	2013-02-01 at 08:00	98602	2013-02-04 at 08:56
TPH GRO	S 8015 D	83528	2013-01-31 at 11:00	98579	2013-01-31 at 11:00
TPH GRO	S 8015 D	83556	2013-02-02 at 15:00	98603	2013-02-03 at 12:00

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 13012802 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 6 of 47
Lea Co., NM

Analytical Report

Sample: 319434 - AH-1 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 98511
Prep Batch: 83472

Analytical Method: S 8021B
Date Analyzed: 2013-01-30
Sample Preparation: 2013-01-29

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

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Benzene	1	Qs, U	1	<0.400	mg/Kg	20	0.0200
Toluene	2	Qs, U	1	<0.400	mg/Kg	20	0.0200
Ethylbenzene		Qs	1	10.6	mg/Kg	20	0.0200
Xylene		Qs	1	4.03	mg/Kg	20	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	47.2	mg/Kg	20	40.0	118	79.5 - 108
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	64.1	mg/Kg	20	40.0	160	71.4 - 108

Sample: 319434 - AH-1 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98567
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

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

Sample: 319434 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 98464
Prep Batch: 83432

Analytical Method: S 8015 D
Date Analyzed: 2013-01-29
Sample Preparation: 2013-01-28

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	5270	mg/Kg	5	50.0

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 7 of 47
Lea Co., NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	304	mg/Kg	5	100	304	70 - 130

Sample: 319434 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 98579
Prep Batch: 83528

Analytical Method: S 8015 D
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-31

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q _s	1	4260	mg/Kg	200	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			358	mg/Kg	200	400	90	70 - 130
4-Bromofluorobenzene (4-BFB)			474	mg/Kg	200	400	118	70 - 130

Sample: 319435 - AH-1 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98568
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

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

Sample: 319435 - AH-1 1-1.5'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 98600
Prep Batch: 83555

Analytical Method: S 8015 D
Date Analyzed: 2013-02-04
Sample Preparation: 2013-01-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Q _s	1	2030	mg/Kg	1	50.0

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 8 of 47
Lea Co., NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{SR}	Q _{SR}	190	mg/Kg	1	100	190	70 - 130

Sample: 319435 - AH-1 1-1.5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 98603
Prep Batch: 83556

Analytical Method: S 8015 D
Date Analyzed: 2013-02-03
Sample Preparation: 2013-02-02

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q _S	1	428	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			35.4	mg/Kg	20	40.0	88	70 - 130
4-Bromofluorobenzene (4-BFB)			45.4	mg/Kg	20	40.0	114	70 - 130

Sample: 319436 - AH-1 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98568
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

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

Sample: 319436 - AH-1 2-2.5'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 98600
Prep Batch: 83555

Analytical Method: S 8015 D
Date Analyzed: 2013-02-04
Sample Preparation: 2013-01-29

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

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 9 of 47
Lea Co., NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			105	mg/Kg	1	100	105	70 - 130

Sample: 319436 - AH-1 2-2.5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 98603
Prep Batch: 83556

Analytical Method: S 8015 D
Date Analyzed: 2013-02-03
Sample Preparation: 2013-02-02

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

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

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

Sample: 319437 - AH-1 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98568
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

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

Sample: 319438 - AH-1 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98568
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

continued ...

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 11 of 47
Lea Co., NM

Sample: 319440 - AH-2 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 98464
Prep Batch: 83432

Analytical Method: S 8015 D
Date Analyzed: 2013-01-29
Sample Preparation: 2013-01-28

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	4160	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	267	mg/Kg	1	100	267	70 - 130

Sample: 319440 - AH-2 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 98579
Prep Batch: 83528

Analytical Method: S 8015 D
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-31

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	1160	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			35.8	mg/Kg	20	40.0	90	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	63.4	mg/Kg	20	40.0	158	70 - 130

Sample: 319441 - AH-2 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98568
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			73.4	mg/Kg	5	4.00

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 12 of 47
Lea Co., NM

Sample: 319441 - AH-2 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2013-02-04	Analyzed By:	CW
QC Batch:	98600	Sample Preparation:	2013-01-29	Prepared By:	CW
Prep Batch:	83555				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	70 - 130

Sample: 319441 - AH-2 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2013-02-03	Analyzed By:	YG
QC Batch:	98603	Sample Preparation:	2013-02-02	Prepared By:	YG
Prep Batch:	83556				

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

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)			1.95	mg/Kg	1	2.00	98	70 - 130

Sample: 319442 - AH-2 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-01-31	Analyzed By:	AR
QC Batch:	98568	Sample Preparation:	2013-01-29	Prepared By:	AR
Prep Batch:	83441				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			762	mg/Kg	5	4.00

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 13 of 47
Lea Co., NM

Sample: 319443 - AH-2 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 98568 Date Analyzed: 2013-01-31 Analyzed By: AR
Prep Batch: 83441 Sample Preparation: 2013-01-29 Prepared By: AR

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

Sample: 319445 - AH-3 0-1'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 98511 Date Analyzed: 2013-01-30 Analyzed By: AH
Prep Batch: 83472 Sample Preparation: 2013-01-29 Prepared By: AH

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	5 Qs,U	1	<0.200	mg/Kg	10	0.0200
Toluene	6 Qs,U	1	<0.200	mg/Kg	10	0.0200
Ethylbenzene	Qs	1	1.70	mg/Kg	10	0.0200
Xylene	7 Qs,U	1	<0.200	mg/Kg	10	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	23.3	mg/Kg	10	20.0	116	79.5 - 108
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	22.8	mg/Kg	10	20.0	114	71.4 - 108

Sample: 319445 - AH-3 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 98568 Date Analyzed: 2013-01-31 Analyzed By: AR
Prep Batch: 83441 Sample Preparation: 2013-01-29 Prepared By: AR

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 14 of 47
Lea Co., NM

Sample: 319445 - AH-3 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2013-01-29	Analyzed By:	CW
QC Batch:	98464	Sample Preparation:	2013-01-28	Prepared By:	CW
Prep Batch:	83432				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	2100	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	195	mg/Kg	1	100	195	70 - 130

Sample: 319445 - AH-3 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2013-01-31	Analyzed By:	YG
QC Batch:	98579	Sample Preparation:	2013-01-31	Prepared By:	YG
Prep Batch:	83528				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q _s	1	514	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			35.4	mg/Kg	20	40.0	88	70 - 130
4-Bromofluorobenzene (4-BFB)			48.8	mg/Kg	20	40.0	122	70 - 130

Sample: 319446 - AH-3 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-01-31	Analyzed By:	AR
QC Batch:	98568	Sample Preparation:	2013-01-29	Prepared By:	AR
Prep Batch:	83441				

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 15 of 47
Lea Co., NM

Sample: 319446 - AH-3 1-1.5'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 98602
Prep Batch: 83557

Analytical Method: S 8015 D
Date Analyzed: 2013-02-04
Sample Preparation: 2013-02-01

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			71.2	mg/Kg	1	100	71	70 - 130

Sample: 319446 - AH-3 1-1.5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 98603
Prep Batch: 83556

Analytical Method: S 8015 D
Date Analyzed: 2013-02-03
Sample Preparation: 2013-02-02

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.14	mg/Kg	1	2.00	107	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 319447 - AH-3 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98569
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 16 of 47
Lea Co., NM

Sample: 319449 - AH-4 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 98511
Prep Batch: 83472

Analytical Method: S 8021B
Date Analyzed: 2013-01-30
Sample Preparation: 2013-01-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	8 Qs, U	1	<0.200	mg/Kg	10	0.0200
Toluene	Qs	1	1.75	mg/Kg	10	0.0200
Ethylbenzene	Qs	1	6.45	mg/Kg	10	0.0200
Xylene	Qs	1	2.72	mg/Kg	10	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	23.2	mg/Kg	10	20.0	116	79.5 - 108
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	31.1	mg/Kg	10	20.0	156	71.4 - 108

Sample: 319449 - AH-4 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98569
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

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

Sample: 319449 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 98464
Prep Batch: 83432

Analytical Method: S 8015 D
Date Analyzed: 2013-01-29
Sample Preparation: 2013-01-28

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	3600	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	234	mg/Kg	1	100	234	70 - 130

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 17 of 47
Lea Co., NM

Sample: 319449 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 98579
Prep Batch: 83528

Analytical Method: S 8015 D
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-31

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q*	1	1070	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			88.5	mg/Kg	50	100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			119	mg/Kg	50	100	119	70 - 130

Sample: 319450 - AH-4 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98569
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

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

Sample: 319450 - AH-4 1-1.5'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 98602
Prep Batch: 83557

Analytical Method: S 8015 D
Date Analyzed: 2013-02-04
Sample Preparation: 2013-02-01

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	178	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			111	mg/Kg	1	100	111	70 - 130

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 18 of 47
Lea Co., NM

Sample: 319450 - AH-4 1-1.5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 98603
Prep Batch: 83556

Analytical Method: S 8015 D
Date Analyzed: 2013-02-03
Sample Preparation: 2013-02-02

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	33.6	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.13	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			2.38	mg/Kg	1	2.00	119	70 - 130

Sample: 319451 - AH-4 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98569
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

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

Sample: 319453 - AH-5 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 98511
Prep Batch: 83472

Analytical Method: S 8021B
Date Analyzed: 2013-01-30
Sample Preparation: 2013-01-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	9	Qs, U	<0.400	mg/Kg	20	0.0200
Toluene		Qs	3.06	mg/Kg	20	0.0200
Ethylbenzene		Qs	10.1	mg/Kg	20	0.0200
Xylene		Qs	2.96	mg/Kg	20	0.0200

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 19 of 47
Lea Co., NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	46.5	mg/Kg	20	40.0	116	79.5 - 108
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	54.2	mg/Kg	20	40.0	136	71.4 - 108

Sample: 319453 - AH-5 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98569
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

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

Sample: 319453 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 98464
Prep Batch: 83432

Analytical Method: S 8015 D
Date Analyzed: 2013-01-29
Sample Preparation: 2013-01-28

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	5360	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	310	mg/Kg	5	100	310	70 - 130

Sample: 319453 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 98579
Prep Batch: 83528

Analytical Method: S 8015 D
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-31

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	qs	1	1410	mg/Kg	20	4.00

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 20 of 47
Lea Co., NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			35.7	mg/Kg	20	40.0	89	70 - 130
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	69.0	mg/Kg	20	40.0	172	70 - 130

Sample: 319454 - AH-5 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 98569 Date Analyzed: 2013-01-31 Analyzed By: AR
Prep Batch: 83441 Sample Preparation: 2013-01-29 Prepared By: AR

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

Sample: 319454 - AH-5 1-1.5'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 98586 Date Analyzed: 2013-02-01 Analyzed By: CW
Prep Batch: 83537 Sample Preparation: 2013-01-31 Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	803	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	149	mg/Kg	1	100	149	70 - 130

Sample: 319454 - AH-5 1-1.5'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 98603 Date Analyzed: 2013-02-03 Analyzed By: YG
Prep Batch: 83556 Sample Preparation: 2013-02-02 Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q _s	1	166	mg/Kg	2	4.00

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 21 of 47
Lea Co., NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.55	mg/Kg	2	4.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	7.72	mg/Kg	2	4.00	193	70 - 130

Sample: 319455 - AH-5 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98569
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			285	mg/Kg	5	4.00

Sample: 319456 - AH-6 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 98511
Prep Batch: 83472

Analytical Method: S 8021B
Date Analyzed: 2013-01-30
Sample Preparation: 2013-01-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	10 Q _s ,U	1	<0.400	mg/Kg	20	0.0200
Toluene	11 Q _s ,U	1	<0.400	mg/Kg	20	0.0200
Ethylbenzene	Q _s	1	4.75	mg/Kg	20	0.0200
Xylene	12 Q _s ,U	1	<0.400	mg/Kg	20	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q _{sr}	Q _{sr}	46.0	mg/Kg	20	40.0	115	79.5 - 108
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	46.2	mg/Kg	20	40.0	116	71.4 - 108

Sample: 319456 - AH-6 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98569
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 22 of 47
Lea Co., NM

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

Sample: 319456 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 98464
Prep Batch: 83432

Analytical Method: S 8015 D
Date Analyzed: 2013-01-29
Sample Preparation: 2013-01-28

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	1610	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	181	mg/Kg	1	100	181	70 - 130

Sample: 319456 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 98603
Prep Batch: 83556

Analytical Method: S 8015 D
Date Analyzed: 2013-02-03
Sample Preparation: 2013-02-02

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	880	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			34.9	mg/Kg	20	40.0	87	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	57.1	mg/Kg	20	40.0	143	70 - 130

Sample: 319457 - AH-6 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 98569
Prep Batch: 83441

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-01-31
Sample Preparation: 2013-01-29

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 23 of 47
Lea Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			625	mg/Kg	10	4.00

Sample: 319457 - AH-6 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2013-02-04	Analyzed By:	CW
QC Batch:	98602	Sample Preparation:	2013-02-01	Prepared By:	CW
Prep Batch:	83557				

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

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

Sample: 319457 - AH-6 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2013-02-03	Analyzed By:	YG
QC Batch:	98603	Sample Preparation:	2013-02-02	Prepared By:	YG
Prep Batch:	83556				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.13	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			1.84	mg/Kg	1	2.00	92	70 - 130

Sample: 319458 - AH-6 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-01-31	Analyzed By:	AR
QC Batch:	98569	Sample Preparation:	2013-01-29	Prepared By:	AR
Prep Batch:	83441				

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 24 of 47
Lea Co., NM

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 25 of 47
Lea Co., NM

Method Blanks

Method Blank (1) QC Batch: 98464

QC Batch: 98464
Prep Batch: 83432

Date Analyzed: 2013-01-29
QC Preparation: 2013-01-28

Analyzed By: CW
Prepared By: CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			97.0	mg/Kg	1	100	97	70 - 130

Method Blank (1) QC Batch: 98511

QC Batch: 98511
Prep Batch: 83472

Date Analyzed: 2013-01-30
QC Preparation: 2013-01-30

Analyzed By: AH
Prepared By: AH

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00810	mg/Kg	0.02
Toluene		1	<0.00750	mg/Kg	0.02
Ethylbenzene		1	<0.00730	mg/Kg	0.02
Xylene		1	<0.00700	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q _{sr}	Q _{sr}	0.116	mg/Kg	1	0.100	116	79.5 - 108
4-Bromofluorobenzene (4-BFB)			0.0914	mg/Kg	1	0.100	91	71.4 - 108

Method Blank (1) QC Batch: 98567

QC Batch: 98567
Prep Batch: 83441

Date Analyzed: 2013-01-31
QC Preparation: 2013-01-29

Analyzed By: AR
Prepared By: AR

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 26 of 47
Lea Co., NM

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

Method Blank (1) QC Batch: 98568

QC Batch: 98568 Date Analyzed: 2013-01-31 Analyzed By: AR
Prep Batch: 83441 QC Preparation: 2013-01-29 Prepared By: AR

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

Method Blank (1) QC Batch: 98569

QC Batch: 98569 Date Analyzed: 2013-01-31 Analyzed By: AR
Prep Batch: 83441 QC Preparation: 2013-01-29 Prepared By: AR

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

Method Blank (1) QC Batch: 98579

QC Batch: 98579 Date Analyzed: 2013-01-31 Analyzed By: YG
Prep Batch: 83528 QC Preparation: 2013-01-31 Prepared By: YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00	93	70 - 130

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 27 of 47
Lea Co., NM

Method Blank (1) QC Batch: 98586

QC Batch: 98586
Prep Batch: 83537

Date Analyzed: 2013-02-01
QC Preparation: 2013-01-31

Analyzed By: CW
Prepared By: CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			102	mg/Kg	1	100	102	70 - 130

Method Blank (1) QC Batch: 98600

QC Batch: 98600
Prep Batch: 83555

Date Analyzed: 2013-02-04
QC Preparation: 2013-01-29

Analyzed By: CW
Prepared By: CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			94.7	mg/Kg	1	100	95	70 - 130

Method Blank (1) QC Batch: 98602

QC Batch: 98602
Prep Batch: 83557

Date Analyzed: 2013-02-04
QC Preparation: 2013-02-01

Analyzed By: CW
Prepared By: CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			104	mg/Kg	1	100	104	70 - 130

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 28 of 47
Lea Co., NM

Method Blank (1) QC Batch: 98603

QC Batch: 98603
Prep Batch: 83556

Date Analyzed: 2013-02-03
QC Preparation: 2013-02-02

Analyzed By: YG
Prepared By: YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.84	mg/Kg	1	2.00	92	70 - 130

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 29 of 47
Lea Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 98464
Prep Batch: 83432

Date Analyzed: 2013-01-29
QC Preparation: 2013-01-28

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	215	mg/Kg	1	250	<6.88	86	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	259	mg/Kg	1	250	<6.88	104	70 - 130	19	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	Q _{sr}	Q _{sr}	157	131	mg/Kg	1	100	157	131	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 98511
Prep Batch: 83472

Date Analyzed: 2013-01-30
QC Preparation: 2013-01-30

Analyzed By: AH
Prepared By: AH

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.97	mg/Kg	1	2.00	<0.00810	98	72.4 - 120
Toluene		1	2.03	mg/Kg	1	2.00	<0.00750	102	77 - 120
Ethylbenzene		1	2.11	mg/Kg	1	2.00	<0.00730	106	71.8 - 120
Xylene		1	6.51	mg/Kg	1	6.00	<0.00700	108	78.3 - 120

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.93	mg/Kg	1	2.00	<0.00810	96	72.4 - 120	2	20
Toluene		1	1.99	mg/Kg	1	2.00	<0.00750	100	77 - 120	2	20
Ethylbenzene		1	2.09	mg/Kg	1	2.00	<0.00730	104	71.8 - 120	1	20
Xylene		1	6.47	mg/Kg	1	6.00	<0.00700	108	78.3 - 120	1	20

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 30 of 47
Lea Co., NM

Surrogate			LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	Q _{sr}	Q _{sr}	2.36	2.32	mg/Kg	1	2.00	118	116	79.5 - 108
4-Bromofluorobenzene (4-BFB)			1.92	1.82	mg/Kg	1	2.00	96	91	71.4 - 108

Laboratory Control Spike (LCS-1)

QC Batch: 98567
Prep Batch: 83441

Date Analyzed: 2013-01-31
QC Preparation: 2013-01-29

Analyzed By: AR
Prepared By: AR

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

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

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 98568
Prep Batch: 83441

Date Analyzed: 2013-01-31
QC Preparation: 2013-01-29

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2570	mg/Kg	1	2500	<3.85	103	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2740	mg/Kg	1	2500	<3.85	110	85 - 115	6	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 98569
Prep Batch: 83441

Date Analyzed: 2013-01-31
QC Preparation: 2013-01-29

Analyzed By: AR
Prepared By: AR

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 31 of 47
Lea Co., NM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2550	mg/Kg	1	2500	<3.85	102	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2620	mg/Kg	1	2500	<3.85	105	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: 98579
Prep Batch: 83528

Date Analyzed: 2013-01-31
QC Preparation: 2013-01-31

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	23.1	mg/Kg	1	20.0	<2.32	116	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	21.7	mg/Kg	1	20.0	<2.32	108	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
Trifluorotoluene (TFT)	2.01	1.83	mg/Kg	1	2.00	100	92	70 - 130
4-Bromofluorobenzene (4-BFB)	1.91	1.86	mg/Kg	1	2.00	96	93	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 98586
Prep Batch: 83537

Date Analyzed: 2013-02-01
QC Preparation: 2013-01-31

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	235	mg/Kg	1	250	<6.88	94	70 - 130

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 32 of 47
Lea Co., NM

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	250	mg/Kg	1	250	<6.88	100	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	104	111	mg/Kg	1	100	104	111	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 98600
Prep Batch: 83555

Date Analyzed: 2013-02-04
QC Preparation: 2013-01-29

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	252	mg/Kg	1	250	<6.88	101	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	273	mg/Kg	1	250	<6.88	109	70 - 130	8	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	108	114	mg/Kg	1	100	108	114	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 98602
Prep Batch: 83557

Date Analyzed: 2013-02-04
QC Preparation: 2013-02-01

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	240	mg/Kg	1	250	<6.88	96	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	245	mg/Kg	1	250	<6.88	98	70 - 130	2	20

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 33 of 47
Lea Co., NM

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	105	106	mg/Kg	1	100	105	106	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 98603
Prep Batch: 83556

Date Analyzed: 2013-02-03
QC Preparation: 2013-02-02

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	23.8	mg/Kg	1	20.0	<2.32	119	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	21.2	mg/Kg	1	20.0	<2.32	106	70 - 130	12	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)	2.00	1.73	mg/Kg	1	2.00	100	86	70 - 130
4-Bromofluorobenzene (4-BFB)	1.91	1.90	mg/Kg	1	2.00	96	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 319415

QC Batch: 98464
Prep Batch: 83432

Date Analyzed: 2013-01-29
QC Preparation: 2013-01-28

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	282	mg/Kg	1	250	92.6	76	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	276	mg/Kg	1	250	92.6	73	70 - 130	2	20

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 34 of 47
Lea Co., NM

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	112	114	mg/Kg	1	100	112	114	70 - 130

Matrix Spike (MS-1) Spiked Sample: 319402

QC Batch: 98511
Prep Batch: 83472

Date Analyzed: 2013-01-30
QC Preparation: 2013-01-30

Analyzed By: AH
Prepared By: AH

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Qs	Qs	1	5.39	mg/Kg	1	2.00	<0.00810	270 66.3 - 138
Toluene	Qs	Qs	1	5.51	mg/Kg	1	2.00	<0.00750	276 64.8 - 142
Ethylbenzene	Qs	Qs	1	5.76	mg/Kg	1	2.00	<0.00730	288 72 - 132
Xylene	Qs	Qs	1	18.1	mg/Kg	1	6.00	<0.00700	302 60.8 - 148

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	Qs	Qs	1	5.21	mg/Kg	1	2.00	<0.00810	260 66.3 - 138	3	20
Toluene	Qs	Qs	1	5.32	mg/Kg	1	2.00	<0.00750	266 64.8 - 142	4	20
Ethylbenzene	Qs	Qs	1	5.59	mg/Kg	1	2.00	<0.00730	280 72 - 132	3	20
Xylene	Qs	Qs	1	17.3	mg/Kg	1	6.00	<0.00700	288 60.8 - 148	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)	Qsr	Qsr	2.30	2.30	mg/Kg	1	2	115 79.5 - 108
4-Bromofluorobenzene (4-BFB)	1.84	1.89	mg/Kg	1	2	92	94	71.4 - 108

Matrix Spike (MS-1) Spiked Sample: 319434

QC Batch: 98567
Prep Batch: 83441

Date Analyzed: 2013-01-31
QC Preparation: 2013-01-29

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2620	mg/Kg	5	2500	<19.2	105	78.9 - 121

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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 35 of 47
Lea Co., NM

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2780	mg/Kg	5	2500	<19.2	111	78.9 - 121	6	20

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

Matrix Spike (MS-1) Spiked Sample: 319446

QC Batch: 98568
Prep Batch: 83441

Date Analyzed: 2013-01-31
QC Preparation: 2013-01-29

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2490	mg/Kg	5	2500	<19.2	100	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2540	mg/Kg	5	2500	<19.2	102	78.9 - 121	2	20

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

Matrix Spike (MS-1) Spiked Sample: 319458

QC Batch: 98569
Prep Batch: 83441

Date Analyzed: 2013-01-31
QC Preparation: 2013-01-29

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2650	mg/Kg	5	2500	<19.2	106	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2480	mg/Kg	5	2500	<19.2	99	78.9 - 121	7	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: 319422

QC Batch: 98579
Prep Batch: 83528

Date Analyzed: 2013-01-31
QC Preparation: 2013-01-31

Analyzed By: YG
Prepared By: YG

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 36 of 47
Lea Co., NM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	32.8	mg/Kg	1	20.0	7.28	128	70 - 130

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

Param				MSD		Dil.	Spike	Matrix	Rec.		RPD	
	F	C	Result	Units	Amount		Result	Rec.	Limit			
GRO	Qs	Qs	1	39.2	mg/Kg	1	20.0	7.28	160	70 - 130	18	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)	2.31	2.45	mg/Kg	1	2	116	122	70 - 130
4-Bromofluorobenzene (4-BFB)	2.07	2.13	mg/Kg	1	2	104	106	70 - 130

Matrix Spike (MS-1) Spiked Sample: 319839

QC Batch: 98586
Prep Batch: 83537

Date Analyzed: 2013-02-01
QC Preparation: 2013-01-31

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	257	mg/Kg	1	250	21.5	94	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	245	mg/Kg	1	250	21.5	89	70 - 130	5	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	108	106	mg/Kg	1	100	108	106	70 - 130

Matrix Spike (MS-1) Spiked Sample: 319418

QC Batch: 98600
Prep Batch: 83555

Date Analyzed: 2013-02-04
QC Preparation: 2013-01-29

Analyzed By: CW
Prepared By: CW

continued ...

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 37 of 47
Lea Co., NM

matrix spikes continued ...

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Q _s	Q _s	1	13600 mg/Kg	10	250	12600	400	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	Q _s	Q _s	1	13500 mg/Kg	10	250	12600	360	70 - 130	1	20

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

			MS	MSD			Spike	MS	MSD	Rec.
Surrogate			Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	Q _{sr}	Q _{sr}	734	722	mg/Kg	10	100	734	722	70 - 130

Matrix Spike (MS-1) Spiked Sample: 319446

QC Batch: 98602
Prep Batch: 83557

Date Analyzed: 2013-02-04
QC Preparation: 2013-02-01

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	321	mg/Kg	1	250	32	116	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	286	mg/Kg	1	250	32	102	70 - 130	12	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	102	98.0	mg/Kg	1	100	102	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 319431

QC Batch: 98603
Prep Batch: 83556

Date Analyzed: 2013-02-03
QC Preparation: 2013-02-02

Analyzed By: YG
Prepared By: YG

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 38 of 47
Lea Co., NM

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs	1	33.7	mg/Kg	1	20.0	3.36	152	70 - 130

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

Param				MSD	Units	Dil.	Spike	Matrix	Rec.		RPD	
	F	C	Result	Amount			Result	Rec.	Limit			
GRO	Qs	Qs	1	33.0	mg/Kg	1	20.0	3.36	148	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
Trifluorotoluene (TFT)	2.47	2.48	mg/Kg	1	2	124	124	70 - 130
4-Bromofluorobenzene (4-BFB)	1.91	1.95	mg/Kg	1	2	96	98	70 - 130

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 39 of 47
Lea Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch: 98464

Date Analyzed: 2013-01-29

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	252	101	80 - 120	2013-01-29

Standard (CCV-2)

QC Batch: 98464

Date Analyzed: 2013-01-29

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	247	99	80 - 120	2013-01-29

Standard (CCV-3)

QC Batch: 98464

Date Analyzed: 2013-01-29

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	246	98	80 - 120	2013-01-29

Standard (CCV-4)

QC Batch: 98464

Date Analyzed: 2013-01-29

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	246	98	80 - 120	2013-01-29

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 40 of 47
Lea Co., NM

Standard (CCV-1)

QC Batch: 98511

Date Analyzed: 2013-01-30

Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0859	86	80 - 120	2013-01-30
Toluene		1	mg/kg	0.100	0.0853	85	80 - 120	2013-01-30
Ethylbenzene		1	mg/kg	0.100	0.0896	90	80 - 120	2013-01-30
Xylene		1	mg/kg	0.300	0.270	90	80 - 120	2013-01-30

Standard (CCV-2)

QC Batch: 98511

Date Analyzed: 2013-01-30

Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0863	86	80 - 120	2013-01-30
Toluene		1	mg/kg	0.100	0.0873	87	80 - 120	2013-01-30
Ethylbenzene		1	mg/kg	0.100	0.0885	88	80 - 120	2013-01-30
Xylene		1	mg/kg	0.300	0.275	92	80 - 120	2013-01-30

Standard (CCV-3)

QC Batch: 98511

Date Analyzed: 2013-01-30

Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0982	98	80 - 120	2013-01-30
Toluene		1	mg/kg	0.100	0.0986	99	80 - 120	2013-01-30
Ethylbenzene		1	mg/kg	0.100	0.101	101	80 - 120	2013-01-30
Xylene		1	mg/kg	0.300	0.311	104	80 - 120	2013-01-30

Standard (CCV-1)

QC Batch: 98567

Date Analyzed: 2013-01-31

Analyzed By: AR

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 41 of 47
Lea Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-01-31

Standard (CCV-2)

QC Batch: 98567

Date Analyzed: 2013-01-31

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-01-31

Standard (CCV-1)

QC Batch: 98568

Date Analyzed: 2013-01-31

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-01-31

Standard (CCV-2)

QC Batch: 98568

Date Analyzed: 2013-01-31

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-01-31

Standard (CCV-1)

QC Batch: 98569

Date Analyzed: 2013-01-31

Analyzed By: AR

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 42 of 47
Lea Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2013-01-31

Standard (CCV-2)

QC Batch: 98569

Date Analyzed: 2013-01-31

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.3	98	85 - 115	2013-01-31

Standard (CCV-1)

QC Batch: 98579

Date Analyzed: 2013-01-31

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.02	102	80 - 120	2013-01-31

Standard (CCV-2)

QC Batch: 98579

Date Analyzed: 2013-01-31

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.05	105	80 - 120	2013-01-31

Standard (CCV-3)

QC Batch: 98579

Date Analyzed: 2013-01-31

Analyzed By: YG

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 43 of 47
Lea Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.07	107	80 - 120	2013-01-31

Standard (CCV-1)

QC Batch: 98586

Date Analyzed: 2013-02-01

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	254	102	80 - 120	2013-02-01

Standard (CCV-2)

QC Batch: 98586

Date Analyzed: 2013-02-01

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	264	106	80 - 120	2013-02-01

Standard (CCV-1)

QC Batch: 98600

Date Analyzed: 2013-02-04

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	259	104	80 - 120	2013-02-04

Standard (CCV-2)

QC Batch: 98600

Date Analyzed: 2013-02-04

Analyzed By: CW

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 44 of 47
Lea Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	266	106	80 - 120	2013-02-04

Standard (CCV-3)

QC Batch: 98600

Date Analyzed: 2013-02-04

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	258	103	80 - 120	2013-02-04

Standard (CCV-1)

QC Batch: 98602

Date Analyzed: 2013-02-04

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	245	98	80 - 120	2013-02-04

Standard (CCV-2)

QC Batch: 98602

Date Analyzed: 2013-02-04

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	267	107	80 - 120	2013-02-04

Standard (CCV-1)

QC Batch: 98603

Date Analyzed: 2013-02-03

Analyzed By: YG

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 45 of 47
Lea Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.984	98	80 - 120	2013-02-03

Standard (CCV-2)

QC Batch: 98603

Date Analyzed: 2013-02-03

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.940	94	80 - 120	2013-02-03

Standard (CCV-3)

QC Batch: 98603

Date Analyzed: 2013-02-03

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.945	94	80 - 120	2013-02-03

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	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
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

Report Date: February 4, 2013
112C04995

Work Order: 13012802
COG/MC Fed. #6

Page Number: 47 of 47
Lea Co., NM

- 1 Dilution due to hydrocarbons.
- 2 Dilution due to hydrocarbons.
- 3 Dilution due to hydrocarbons.
- 4 Dilution due to hydrocarbons.
- 5 Dilution due to hydrocarbons.
- 6 Dilution due to hydrocarbons.
- 7 Dilution due to hydrocarbons.
- 8 Dilution due to hydrocarbons.
- 9 Dilution due to hydrocarbons.
- 10 Dilution due to hydrocarbons.
- 11 Dilution due to hydrocarbons.
- 12 Dilution due to hydrocarbons.

Attachments

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

Analysis Request of Chain of Custody Record

PAGE: / 3

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

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

CLIENT NAME:		PROJECT NAME:		SITING MANAGER:	
PROJECT NO.:		PROJECT NAME:		SITING MANAGER:	
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB
319434	2/24		6		X
435					
436					
437					
438					
439					
440					
441					
442					
443					

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)	
Date:	Time:	Date:	Time:
01-25-13	14:30	01-25-13	14:30
01-25-13	16:25	01-25-13	16:25
01-25-13	16:25	01-25-13	16:25
01-25-			

CONTACT: _____	PHONE: _____	REMARKS:
SAMPLE CONDITION WHEN RECEIVED: 0.1°C		Net deeper samples of TPH exceeds 1,000 mg/kg. Midland-064 Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy. Do not... number it before exceeds 10 mg/kg or filed BTEX exceed 5 mg/kg.

Analysis Request of Chain of Custody Record



TETRA TECH

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

SITE MANAGER:

IKr Taravitz

PROJECT NAME: 1064

MC Fid #6

SAMPLE IDENTIFICATION

CLIENT NAME:	PROJECT NAME:	SITE MANAGER:	PRESERVATIVE METHOD	
PROJECT NO.:	DATE	TIME	MATRIX	COMPR
444	2/24		S	X
445				
446				
447				
448				
449				
450				
451				
452				
453				

	BTEx 802	PH 8015 MOD.	TX1005	(Ext. to C36)
PAH 8270				
RCRA Metals Ag As Ba Cd Cr Pb Hg Se				
TCLP Metals Ag As Ba Cd Vr Pd Hg Se				
TCLP Volatiles				
RCl				
GC.MS Vol. 8240/8260/624				
GC.MS Semi. Vol. 8270/625				
PCB's 8080/608				
Pest. 808/608				
Chloride	X	X	X	X
Gamma Spec.				
Alpha Beta (Air)				
PLM (Asbestos)				
Major Anions/Cations, pH, TDS				

RELINQUISHED BY: (Signature)	Date: 6-25-13	Time: 14:30	RECEIVED BY: (Signature)	Date: 6-25-13	Time: 14:30	SAMPLED BY: (Print & Initial)	Date: 6/24/13
RELINQUISHED BY: (Signature)	Date: 6-25-13	Time: 16:25	RECEIVED BY: (Signature)	Date: 6-25-13	Time: 16:25	SAMPLE SHIPPED BY: (Circle)	ST/RR
RELINQUISHED BY: (Signature)	Date: 6-25-13	Time: 16:25	RECEIVED BY: (Signature)	Date: 6-25-13	Time: 16:25	FED-EX	AIRBILL #:
RELINQUISHED BY: (Signature)	Date: 6-25-13	Time: 16:25	RECEIVED BY: (Signature)	Date: 6-25-13	Time: 16:25	HAND DELIVERED	OTHER:
RELINQUISHED BY: (Signature)	Date: 6-25-13	Time: 16:25	RECEIVED BY: (Signature)	Date: 6-25-13	Time: 16:25	TETRA TECH CONTACT PERSON	Results by:

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

Ike Tavariz

RUSH Charges Authorized:	Yes	No
--------------------------	-----	----

SAMPLE CONDITION WHEN RECEIVED:	REMARKS:
0.16	

13012802

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: <u>COG</u>		SITE MANAGER: <u>IKL Tovariz</u>	
PROJECT NO.: <u>COG / MC Fed #6</u>		PROJECT NAME: <u>La C. JM</u>	
LAB I.D. NUMBER	DATE	TIME	MATRIX
434	1/24		6
455			
456			
457			
458			
459			

NUMBER OF CONTAINERS	PRELIMINARY METHOD	TESTS	RESULTS	
	HCL	HNO3	ICE	NONE
1			X	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE: 01-25-13	TIME: 1430
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE: 01-25-13	TIME: 1625
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE: 01-25-13	TIME: 1625
RECEIVING LABORATORY:	RECEIVED BY: (Signature)	DATE: 01-25-13	TIME: 1625
ADDRESS: <u>Midland</u>	STATE: <u>TX</u>	ZIP: <u>79701</u>	PHONE: <u>682-4559</u>
CONTACT: <u>IKL Tovariz</u>	REMARKS: <u>0.1</u>		

ANALYSIS REQUEST (Circle or Specify Method No.)	DATE: 01-25-13	TIME: 1430
Major Anions/Cations, pH, TDS	DATE: 01-25-13	TIME: 1430
PLM (Asbestos)	DATE: 01-25-13	TIME: 1430
Alpha Beta (Air)	DATE: 01-25-13	TIME: 1430
Gamma Spec.	DATE: 01-25-13	TIME: 1430
Chloride	DATE: 01-25-13	TIME: 1430
Post. 808/608	DATE: 01-25-13	TIME: 1430
PCB's 8080/608	DATE: 01-25-13	TIME: 1430
GC/MS Semi. Vol. 8270/625	DATE: 01-25-13	TIME: 1430
GC/MS Vol. 8240/8260/624	DATE: 01-25-13	TIME: 1430
RCI	DATE: 01-25-13	TIME: 1430
TCLP Semi Volatiles	DATE: 01-25-13	TIME: 1430
TCLP Volatiles	DATE: 01-25-13	TIME: 1430
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	DATE: 01-25-13	TIME: 1430
TCRA Metals Ag As Ba Cd Cr Pb Hg Se	DATE: 01-25-13	TIME: 1430
PAH 8270	DATE: 01-25-13	TIME: 1430
TPH 8015 MOD. TX1005 (Ext. to C35)	DATE: 01-25-13	TIME: 1430
BTEX 8021B	DATE: 01-25-13	TIME: 1430

SAMPLED BY: (Print & Initial)	DATE: 01-25-13	TIME: 1430
SAMPLE SHIPPED BY: (Circle)	DATE: 01-25-13	TIME: 1430
FEDEX	DATE: 01-25-13	TIME: 1430
BUS	DATE: 01-25-13	TIME: 1430
UPS	DATE: 01-25-13	TIME: 1430
HAND DELIVERED	DATE: 01-25-13	TIME: 1430
TETRA TECH CONTACT PERSON:	DATE: 01-25-13	TIME: 1430
IKL Tovariz	DATE: 01-25-13	TIME: 1430
RESULTS BY:	DATE: 01-25-13	TIME: 1430
RUSH Charges Authorized:	DATE: 01-25-13	TIME: 1430
Yes	DATE: 01-25-13	TIME: 1430
No	DATE: 01-25-13	TIME: 1430

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

Analysis Request of Chain of Custody Record



TETRA TECH

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

CLIENT NAME: <u>COG</u>		SITE MANAGER: <u>IKT Tarrar</u>	
PROJECT NO.: <u>COG / MC Fed #6</u>		PROJECT NAME: <u>COG / MC Fed #6</u>	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
454	1/24		AH-5 1'-1.5'
455			AH-5 2'-2.5'
456			AH-6 0'-1'
457			AH-6 1'-1.5'
458			AH-6 2'-2.5'
459			AH-6 3'-3.5'

NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	PRESERVATIVE METHOD
1				X		

TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	TCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCRP Volatiles	TCRP 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) <u>Jane Fitch</u>	RECEIVED BY: (Signature) <u>Jane Fitch</u>
Date: <u>01-25-13</u>	Date: <u>01-25-13</u>
Time: <u>1430</u>	Time: <u>1430</u>
RELINQUISHED BY: (Signature) <u>Jane Fitch</u>	RECEIVED BY: (Signature) <u>Jane Fitch</u>
Date: <u>01-25-13</u>	Date: <u>01-25-13</u>
Time: <u>1625</u>	Time: <u>1625</u>
RELINQUISHED BY: (Signature) <u>Jane Fitch</u>	RECEIVED BY: (Signature) <u>Jane Fitch</u>
Date: <u>01-25-13</u>	Date: <u>01-25-13</u>
Time: <u>1625</u>	Time: <u>1625</u>
RECEIVING LABORATORY: <u>Midland</u>	RECEIVED BY: (Signature) <u>IKT Tarrar</u>
ADDRESS: <u>Midland</u>	Date: <u>01-25-13</u>
CITY: <u>Midland</u>	Time: <u>1625</u>
STATE: <u>TX</u>	Time: <u>1625</u>
ZIP: <u>79701</u>	Time: <u>1625</u>
PHONE: <u>682-4559</u>	Time: <u>1625</u>
REMARKS: <u>0.1</u>	TIME: <u>1625</u>

ANALYSIS REQUEST
(Circle or Specify Method No.)