

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

HOBBS OCD

APR 23 2013

RECEIVED

25XK1600431381
4062

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	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Magnum Pronto State Com #2	Facility Type	Tank Battery
Surface Owner	State	Mineral Owner	Lease No. (API#) 30-025-38827

LOCATION OF RELEASE

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

Latitude 32 36.903 Longitude 103 47.446

NATURE OF RELEASE

Type of Release	Oil and produced water	Volume of Release	130bbls	Volume Recovered	100bbls
Source of Release	Water leg at heater	Date and Hour of Occurrence	07/26/2012	Date and Hour of Discovery	07/26/2012 10:00a.m.
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Geoffrey Leking-OCD		
By Whom?	Michelle Mullins	Date and Hour	07/30/2012 10:58 a.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.*

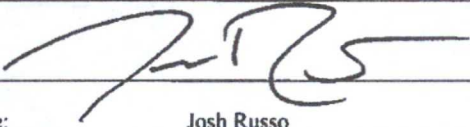
A water leg failed at heater which caused the release of fluid. The heater has been removed from service as the water leg is being repaired.

Describe Area Affected and Cleanup Action Taken.*

Initially 130bbls of fluid were released from the faulty water leg and we were able to recover 100bbls with a vacuum truck. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

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

OIL CONSERVATION DIVISION

Signature: 

Printed Name: Josh Russo

Title: HSE Coordinator

E-mail Address: jrusso@conchoresources.com

Date: 08/07/2012 Phone: 432-212-2399

Approved by District Supervisor:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

* Attach Additional Sheets If Necessary

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Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	COG Operating LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 1300 Midland, Texas 79701	Telephone No.	(432) 230-0077
Facility Name	Magnum Pronto State Com #2	Facility Type	Tank Battery
Surface Owner:	State	Mineral Owner	
		Lease No. (API#)	30-025-38827

LOCATION OF RELEASE

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

Latitude N 32.61457° Longitude W 103.79071°

NATURE OF RELEASE

Type of Release: Oil and produced water	Volume of Release 130bbls	Volume Recovered 100bbls
Source of Release: Water leg at heater	Date and Hour of Occurrence 07/26/2012	Date and Hour of Discovery 07/26/2012 10:00a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffrey Leking--OCD	
By Whom? Michelle Mullins	Date and Hour 07/30/2012 10:58a.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.*

A water leg failed at heater which caused the release of fluid. The heater has been removed from service as the water leg is being repaired.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech personnel inspected and collected samples to assess the spill extents. Soil that exceeded RRAL and the elevated chlorides were removed and transported to 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: 3-11-13	Phone: (432) 686-3023		

* Attach Additional Sheets If Necessary

SITE INFORMATION

Report Type: Work Plan

General Site Information:

Site:	Magnum Pronto State Com #2 Tank Battery					
Company:	COG Operating LLC					
Section, Township and Range	Unit K	Sec 32	T19S	R32E		
Lease Number:	API-30-025-38827					
County:	Lea County					
GPS:	32.61457° N			103.79071° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	In between Carlsbad and Hobbs New Mexico at the intersection of CR 243 and CR 126, travel north on CR 126 for 3.3 miles, turn right onto lease road and travel 0.4 miles, turn right and travel 0.1 miles to location on right.					

Release Data:

Date Released:	7/26/2012
Type Release:	Oil and Produced Water
Source of Contamination:	Water leg at heater treater
Fluid Released:	130 bbls
Fluids Recovered:	100 bbls

Official Communication:

Name:	Pat Ellis	Thomas Franklin
Company:	COG Operating, LLC	Tetra Tech
Address:	550 W. Texas Ave. Ste. 1300	1910 N. Blg Spring
P.O. Box		
City:	Midland Texas, 79701	Midland, Texas
Phone number:	(432) 686-3023	(432) 682-4559
Fax:	(432) 684-7137	
Email:	pellis@conchoresources.com	tom.k.franklin@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:		0

Acceptable Soil RRAL (mg/kg)

Benzene	Total BTEX	TPH
10	50	5,000



October 15, 2012

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

Re: Work Plan for the COG Operating LLC., Magnum Pronto State Com #2, Unit K, Section 32, Township 19 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 Magnum Pronto State Com #2 Tank Battery, Unit K, Section 32, Township 19 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.61457°, W 103.79071°. 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 July 26, 2012, and released approximately one hundred and thirty (130) barrels of oil and produced water from the water leg of the heater treater, with one hundred (100) barrels of standing fluids recovered. The spill is located in the pasture south of the tank battery measuring approximately 25' x 60'. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 32. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 500' below surface. The average depth to groundwater map is included in Appendix B.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432 682 4569

Fax 432 682 3745

www.tetrattech.com



Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Analytical Results

On September 5, 2012, Tetra Tech personnel inspected and sampled the spill area. Four (4) auger holes (AH-1 through AH-4) were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, the area of AH-3 showed TPH and BTEX exceeding the RRAL at 0-1.0', but declined below the RRAL at 1.5' below surface. Auger hole (AH-4) showed all of the samples exceeding the TPH RRAL from surface to 2.5' below surface, with concentrations of 11,640 mg/kg at 0-1', 12,240 mg/kg at 1-1.5' and 6,670 mg/kg at 2-2.5'. The impacted soil was not vertically defined at this area. Deeper samples were not collected due to a dense caliche formation.

In addition, elevated chloride concentrations were detected in the deeper soils in the area of AH-2 at 3.0'-3.5' and 4.0'-4.5', with chloride concentrations of 2,780 mg/kg and 7,140 mg/kg, respectively. The chlorides were not vertically defined and the impact appears to be historical.

Work Plan

COG proposes to excavate the impacted soils to depths ranging from 1.0' to 3.0' below surface in order to remove the impacted soil above the RRAL. Once excavated, a confirmation sample will be collected in the area of AH-4 for TPH analysis.



TETRA TECH

In the area of AH-2, a backhoe trench will be installed to assess and attempt to vertically define the chloride impact. Based on the evaluation, the impacted soil may be excavated or capped. However, if the chloride impact at AH-2 is limited, based upon the depth of the known impact and depth to groundwater, this area may be left undisturbed. All of the excavated material will be transported offsite for proper disposal. Once final excavation depths are achieved, the site will be backfilled with clean material and brought to grade.

If the area of AH-2 shows a deeper chloride impact to the soils or the impact is not vertically defined, the spill area may be excavated to a depth of 4.0' below surface and capped with either a 40-mil liner or clay material and backfilled with clean soil. If necessary, Tetra Tech may then oversee the installation of a single borehole to define the extents of the chloride impact.

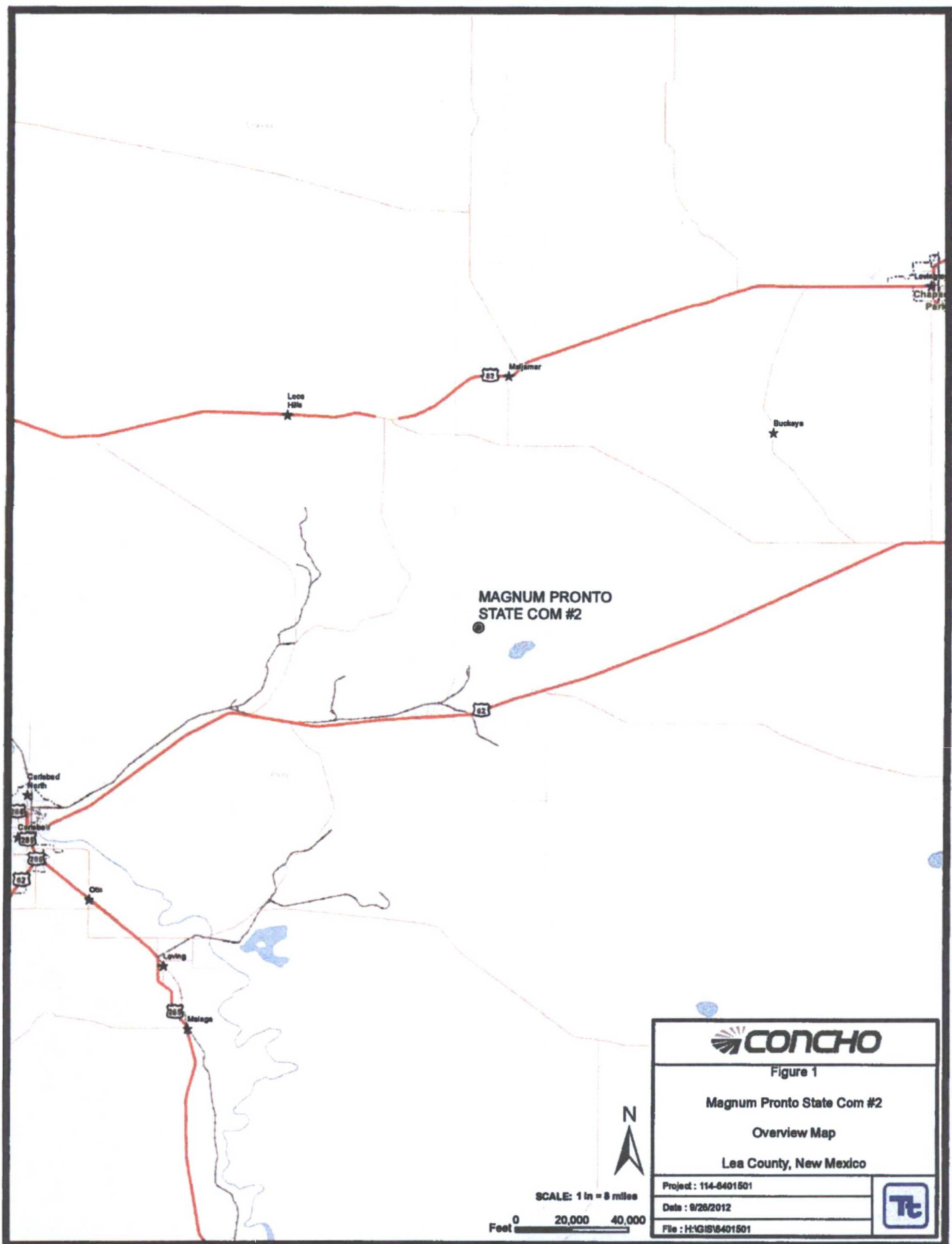
Due to the location of the spill, the proposed excavation depths or deeper excavation may not be achieved due to wall cave ins, limited access, oil and gas equipment, electrical, structures or lines which may not be feasible or practicable to be removed due to safety concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable. If the impacted soil is not accessible, the soil will be deferred until the abandonment of the facility.

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

Respectfully submitted,
TETRA TECH

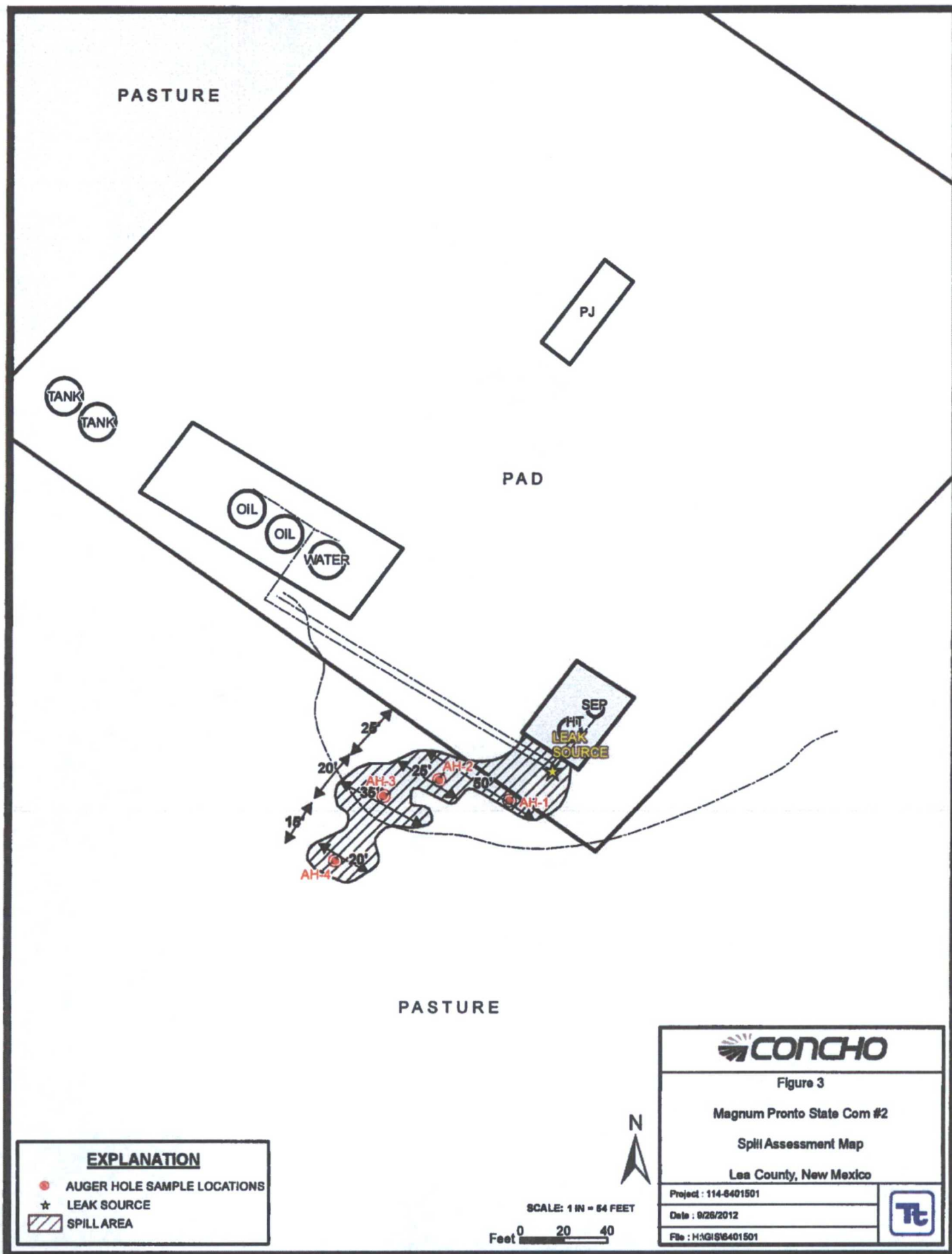
Ike Tavares, PG
Project Manager

cc: Pat Ellis – COG









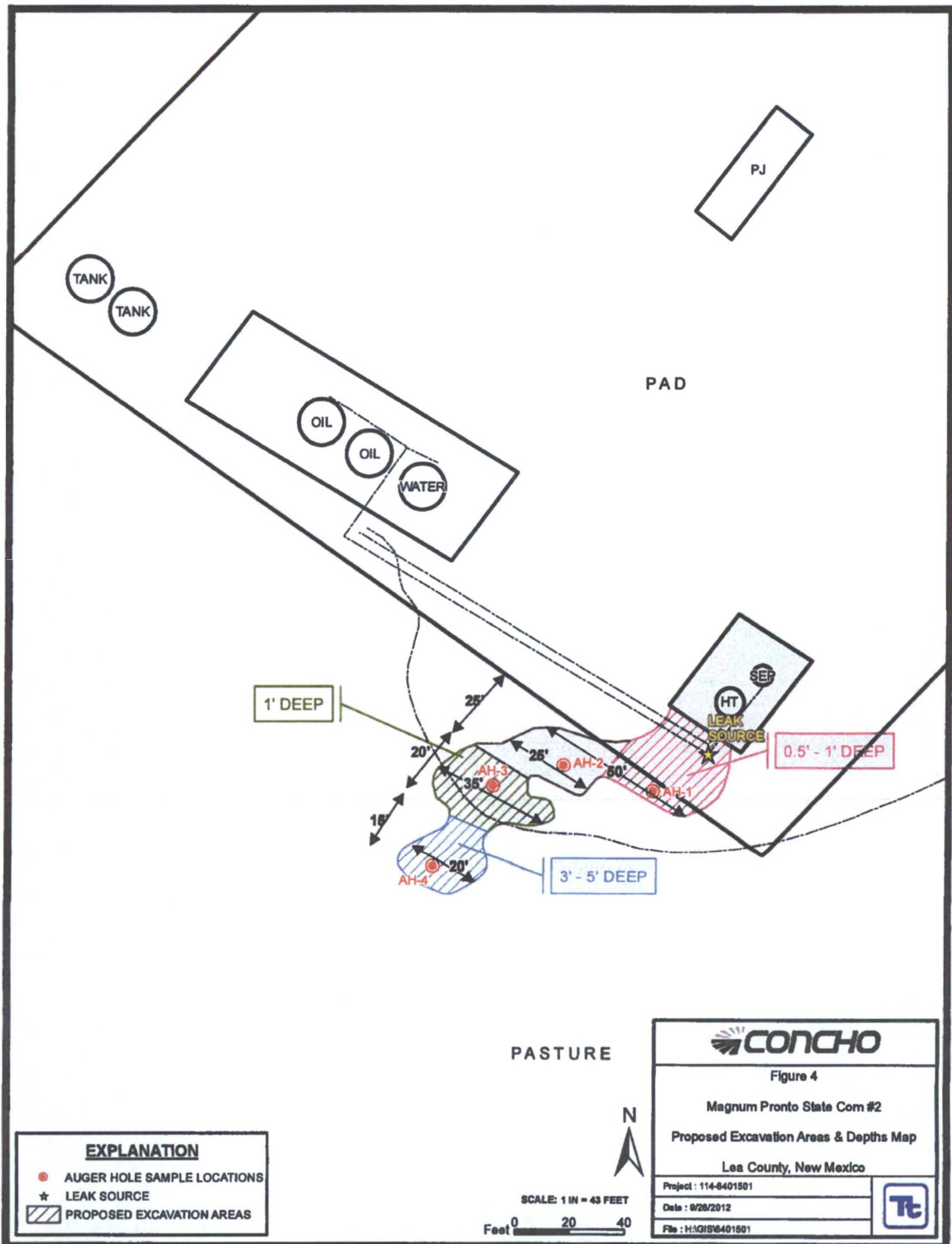


Table 1
COG Operating LLC.
Magnum Pronto State
Eddy County, New Mexico

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-1	9/5/2012	0-1	X		5.25	<50.0	5.25	<0.0200	0.131	0.0261	0.106	0.263	915
	"	1-1.5	X		-	-	-	-	-	-	-	-	420
	"	2-2.5	X		-	-	-	-	-	-	-	-	<20.0
	"	3-3.5	X		-	-	-	-	-	-	-	-	<20.0
	"	4-4.5	X		-	-	-	-	-	-	-	-	<20.0
AH-2	9/5/2012	0-1	X		676	<50.0	676	<1.00	6.43	<1.00	6.86	13.3	393
	"	1-1.5	X		-	-	-	-	-	-	-	-	39.6
	"	2-2.5	X		-	-	-	-	-	-	-	-	331
	"	3-3.5	X		-	-	-	-	-	-	-	-	2,780
	"	4-4.5	X		-	-	-	-	-	-	-	-	7,140
AH-3	9/5/2012	0-1	X		2,140	9,250	11,390	2.09	51.6	49.6	88.4	192	<20.0
	"	1-1.5	X		1,690	1,790	3,480	<0.100	0.163	0.128	0.328	0.619	<20.0
	"	2-2.5	X		6.99	<50.0	6.99	-	-	-	-	-	<20.0
	"	3-3.5	X		-	-	-	-	-	-	-	-	<20.0
	"	4-4.5	X		-	-	-	-	-	-	-	-	<20.0
AH-4	9/5/2012	0-1	X		2,390	9,250	11,640	<1.00	1.23	<1.00	2.10	3.33	<20.0
	"	1-1.5	X		3,440	8,800	12,240	-	-	-	-	-	<20.0
	"	2-2.5	X		5,030	1,640	6,670	-	-	-	-	-	<20.0

(-) Not Analyzed

Proposed Excavation Depths

Photos

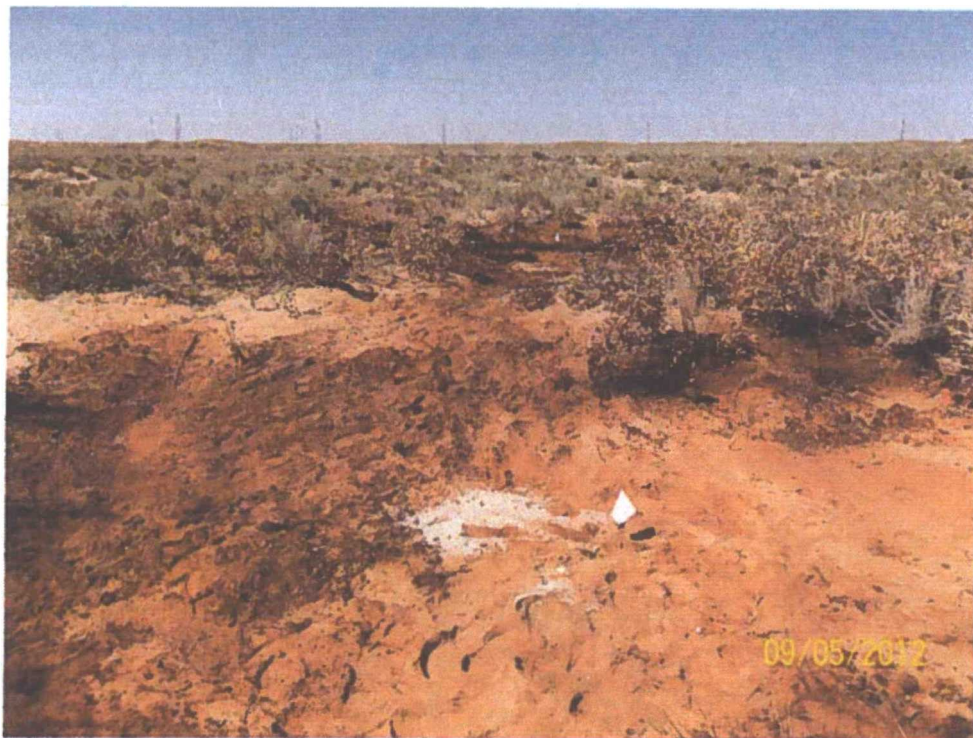
COG Operating LLC
Magnum Pronto State Com #2
Lea County, New Mexico



TETRA TECH



View Southwest – Area of AH-1 and AH-2



View South – Area of AH-3 and AH-4

Water Well Data
Average Depth to Groundwater (ft)
COG - Magnum Pronto State Com #2
Lea County, New Mexico

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

19 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

20 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

18 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

19 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

20 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

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

19 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

20 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

Appendix C

Summary Report

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

Report Date: September 25, 2012

Work Order: 12091205



Project Location: NM
Project Name: COG/Magnum Pronto State Com. #2
Project Number: 114-6401501

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
308963	AH-1 0-1'	soil	2012-09-05	00:00	2012-09-11
308964	AH-1 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308965	AH-1 2-2.5'	soil	2012-09-05	00:00	2012-09-11
308966	AH-1 3-3.5'	soil	2012-09-05	00:00	2012-09-11
308967	AH-1 4-4.5'	soil	2012-09-05	00:00	2012-09-11
308968	AH-2 0-1'	soil	2012-09-05	00:00	2012-09-11
308969	AH-2 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308970	AH-2 2-2.5'	soil	2012-09-05	00:00	2012-09-11
308971	AH-2 3-3.5'	soil	2012-09-05	00:00	2012-09-11
308972	AH-2 4-4.5'	soil	2012-09-05	00:00	2012-09-11
308973	AH-3 0-1'	soil	2012-09-05	00:00	2012-09-11
308974	AH-3 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308975	AH-3 2-2.5'	soil	2012-09-05	00:00	2012-09-11
308976	AH-3 3-3.5'	soil	2012-09-05	00:00	2012-09-11
308977	AH-3 4-4.5'	soil	2012-09-05	00:00	2012-09-11
308978	AH-4 0-1'	soil	2012-09-05	00:00	2012-09-11
308979	AH-4 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308980	AH-4 2-2.5'	soil	2012-09-05	00:00	2012-09-11

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)
308963 - AH-1 0-1'	<0.0200	0.131	0.0261	0.106	<50.0	5.25 _{qs}
308968 - AH-2 0-1'	<1.00	6.43	<1.00	6.86	<50.0	676 _{qs}
308973 - AH-3 0-1'	2.09	51.6	49.6	88.4	9250	2140 _{qs}
308974 - AH-3 1-1.5'	<0.100	0.163	0.128	0.328	1790	1690 _{js}
308975 - AH-3 2-2.5'					<50.0	6.99
308978 - AH-4 0-1'	<1.00	1.23	<1.00	2.10	9250	2390 _{qs}
308979 - AH-4 1-1.5'					8800	3440

continued ...

... 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)
308980 - AH-4 2-2.5'					1640	5030

Sample: 308963 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		915	mg/Kg	4

Sample: 308964 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		420	mg/Kg	4

Sample: 308965 - AH-1 2-2.5'

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

Sample: 308966 - AH-1 3-3.5'

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

Sample: 308967 - AH-1 4-4.5'

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

Sample: 308968 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		393	mg/Kg	4

Sample: 308969 - AH-2 1-1.5'

continued ...

sample 308969 continued ...

Param	Flag	Result	Units	RL
Param	Flag	Result	Units	RL
Chloride		39.6	mg/Kg	4

Sample: 308970 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		331	mg/Kg	4

Sample: 308971 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		2780	mg/Kg	4

Sample: 308972 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		7140	mg/Kg	4

Sample: 308973 - AH-3 0-1'

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

Sample: 308974 - AH-3 1-1.5'

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

Sample: 308975 - AH-3 2-2.5'

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

Sample: 308976 - AH-3 3-3.5'

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

Sample: 308977 - AH-3 4-4.5'

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

Sample: 308978 - AH-4 0-1'

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

Sample: 308979 - AH-4 1-1.5'

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

Sample: 308980 - AH-4 2-2.5'

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

SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	Magnum Pronto State Com #2 Tank Battery					
Company:	COG Operating LLC					
Section, Township and Range	Unit K	Sec 32	T19S	R32E		
Lease Number:	API-30-025-38827					
County:	Lea County					
GPS:	32.61457° N			103.79071° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	In between Carlsbad and Hobbs New Mexico at the intersection of CR 243 and CR 126, travel north on CR 126 for 3.3 miles, turn right onto lease road and travel 0.4 miles, turn right and travel 0.1 miles to location on right.					

Release Data:

Date Released:	7/26/2012
Type Release:	Oil and Produced Water
Source of Contamination:	Water leg at heater treater
Fluid Released:	130 bbls
Fluids Recovered:	100 bbls

Official Communication:

Name:	Pat Ellis	Thomas Franklin
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	tom.k.franklin@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:	0	

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

HOBBS OCD
APR 23 2013

RECEIVED



TETRA TECH

March 11, 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, Magnum Pronto State Com #2, Unit K, Section 32, Township 19 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 Magnum Pronto State Com #2 Tank Battery, Unit K, Section 32, Township 19 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.61457°, W 103.79071°. 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 July 26, 2012, and released approximately one hundred and thirty (130) barrels of oil and produced water from the water leg of the heater treater, with one hundred (100) barrels of standing fluids recovered. The spill is located in the pasture south of the tank battery measuring approximately 25' x 60'. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 32. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 500' below surface. The average depth to groundwater map is included in Appendix B.

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 5,000 mg/kg.

Soil Assessment and Analytical Results

On September 5, 2012, Tetra Tech personnel inspected and sampled the spill area. Four (4) auger holes (AH-1 through AH-4) were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, the area of AH-3 showed TPH and BTEX exceeding the RRAL at 0-1.0', but declined below the RRAL at 1.5' below surface. Auger hole (AH-4) showed all of the samples exceeding the TPH RRAL from surface to 2.5' below surface, with concentrations of 11,640 mg/kg at 0-1', 12,240 mg/kg at 1-1.5' and 6,670 mg/kg at 2-2.5'. The impacted soil was not vertically defined at this area. Deeper samples were not collected due to a dense caliche formation.

In addition, elevated chloride concentrations were detected in the deeper soils in the area of AH-2 at 3.0'-3.5' and 4.0'-4.5', with chloride concentrations of 2,780 mg/kg and 7,140 mg/kg, respectively. The chlorides were not vertically defined and the impact appears to be historical.



Remediation and Conclusion

On January 2, 2012, 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 5.0' below surface.

At AH-4, the hydrocarbon impact was excavated to a depth of 5.0' below surface. Tetra Tech collected a bottom hole confirmation sample for TPH and showed concentrations below the RRAL. In addition, the area of AH-1 and AH-3 was excavated to a depth of 1.0' below grade surface. As recommended in the work plan, a backhoe trench was installed in the area of AH-2 to define the chloride extents. Referring to Table 1, the chloride impact was not vertically defined. Based on the results, the impacted area was excavated to 4.0' below surface and capped with a 40 mil liner.

On January 21, 2013, Tetra Tech personnel installed one soil boring in the area of AH-2 to vertically define the extents. Samples were collected from 6.0' to 20.0' below surface. The soil boring results are shown in Table 1. Referring to Table 1, the soil boring samples did not show an impact to the soils. Based on the results, the impacted soil encountered in the trench sampling appears to be limited or may have been a localized hot spot in the area.

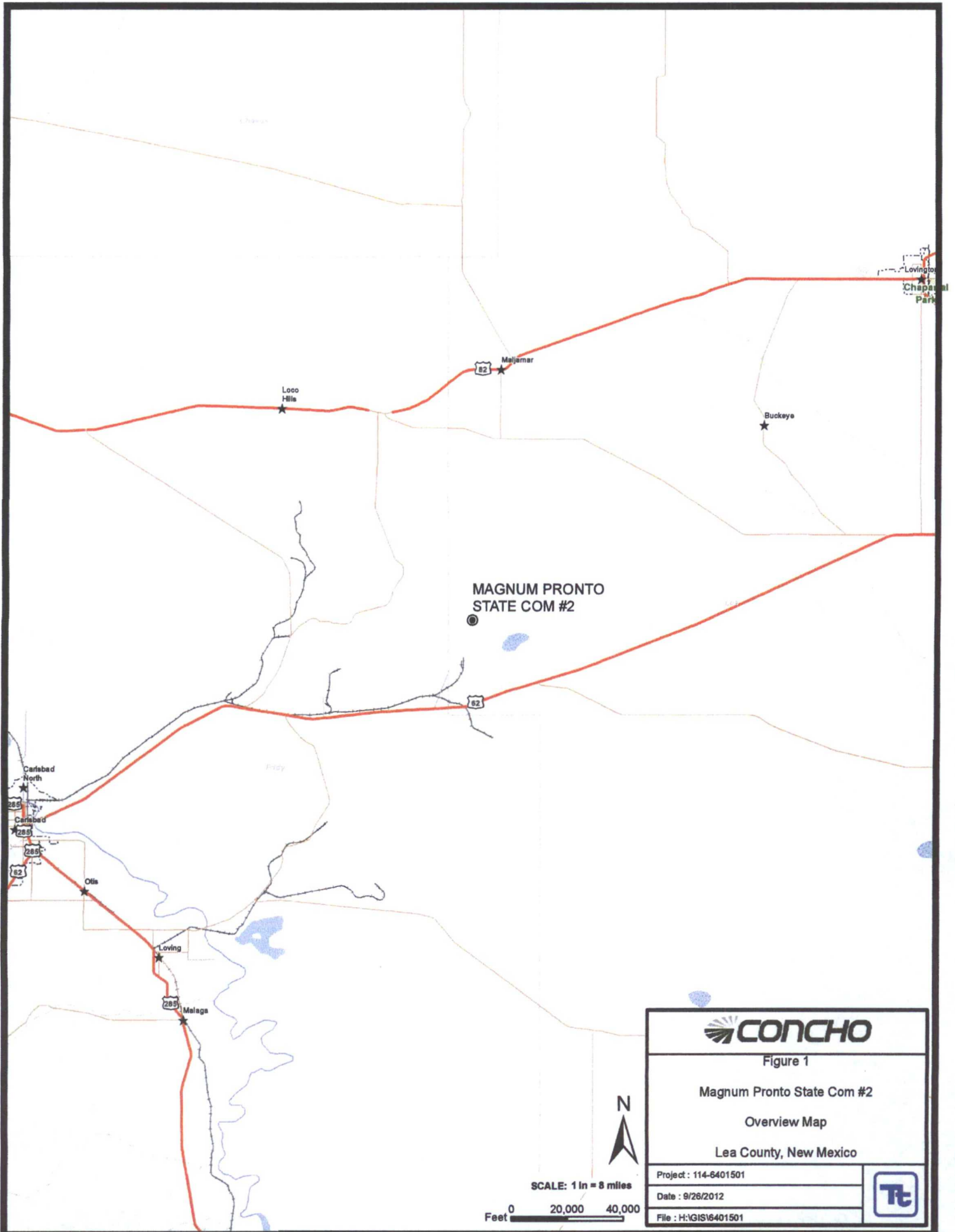
Approximately 125 cubic yards³ of soil were removed and transported to R360 facility for proper disposal. The site was then backfilled with clean material to surface grade.

Based on the remediation activities performed at this location, COG request 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.

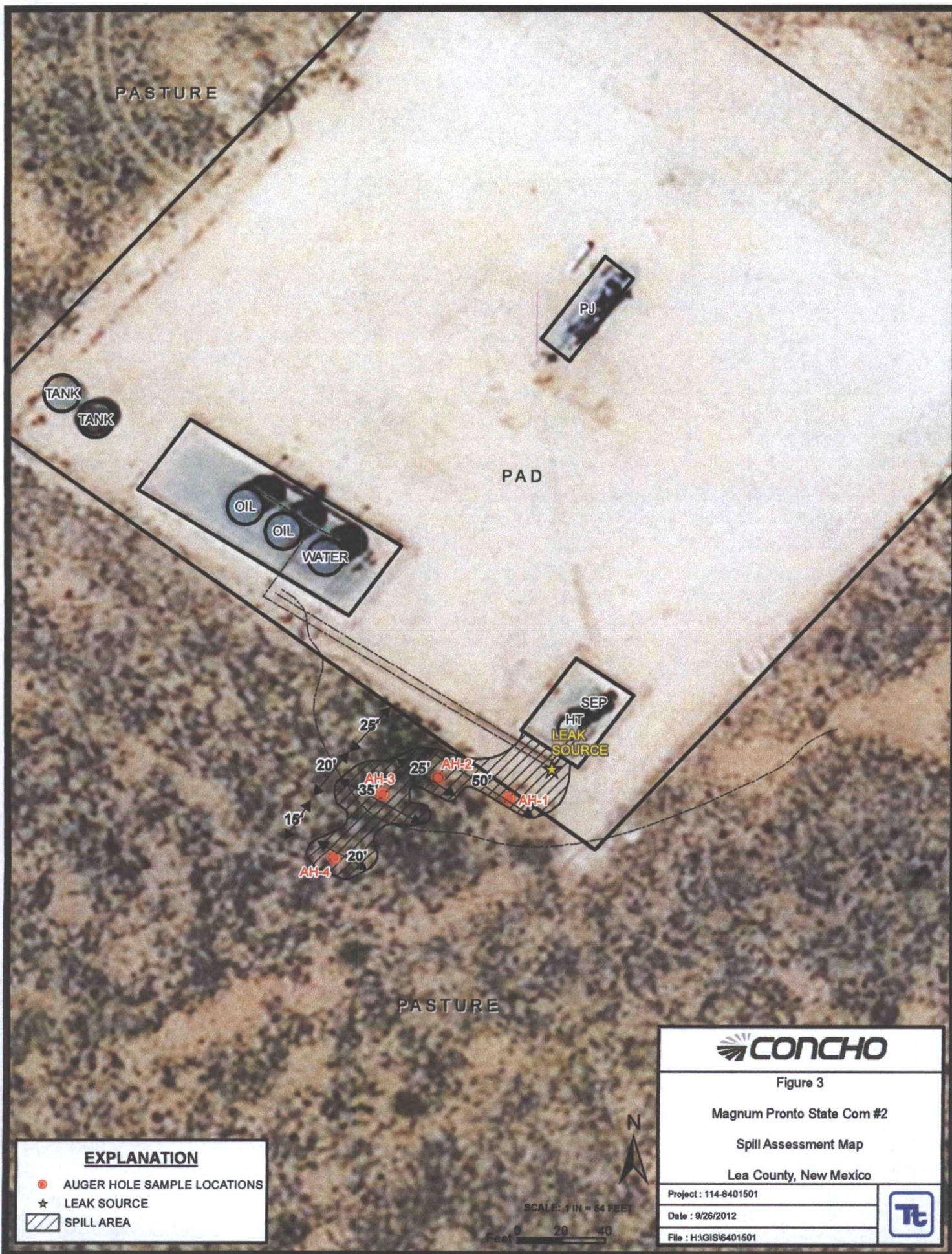
Respectfully submitted,
TETRA TECH

Ike Tavarez, PG
Senior Project Manager

cc: Pat Ellis – COG







EXPLANATION

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



Figure 3

Magnum Pronto State Com #2

Spill Assessment Map

Lea County, New Mexico

Project : 114-6401501

Date : 9/26/2012

File : H:\GIS\6401501



PASTURE

PJ

PAD

TANK

TANK

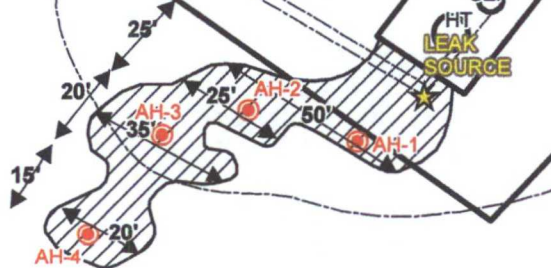
OIL

OIL

WATER

SEP

HIT
LEAK
SOURCE



PASTURE

EXPLANATION

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

SCALE: 1 IN = 64 FEET

Feet 0 20 40



Figure 3

Magnum Pronto State Com #2

Spill Assessment Map

Lea County, New Mexico

Project : 114-6401501

Date : 9/26/2012

File : H:\GIS\6401501



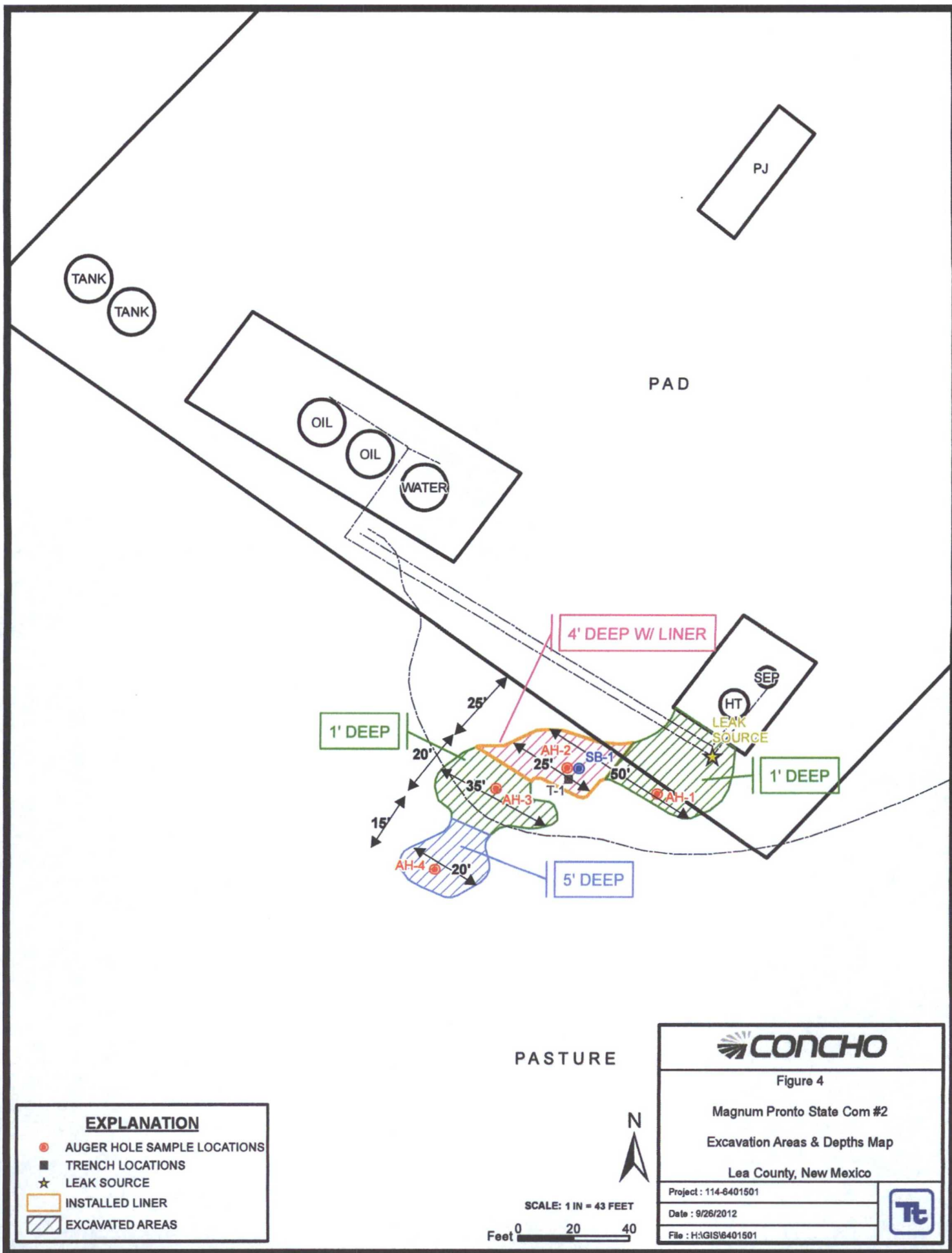


Table 1
COG Operating LLC.
Magnum Pronto State Commingle #2
Lea County, New Mexico

[illegible]

Table 1

**COG Operating LLC.
Magnum Pronto State Commingle #2
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-3	9/5/2012	0-1		X	2,140	9,250	11,390	2.09	51.6	49.6	88.4	192	<20.0
	"	1-1.5	X		1,690	1,790	3,480	<0.100	0.163	0.128	0.328	0.619	<20.0
	"	2-2.5	X		6.99	<50.0	6.99	-	-	-	-	-	<20.0
	"	3-3.5	X		-	-	-	-	-	-	-	-	<20.0
	"	4-4.5	X		-	-	-	-	-	-	-	-	<20.0
AH-4	9/5/2012	0-1		X	2,390	9,250	11,640	<1.00	1.23	<1.00	2.10	3.33	<20.0
	"	1-1.5		X	3,440	8,800	12,240	-	-	-	-	-	<20.0
	"	2-2.5		X	5,030	1,640	6,670	-	-	-	-	-	<20.0
CS-1	1/3/2013	5' Bottom	X		<4.00	79.6	79.6	-	-	-	-	-	-

(-)

Not Analyzed

Excavated Depths

Liner Installed

Water Well Data
Average Depth to Groundwater (ft)
COG - Magnum Pronto State Com #2
Lea County, New Mexico

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

19 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

20 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

18 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

19 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

20 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

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

19 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

20 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 Tavaréz
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: January 30, 2013

Work Order: 13012302



Project Location: Lea Co., NM
Project Name: COG/Magnum Pronto State Com. #2
Project Number: 114-6401501

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
319035	Soil Bore 1 6-7'	soil	2013-01-21	00:00	2013-01-22
319036	Soil Bore 1 9-10'	soil	2013-01-21	00:00	2013-01-22
319037	Soil Bore 1 14-15'	soil	2013-01-21	00:00	2013-01-22
319038	Soil Bore 1 19-20'	soil	2013-01-21	00:00	2013-01-22

Sample: 319035 - Soil Bore 1 6-7'

Param	Flag	Result	Units	RL
Chloride		108	mg/Kg	4

Sample: 319036 - Soil Bore 1 9-10'

Param	Flag	Result	Units	RL
Chloride		28.3	mg/Kg	4

Sample: 319037 - Soil Bore 1 14-15'

Param	Flag	Result	Units	RL
Chloride		104	mg/Kg	4

Sample: 319038 - Soil Bore 1 19-20'

Report Date: January 30, 2013

Work Order: 13012302

Page Number: 2 of 2

Param	Flag	Result	Units	RL
Chloride		123	mg/Kg	4



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-375-1296 806-794-1296 FAX 806-794-1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: 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: January 30, 2013

Work Order: 13012302



Project Location: Lea Co., NM
Project Name: COG/Magnum Pronto State Com. #2
Project Number: 114-6401501

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
319035	Soil Bore 1 6-7'	soil	2013-01-21	00:00	2013-01-22
319036	Soil Bore 1 9-10'	soil	2013-01-21	00:00	2013-01-22
319037	Soil Bore 1 14-15'	soil	2013-01-21	00:00	2013-01-22
319038	Soil Bore 1 19-20'	soil	2013-01-21	00:00	2013-01-22

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

This report consists of a total of 10 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

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Analytical Report	4
Sample 319035 (Soil Bore 1 6-7')	4
Sample 319036 (Soil Bore 1 9-10')	4
Sample 319037 (Soil Bore 1 14-15')	4
Sample 319038 (Soil Bore 1 19-20')	4
Method Blanks	6
QC Batch 98486 - Method Blank (1)	6
Laboratory Control Spikes	7
QC Batch 98486 - LCS (1)	7
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Calibration Standards	8
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Case Narrative

Samples for project COG/Magnum Pronto State Com. #2 were received by TraceAnalysis, Inc. on 2013-01-22 and assigned to work order 13012302. Samples for work order 13012302 were received intact at a temperature of 1.3 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	83354	2013-01-24 at 08:05	98486	2013-01-29 at 14:28

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 13012302 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: January 30, 2013
114-6401501

Work Order: 13012302
COG/Magnum Pronto State Com. #2

Page Number: 4 of 10
Lea Co., NM

Analytical Report

Sample: 319035 - Soil Bore 1 6-7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-01-29	Analyzed By:	AR
QC Batch:	98486	Sample Preparation:	2013-01-24	Prepared By:	AR
Prep Batch:	83354				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			108	mg/Kg	5	4.00

Sample: 319036 - Soil Bore 1 9-10'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-01-29	Analyzed By:	AR
QC Batch:	98486	Sample Preparation:	2013-01-24	Prepared By:	AR
Prep Batch:	83354				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			28.3	mg/Kg	5	4.00

Sample: 319037 - Soil Bore 1 14-15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-01-29	Analyzed By:	AR
QC Batch:	98486	Sample Preparation:	2013-01-24	Prepared By:	AR
Prep Batch:	83354				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			104	mg/Kg	5	4.00

Report Date: January 30, 2013
114-6401501

Work Order: 13012302
COG/Magnum Pronto State Com. #2

Page Number: 5 of 10
Lea Co., NM

Sample: 319038 - Soil Bore 1 19-20'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 98486

Prep Batch: 83354

Analytical Method: SM 4500-Cl B

Date Analyzed: 2013-01-29

Sample Preparation: 2013-01-24

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			123	mg/Kg	5	4.00

Report Date: January 30, 2013
114-6401501

Work Order: 13012302
COG/Magnum Pronto State Com. #2

Page Number: 6 of 10
Lea Co., NM

Method Blanks

Method Blank (1) QC Batch: 98486

QC Batch: 98486
Prep Batch: 83354

Date Analyzed: 2013-01-29
QC Preparation: 2013-01-24

Analyzed By: AR
Prepared By: AR

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

Report Date: January 30, 2013
114-6401501

Work Order: 13012302
COG/Magnum Pronto State Com. #2

Page Number: 7 of 10
Lea Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 98486
Prep Batch: 83354

Date Analyzed: 2013-01-29
QC Preparation: 2013-01-24

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2700	mg/Kg	1	2500	<3.85	108	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.

Matrix Spike (MS-1) Spiked Sample: 319039

QC Batch: 98486
Prep Batch: 83354

Date Analyzed: 2013-01-29
QC Preparation: 2013-01-24

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2430	mg/Kg	5	2500	<19.2	97	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			2570	mg/Kg	5	2500	<19.2	103	78.9 - 121	6	20

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

Report Date: January 30, 2013
114-6401501

Work Order: 13012302
COG/Magnum Pronto State Com. #2

Page Number: 8 of 10
Lea Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch: 98486

Date Analyzed: 2013-01-29

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.7	100	85 - 115	2013-01-29

Standard (CCV-2)

QC Batch: 98486

Date Analyzed: 2013-01-29

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-01-29

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less 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

Attachments

Report Date: January 30, 2013
114-6401501

Work Order: 13012302
COG/Magnum Pronto State Com. #2

Page Number: 10 of 10
Lea Co., NM

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

13012302

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:

Ike Tavares

PROJECT NAME:

Megnum Ponton State Conn #2 TB

Lea Co NM
SAMPLE IDENTIFICATION

LAB I.D. NUMBER

DATE

TIME

MATRIX

COMP.

GRAB

PRESERVATIVE METHOD

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

BTEX 80218

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

RCFA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/624

GC/MS Semi. Vol. 8270/625

PCB's 8080/608

Post. 808/608

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

PAGE: 1 OF: 1

ANALYSIS REQUEST
(Circle or Specify Method No.)

SAMPLED BY: (Print & Initial) *IT* Date: 1-21-13 Time: 12:13

RECEIVED BY: (Signature) *[Signature]* Date: 1-21-13 Time: 12:13

RECEIVED BY: (Signature) *[Signature]* Date: 1-21-13 Time: 12:13

RECEIVED BY: (Signature) *[Signature]* Date: 1-21-13 Time: 12:13

RECEIVED BY: (Signature) *[Signature]* Date: 1-21-13 Time: 12:13

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RECEIVING LABORATORY: *Midland*

ADDRESS: *Midland*

CITY: *Midland*

STATE: *TX*

ZIP: *79705*

PHONE: *(432) 682-4559*

REMARKS:

Midland all

SAMPLE CONDITION WHEN RECEIVED:

13'

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

Summary Report

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

Report Date: January 9, 2013

Work Order: 13010717



Project Location: Lea Co., NM
Project Name: COG/Magnum Pronto State Com. #2
Project Number: 114-6401501

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
317803	Trench - 1 4' Bottom Hole (AH-2)	soil	2013-01-02	00:00	2013-01-04
317804	Trench - 1 6' Bottom Hole (AH-2)	soil	2013-01-02	00:00	2013-01-04
317805	Trench - 1 8' Bottom Hole (AH-2)	soil	2013-01-02	00:00	2013-01-04
317806	CS-1 5' Bottom Hole (AH-4)	soil	2013-01-03	00:00	2013-01-04

Sample - Field Code	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
317806 - CS-1 5' Bottom Hole (AH-4)	79.6	<4.00

Sample: 317803 - Trench - 1 4' Bottom Hole (AH-2)

Param	Flag	Result	Units	RL
Chloride		1180	mg/Kg	4

Sample: 317804 - Trench - 1 6' Bottom Hole (AH-2)

Param	Flag	Result	Units	RL
Chloride		2230	mg/Kg	4

Sample: 317805 - Trench - 1 8' Bottom Hole (AH-2)

Param	Flag	Result	Units	RL
Chloride		9800	mg/Kg	4



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

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: January 9, 2013

Work Order: 13010717



Project Location: Lea Co., NM
Project Name: COG/Magnum Pronto State Com. #2
Project Number: 114-6401501

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
317803	Trench - 1 4' Bottom Hole (AH-2)	soil	2013-01-02	00:00	2013-01-04
317804	Trench - 1 6' Bottom Hole (AH-2)	soil	2013-01-02	00:00	2013-01-04
317805	Trench - 1 8' Bottom Hole (AH-2)	soil	2013-01-02	00:00	2013-01-04
317806	CS-1 5' Bottom Hole (AH-4)	soil	2013-01-03	00:00	2013-01-04

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 13 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

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Case Narrative

Samples for project COG/Magnum Pronto State Com. #2 were received by TraceAnalysis, Inc. on 2013-01-04 and assigned to work order 13010717. Samples for work order 13010717 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	82986	2013-01-09 at 09:58	97951	2013-01-09 at 12:58
TPH DRO - NEW	S 8015 D	82953	2013-01-07 at 08:00	97912	2013-01-08 at 10:29
TPH GRO	S 8015 D	82995	2013-01-09 at 09:00	97966	2013-01-09 at 09:00

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 13010717 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: January 9, 2013
114-6401501

Work Order: 13010717
COG/Magnum Pronto State Com. #2

Page Number: 4 of 13
Lea Co., NM

Analytical Report

Sample: 317803 - Trench - 1 4' Bottom Hole (AH-2)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-01-09	Analyzed By:	AR
QC Batch:	97951	Sample Preparation:	2013-01-09	Prepared By:	AR
Prep Batch:	82986				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1180	mg/Kg	10	4.00

Sample: 317804 - Trench - 1 6' Bottom Hole (AH-2)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-01-09	Analyzed By:	AR
QC Batch:	97951	Sample Preparation:	2013-01-09	Prepared By:	AR
Prep Batch:	82986				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2230	mg/Kg	10	4.00

Sample: 317805 - Trench - 1 8' Bottom Hole (AH-2)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-01-09	Analyzed By:	AR
QC Batch:	97951	Sample Preparation:	2013-01-09	Prepared By:	AR
Prep Batch:	82986				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9800	mg/Kg	10	4.00

Report Date: January 9, 2013
114-6401501

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Lea Co., NM

Sample: 317806 - CS-1 5' Bottom Hole (AH-4)

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	97912	Date Analyzed:	2013-01-08
Prep Batch:	82953	Sample Preparation:	
		Prep Method:	N/A
		Analyzed By:	CW
		Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	B	1	79.6	mg/Kg	1	50.0

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

Sample: 317806 - CS-1 5' Bottom Hole (AH-4)

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	97966	Date Analyzed:	2013-01-09
Prep Batch:	82995	Sample Preparation:	2013-01-09
		Prep Method:	S 5035
		Analyzed By:	YG
		Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.64	mg/Kg	1	2.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)			1.89	mg/Kg	1	2.00	94	70 - 130

Report Date: January 9, 2013
114-6401501

Work Order: 13010717
COG/Magnum Pronto State Com. #2

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Lea Co., NM

Method Blanks

Method Blank (1) QC Batch: 97912

QC Batch: 97912
Prep Batch: 82953

Date Analyzed: 2013-01-08
QC Preparation: 2013-01-07

Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	22.2	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			89.1	mg/Kg	1	100	89	70 - 130

Method Blank (1) QC Batch: 97951

QC Batch: 97951
Prep Batch: 82986

Date Analyzed: 2013-01-09
QC Preparation: 2013-01-09

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 97966

QC Batch: 97966
Prep Batch: 82995

Date Analyzed: 2013-01-09
QC Preparation: 2013-01-09

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)			1.51	mg/Kg	1	2.00	76	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Report Date: January 9, 2013
114-6401501

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COG/Magnum Pronto State Com. #2

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Lea Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 97912
Prep Batch: 82953

Date Analyzed: 2013-01-08
QC Preparation: 2013-01-07

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	204	mg/Kg	1	250	22.2	73	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	236	mg/Kg	1	250	22.2	86	70 - 130	14	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	94.5	107	mg/Kg	1	100	94	107	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 97951
Prep Batch: 82986

Date Analyzed: 2013-01-09
QC Preparation: 2013-01-09

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2720	mg/Kg	1	2500	<3.85	109	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2600	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.

Report Date: January 9, 2013
114-6401501

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COG/Magnum Pronto State Com. #2

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Lea Co., NM

Laboratory Control Spike (LCS-1)

QC Batch: 97966
Prep Batch: 82995

Date Analyzed: 2013-01-09
QC Preparation: 2013-01-09

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	18.3	mg/Kg	1	20.0	3.86	92	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	20.9	mg/Kg	1	20.0	3.86	104	70 - 130	13	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.76	1.83	mg/Kg	1	2.00	88	92	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.85	mg/Kg	1	2.00	97	92	70 - 130

Matrix Spike (MS-1) Spiked Sample: 317806

QC Batch: 97912
Prep Batch: 82953

Date Analyzed: 2013-01-08
QC Preparation: 2013-01-07

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	297	mg/Kg	1	250	79.6	87	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	305	mg/Kg	1	250	79.6	90	70 - 130	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	94.7	94.8	mg/Kg	1	100	95	95	70 - 130

Report Date: January 9, 2013
114-6401501

Work Order: 13010717
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Lea Co., NM

Matrix Spike (MS-1) Spiked Sample: 317944

QC Batch: 97951
Prep Batch: 82986

Date Analyzed: 2013-01-09
QC Preparation: 2013-01-09

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.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2710	mg/Kg	5	2500	<19.2	108	78.9 - 121	3	20

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

Matrix Spike (MS-1) Spiked Sample: 317581

QC Batch: 97966
Prep Batch: 82995

Date Analyzed: 2013-01-09
QC Preparation: 2013-01-09

Analyzed By: YG
Prepared By: YG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	24.5	mg/Kg	1	20.0	<2.32	122	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	24.3	mg/Kg	1	20.0	<2.32	122	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.84	1.84	mg/Kg	1	2	92	92	70 - 130
4-Bromofluorobenzene (4-BFB)	1.90	1.88	mg/Kg	1	2	95	94	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 97912

Date Analyzed: 2013-01-08

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	224	90	80 - 120	2013-01-08

Standard (CCV-2)

QC Batch: 97912

Date Analyzed: 2013-01-08

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	222	89	80 - 120	2013-01-08

Standard (CCV-1)

QC Batch: 97951

Date Analyzed: 2013-01-09

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.2	99	85 - 115	2013-01-09

Standard (CCV-2)

QC Batch: 97951

Date Analyzed: 2013-01-09

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2013-01-09

Report Date: January 9, 2013
114-6401501

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Lea Co., NM

Standard (CCV-1)

QC Batch: 97966

Date Analyzed: 2013-01-09

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	0.911	91	80 - 120	2013-01-09

Standard (CCV-2)

QC Batch: 97966

Date Analyzed: 2013-01-09

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	0.910	91	80 - 120	2013-01-09

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

Attachments

Report Date: January 9, 2013
114-6401501

Work Order: 13010717
COG/Magnum Pronto State Com. #2

Page Number: 13 of 13
Lea Co., NM

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

13010717

Analysis Request of Chain of Custody Record

PAGE: 1

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: <u>COG</u>		SITE MANAGER: <u>The Trench</u>		PROJECT NAME: <u>COG/ Magnesium Trench Site Clean Up TB</u>		PRESERVATIVE METHOD		NUMBER OF CONTAINERS		FILTERED (Y/N)		HCL		HNO3		ICE		NONE	
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION													
317803	1-2	2013	5	X	X	Trench-1 4' Bottom Hbl (AH-2)													
317804	1-2					Trench-1 6' (AH-2)													
317805	1-2					Trench-1 8' (AH-2)													
317806	1-3					CS-1 5' Bottom Hbl (AH-4)													

RELINQUISHED BY: (Signature)	Date: <u>1-14-13</u>	Time: <u>1:45</u>	RECEIVED BY: (Signature)	Date: <u>1-14-13</u>	Time: <u>1:45</u>
<u>[Signature]</u>			<u>[Signature]</u>		

RELINQUISHED BY: (Signature)	Date: <u>1-14-13</u>	Time: <u>1:45</u>	RECEIVED BY: (Signature)	Date: <u>1-14-13</u>	Time: <u>1:45</u>
<u>[Signature]</u>			<u>[Signature]</u>		

RELINQUISHED BY: (Signature)	Date: <u>1-14-13</u>	Time: <u>1:45</u>	RECEIVED BY: (Signature)	Date: <u>1-14-13</u>	Time: <u>1:45</u>
<u>[Signature]</u>			<u>[Signature]</u>		

RECEIVING LABORATORY: <u>Tech</u>	ADDRESS: <u>Midland</u>	STATE: <u>TX</u>	ZIP: <u>79705</u>	PHONE: <u>682-4559</u>	DATE: <u>1-14-13</u>	TIME: <u>1:45</u>
SAMPLE CONDITION WHEN RECEIVED: <u>TPH - ver-bis and 1KE 405-3828</u>						

SAMPLING BY: (Print & Initial)		Date: <u>1-14-13</u>	Time: <u>1:45</u>
<u>Robert G. Gibbs Jr.</u>			

SAMPLE SHIPPED BY: (Circle)		AIRBILL #:
FEDEX	BUS	
OTHER: <u>UPS</u>		

TETRA TECH CONTACT PERSON:		Results by:
<u>F. K. C.</u>		

RUSH CHARGES AUTHORIZED:		Yes	No

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

Summary Report

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

Report Date: September 25, 2012

Work Order: 12091205



Project Location: NM
Project Name: COG/Magnum Pronto State Com. #2
Project Number: 114-6401501

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
308963	AH-1 0-1'	soil	2012-09-05	00:00	2012-09-11
308964	AH-1 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308965	AH-1 2-2.5'	soil	2012-09-05	00:00	2012-09-11
308966	AH-1 3-3.5'	soil	2012-09-05	00:00	2012-09-11
308967	AH-1 4-4.5'	soil	2012-09-05	00:00	2012-09-11
308968	AH-2 0-1'	soil	2012-09-05	00:00	2012-09-11
308969	AH-2 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308970	AH-2 2-2.5'	soil	2012-09-05	00:00	2012-09-11
308971	AH-2 3-3.5'	soil	2012-09-05	00:00	2012-09-11
308972	AH-2 4-4.5'	soil	2012-09-05	00:00	2012-09-11
308973	AH-3 0-1'	soil	2012-09-05	00:00	2012-09-11
308974	AH-3 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308975	AH-3 2-2.5'	soil	2012-09-05	00:00	2012-09-11
308976	AH-3 3-3.5'	soil	2012-09-05	00:00	2012-09-11
308977	AH-3 4-4.5'	soil	2012-09-05	00:00	2012-09-11
308978	AH-4 0-1'	soil	2012-09-05	00:00	2012-09-11
308979	AH-4 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308980	AH-4 2-2.5'	soil	2012-09-05	00:00	2012-09-11

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)
308963 - AH-1 0-1'	<0.0200	0.131	0.0261	0.106	<50.0	5.25 Qs
308968 - AH-2 0-1'	<1.00	6.43	<1.00	6.86	<50.0	676 Qs
308973 - AH-3 0-1'	2.09	51.6	49.6	88.4	9250	2140 Qs
308974 - AH-3 1-1.5'	<0.100	0.163	0.128	0.328	1790	1690 Js
308975 - AH-3 2-2.5'					<50.0	6.99
308978 - AH-4 0-1'	<1.00	1.23	<1.00	2.10	9250	2390 Qs
308979 - AH-4 1-1.5'					8800	3440

continued ...

... 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)
308980 - AH-4 2-2.5'					1640	5030 Jo

Sample: 308963 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		915	mg/Kg	4

Sample: 308964 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		420	mg/Kg	4

Sample: 308965 - AH-1 2-2.5'

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

Sample: 308966 - AH-1 3-3.5'

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

Sample: 308967 - AH-1 4-4.5'

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

Sample: 308968 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		393	mg/Kg	4

Sample: 308969 - AH-2 1-1.5'

continued ...

sample 308969 continued ...

Param	Flag	Result	Units	RL
Param	Flag	Result	Units	RL
Chloride		39.6	mg/Kg	4

Sample: 308970 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		331	mg/Kg	4

Sample: 308971 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		2780	mg/Kg	4

Sample: 308972 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		7140	mg/Kg	4

Sample: 308973 - AH-3 0-1'

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

Sample: 308974 - AH-3 1-1.5'

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

Sample: 308975 - AH-3 2-2.5'

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

Sample: 308976 - AH-3 3-3.5'

Report Date: September 25, 2012

Work Order: 12091205

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

Sample: 308977 - AH-3 4-4.5'

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

Sample: 308978 - AH-4 0-1'

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

Sample: 308979 - AH-4 1-1.5'

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

Sample: 308980 - AH-4 2-2.5'

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



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

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report (Corrected Report)

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

Report Date: September 25, 2012

Work Order: 12091205



Project Location: NM
Project Name: COG/Magnum Pronto State Com. #2
Project Number: 114-6401501

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
308963	AH-1 0-1'	soil	2012-09-05	00:00	2012-09-11
308964	AH-1 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308965	AH-1 2-2.5'	soil	2012-09-05	00:00	2012-09-11
308966	AH-1 3-3.5'	soil	2012-09-05	00:00	2012-09-11
308967	AH-1 4-4.5'	soil	2012-09-05	00:00	2012-09-11
308968	AH-2 0-1'	soil	2012-09-05	00:00	2012-09-11
308969	AH-2 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308970	AH-2 2-2.5'	soil	2012-09-05	00:00	2012-09-11
308971	AH-2 3-3.5'	soil	2012-09-05	00:00	2012-09-11
308972	AH-2 4-4.5'	soil	2012-09-05	00:00	2012-09-11
308973	AH-3 0-1'	soil	2012-09-05	00:00	2012-09-11
308974	AH-3 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308975	AH-3 2-2.5'	soil	2012-09-05	00:00	2012-09-11
308976	AH-3 3-3.5'	soil	2012-09-05	00:00	2012-09-11
308977	AH-3 4-4.5'	soil	2012-09-05	00:00	2012-09-11
308978	AH-4 0-1'	soil	2012-09-05	00:00	2012-09-11

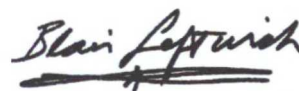
Sample	Description	Matrix	Date Taken	Time Taken	Date Received
308979	AH-4 1-1.5'	soil	2012-09-05	00:00	2012-09-11
308980	AH-4 2-2.5'	soil	2012-09-05	00:00	2012-09-11

Report Corrections (Work Order 12091205)

- Corrected BTEX QC batch date. 9-25-12

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 39 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

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Sample 308970 (AH-2 2-2.5')	10
Sample 308971 (AH-2 3-3.5')	10
Sample 308972 (AH-2 4-4.5')	11
Sample 308973 (AH-3 0-1')	11
Sample 308974 (AH-3 1-1.5')	12
Sample 308975 (AH-3 2-2.5')	14
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QC Batch 94943 - CCV (2)	34
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Case Narrative

Samples for project COG/Magnum Pronto State Com. #2 were received by TraceAnalysis, Inc. on 2012-09-11 and assigned to work order 12091205. Samples for work order 12091205 were received intact at a temperature of 2.1 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	80514	2012-09-18 at 09:00	95020	2012-09-18 at 15:38
BTEX	S 8021B	80559	2012-09-18 at 09:00	95067	2012-09-18 at 09:00
Chloride (Titration)	SM 4500-Cl B	80432	2012-09-17 at 11:26	94942	2012-09-18 at 18:12
Chloride (Titration)	SM 4500-Cl B	80432	2012-09-17 at 11:26	94943	2012-09-18 at 18:13
Chloride (Titration)	SM 4500-Cl B	80538	2012-09-21 at 11:48	95052	2012-09-21 at 16:12
TPH DRO - NEW	S 8015 D	80415	2012-09-17 at 08:00	94898	2012-09-18 at 08:30
TPH DRO - NEW	S 8015 D	80512	2012-09-18 at 08:00	95015	2012-09-20 at 15:10
TPH DRO - NEW	S 8015 D	80556	2012-09-18 at 08:00	95065	2012-09-24 at 08:36
TPH GRO	S 8015 D	80524	2012-09-18 at 09:00	95031	2012-09-18 at 09:00
TPH GRO	S 8015 D	80559	2012-09-18 at 09:00	95077	2012-09-18 at 09:00

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 12091205 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 308963 - AH-1 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 95020

Prep Batch: 80514

Analytical Method: S 8021B

Date Analyzed: 2012-09-18

Sample Preparation: 2012-09-18

Prep Method: S 5035

Analyzed By: YG

Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	<0.0200	mg/Kg	1	0.0200
Toluene		1	0.131	mg/Kg	1	0.0200
Ethylbenzene		1	0.0261	mg/Kg	1	0.0200
Xylene		1	0.106	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.15	mg/Kg	1	2.00	108	70 - 130

Sample: 308963 - AH-1 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 94942

Prep Batch: 80432

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-09-18

Sample Preparation: 2012-09-17

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			915	mg/Kg	5	4.00

Sample: 308963 - AH-1 0-1'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 94898

Prep Batch: 80415

Analytical Method: S 8015 D

Date Analyzed: 2012-09-18

Sample Preparation: 2012-09-17

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

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Work Order: 12091205
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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			115	mg/Kg	1	100	115	70 - 130

Sample: 308963 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 95031
Prep Batch: 80524

Analytical Method: S 8015 D
Date Analyzed: 2012-09-18
Sample Preparation: 2012-09-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	5.25	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0986	mg/Kg	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.102	mg/Kg	1	0.100	102	70 - 130

Sample: 308964 - AH-1 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 94942
Prep Batch: 80432

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-09-18
Sample Preparation: 2012-09-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			420	mg/Kg	5	4.00

Sample: 308965 - AH-1 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 94942
Prep Batch: 80432

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-09-18
Sample Preparation: 2012-09-17

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

continued ...

Report Date: September 25, 2012
114-6401501

Work Order: 12091205
COG/Magnum Pronto State Com. #2

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sample 308965 continued ...

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

Sample: 308966 - AH-1 3-3.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2012-09-18	Analyzed By: AR
QC Batch: 94942	Sample Preparation: 2012-09-17	Prepared By: AR
Prep Batch: 80432		

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

Sample: 308967 - AH-1 4-4.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2012-09-18	Analyzed By: AR
QC Batch: 94942	Sample Preparation: 2012-09-17	Prepared By: AR
Prep Batch: 80432		

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

Sample: 308968 - AH-2 0-1'

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5035
Analysis: BTEX	Date Analyzed: 2012-09-18	Analyzed By: YG
QC Batch: 95020	Sample Preparation: 2012-09-18	Prepared By: YG
Prep Batch: 80514		

Report Date: September 25, 2012
114-6401501

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	<1.00	mg/Kg	50	0.0200
Toluene		1	6.43	mg/Kg	50	0.0200
Ethylbenzene	u	1	<1.00	mg/Kg	50	0.0200
Xylene		1	6.86	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.105	mg/Kg	50	0.100	105	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0962	mg/Kg	50	0.100	96	70 - 130

Sample: 308968 - AH-2 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 95052 Date Analyzed: 2012-09-21 Analyzed By: AR
Prep Batch: 80538 Sample Preparation: 2012-09-21 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			393	mg/Kg	5	4.00

Sample: 308968 - AH-2 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 95015 Date Analyzed: 2012-09-20 Analyzed By: CW
Prep Batch: 80512 Sample Preparation: 2012-09-18 Prepared By: CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			128	mg/Kg	1	100	128	70 - 130

Sample: 308968 - AH-2 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 95031 Date Analyzed: 2012-09-18 Analyzed By: YG
Prep Batch: 80524 Sample Preparation: 2012-09-18 Prepared By: YG

Report Date: September 25, 2012
114-6401501

Work Order: 12091205
COG/Magnum Pronto State Com. #2

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q*	1	676	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0963	mg/Kg	50	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.103	mg/Kg	50	0.100	103	70 - 130

Sample: 308969 - AH-2 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 94942 Date Analyzed: 2012-09-18 Analyzed By: AR
Prep Batch: 80432 Sample Preparation: 2012-09-17 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			39.6	mg/Kg	5	4.00

Sample: 308970 - AH-2 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 94942 Date Analyzed: 2012-09-18 Analyzed By: AR
Prep Batch: 80432 Sample Preparation: 2012-09-17 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			331	mg/Kg	5	4.00

Sample: 308971 - AH-2 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 94942 Date Analyzed: 2012-09-18 Analyzed By: AR
Prep Batch: 80432 Sample Preparation: 2012-09-17 Prepared By: AR

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2780	mg/Kg	10	4.00

Sample: 308972 - AH-2 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 94942 Date Analyzed: 2012-09-18 Analyzed By: AR
Prep Batch: 80432 Sample Preparation: 2012-09-17 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7140	mg/Kg	10	4.00

Sample: 308973 - AH-3 0-1'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 95020 Date Analyzed: 2012-09-18 Analyzed By: YG
Prep Batch: 80514 Sample Preparation: 2012-09-18 Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	2.09	mg/Kg	50	0.0200
Toluene		1	51.6	mg/Kg	50	0.0200
Ethylbenzene		1	49.6	mg/Kg	50	0.0200
Xylene		1	88.4	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.102	mg/Kg	50	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	0.144	mg/Kg	50	0.100	144	70 - 130

Sample: 308973 - AH-3 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 94943 Date Analyzed: 2012-09-18 Analyzed By: AR
Prep Batch: 80432 Sample Preparation: 2012-09-17 Prepared By: AR

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

Sample: 308973 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 94898
Prep Batch: 80415

Analytical Method: S 8015 D
Date Analyzed: 2012-09-18
Sample Preparation: 2012-09-17

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	9250	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	1010	mg/Kg	5	100	1010	70 - 130

Sample: 308973 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 95031
Prep Batch: 80524

Analytical Method: S 8015 D
Date Analyzed: 2012-09-18
Sample Preparation: 2012-09-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	2140	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0957	mg/Kg	50	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0876	mg/Kg	50	0.100	88	70 - 130

Sample: 308974 - AH-3 1-1.5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 95067
Prep Batch: 80559

Analytical Method: S 8021B
Date Analyzed: 2012-09-18
Sample Preparation:

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.100	mg/Kg	5	0.0200
Toluene		1	0.163	mg/Kg	5	0.0200
Ethylbenzene		1	0.128	mg/Kg	5	0.0200
Xylene		1	0.328	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.78	mg/Kg	5	10.0	98	70 - 130
4-Bromofluorobenzene (4-BFB)			9.48	mg/Kg	5	10.0	95	70 - 130

Sample: 308974 - AH-3 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 94943 Date Analyzed: 2012-09-18 Analyzed By: AR
Prep Batch: 80432 Sample Preparation: 2012-09-17 Prepared By: AR

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

Sample: 308974 - AH-3 1-1.5'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 95065 Date Analyzed: 2012-09-24 Analyzed By: CW
Prep Batch: 80556 Sample Preparation: 2012-09-18 Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	1790	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qcr	Qcr	204	mg/Kg	1	100	204	70 - 130

Sample: 308974 - AH-3 1-1.5'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 95077 Date Analyzed: 2012-09-18 Analyzed By: YG
Prep Batch: 80559 Sample Preparation: Prepared By: YG

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Je	1	1690	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.50	mg/Kg	5	10.0	95	70 - 130
4-Bromofluorobenzene (4-BFB)			9.04	mg/Kg	5	10.0	90	70 - 130

Sample: 308975 - AH-3 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 94943 Date Analyzed: 2012-09-18 Analyzed By: AR
Prep Batch: 80432 Sample Preparation: 2012-09-17 Prepared By: AR

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

Sample: 308975 - AH-3 2-2.5'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 95065 Date Analyzed: 2012-09-24 Analyzed By: CW
Prep Batch: 80556 Sample Preparation: 2012-09-18 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	Qor	Qor	130	mg/Kg	1	100	130	70 - 130

Sample: 308975 - AH-3 2-2.5'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 95077 Date Analyzed: 2012-09-18 Analyzed By: YG
Prep Batch: 80559 Sample Preparation: Prepared By: YG

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	6.99	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.03	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	70 - 130

Sample: 308976 - AH-3 3-3.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 94943

Prep Batch: 80432

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-09-18

Sample Preparation: 2012-09-17

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: 308977 - AH-3 4-4.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 94943

Prep Batch: 80432

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-09-18

Sample Preparation: 2012-09-17

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

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

Sample: 308978 - AH-4 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 95020

Prep Batch: 80514

Analytical Method: S 8021B

Date Analyzed: 2012-09-18

Sample Preparation: 2012-09-18

Prep Method: S 5035

Analyzed By: YG

Prepared By: YG

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<1.00	mg/Kg	50	0.0200
Toluene		1	1.23	mg/Kg	50	0.0200
Ethylbenzene		1	<1.00	mg/Kg	50	0.0200
Xylene		1	2.10	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.100	mg/Kg	50	0.100	100	70 - 130
4-Bromofluorobenzene (4-BFB)			0.118	mg/Kg	50	0.100	118	70 - 130

Sample: 308978 - AH-4 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 94943 Date Analyzed: 2012-09-18 Analyzed By: AR
Prep Batch: 80432 Sample Preparation: 2012-09-17 Prepared By: AR

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

Sample: 308978 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 94898 Date Analyzed: 2012-09-18 Analyzed By: CW
Prep Batch: 80415 Sample Preparation: 2012-09-17 Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	9250	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qcr	Qcr	1010	mg/Kg	5	100	1010	70 - 130

Sample: 308978 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 95031 Date Analyzed: 2012-09-18 Analyzed By: YG
Prep Batch: 80524 Sample Preparation: 2012-09-18 Prepared By: YG

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q*	1	2390	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0976	mg/Kg	50	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0968	mg/Kg	50	0.100	97	70 - 130

Sample: 308979 - AH-4 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 94943 Date Analyzed: 2012-09-18 Analyzed By: AR
Prep Batch: 80432 Sample Preparation: 2012-09-17 Prepared By: AR

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

Sample: 308979 - AH-4 1-1.5'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 95065 Date Analyzed: 2012-09-24 Analyzed By: CW
Prep Batch: 80556 Sample Preparation: 2012-09-18 Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	8800	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	5	100	101	70 - 130

Sample: 308979 - AH-4 1-1.5'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 95077 Date Analyzed: 2012-09-18 Analyzed By: YG
Prep Batch: 80559 Sample Preparation: Prepared By: YG

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	3440	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0958	mg/Kg	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0977	mg/Kg	1	0.100	98	70 - 130

Sample: 308980 - AH-4 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 94943
Prep Batch: 80432

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-09-18
Sample Preparation: 2012-09-17

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: 308980 - AH-4 2-2.5'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 95065
Prep Batch: 80556

Analytical Method: S 8015 D
Date Analyzed: 2012-09-24
Sample Preparation: 2012-09-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	1640	mg/Kg	1	50.0

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

Sample: 308980 - AH-4 2-2.5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 95077
Prep Batch: 80559

Analytical Method: S 8015 D
Date Analyzed: 2012-09-18
Sample Preparation:

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Ja	1	5030	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0951	mg/Kg	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0717	mg/Kg	1	0.100	72	70 - 130

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Method Blanks

Method Blank (1) QC Batch: 94898

QC Batch: 94898
Prep Batch: 80415

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<9.09	mg/Kg	50

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

Method Blank (1) QC Batch: 94942

QC Batch: 94942
Prep Batch: 80432

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 94943

QC Batch: 94943
Prep Batch: 80432

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: AR
Prepared By: AR

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

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Method Blank (1) QC Batch: 95015

QC Batch: 95015
Prep Batch: 80512

Date Analyzed: 2012-09-20
QC Preparation: 2012-09-18

Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<9.09	mg/Kg	50

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

Method Blank (1) QC Batch: 95020

QC Batch: 95020
Prep Batch: 80514

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00470	mg/Kg	0.02
Toluene		1	<0.00980	mg/Kg	0.02
Ethylbenzene		1	<0.00500	mg/Kg	0.02
Xylene		1	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.104	mg/Kg	1	0.100	104	70 - 130
4-Bromofluorobenzene (4-BFB)			0.108	mg/Kg	1	0.100	108	70 - 130

Method Blank (1) QC Batch: 95031

QC Batch: 95031
Prep Batch: 80524

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<1.22	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0980	mg/Kg	1	0.100	98	70 - 130

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method blank continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			0.100	mg/Kg	1	0.100	100	70 - 130

Method Blank (1) QC Batch: 95052

QC Batch: 95052
Prep Batch: 80538

Date Analyzed: 2012-09-21
QC Preparation: 2012-09-21

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 95065

QC Batch: 95065
Prep Batch: 80556

Date Analyzed: 2012-09-24
QC Preparation: 2012-09-18

Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<9.09	mg/Kg	50

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

Method Blank (1) QC Batch: 95067

QC Batch: 95067
Prep Batch: 80559

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	0.0765	mg/Kg	0.02
Toluene		1	<0.00980	mg/Kg	0.02
Ethylbenzene		1	<0.00500	mg/Kg	0.02
Xylene		1	<0.0170	mg/Kg	0.02

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	70 - 130

Method Blank (1) QC Batch: 95077

QC Batch: 95077
Prep Batch: 80559

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	3.97	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.58	mg/Kg	1	2.00	79	70 - 130

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 94898
Prep Batch: 80415

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	293	mg/Kg	1	250	<9.09	117	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	289	mg/Kg	1	250	<9.09	116	70 - 130	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	110	103	mg/Kg	1	100	110	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 94942
Prep Batch: 80432

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2640	mg/Kg	1	2500	<3.85	106	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2530	mg/Kg	1	2500	<3.85	101	85 - 115	4	20

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

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Laboratory Control Spike (LCS-1)

QC Batch: 94943
Prep Batch: 80432

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2580	mg/Kg	1	2500	<3.85	103	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2640	mg/Kg	1	2500	<3.85	106	85 - 115	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95015
Prep Batch: 80512

Date Analyzed: 2012-09-20
QC Preparation: 2012-09-18

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	295	mg/Kg	1	250	<9.09	118	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	288	mg/Kg	1	250	<9.09	115	70 - 130	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	117	118	mg/Kg	1	100	117	118	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95020
Prep Batch: 80514

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0990	mg/Kg	1	0.100	<0.00470	99	70 - 130
Toluene		1	0.102	mg/Kg	1	0.100	<0.00980	102	70 - 130
Ethylbenzene		1	0.0974	mg/Kg	1	0.100	<0.00500	97	70 - 130
Xylene		1	0.297	mg/Kg	1	0.300	<0.0170	99	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0992	mg/Kg	1	0.100	<0.00470	99	70 - 130	0	20
Toluene		1	0.102	mg/Kg	1	0.100	<0.00980	102	70 - 130	0	20
Ethylbenzene		1	0.0980	mg/Kg	1	0.100	<0.00500	98	70 - 130	1	20
Xylene		1	0.298	mg/Kg	1	0.300	<0.0170	99	70 - 130	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.102	0.102	mg/Kg	1	0.100	102	102	70 - 130
4-Bromofluorobenzene (4-BFB)	0.112	0.111	mg/Kg	1	0.100	112	111	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95031
Prep Batch: 80524

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	21.2	mg/Kg	1	20.0	<1.22	106	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	21.1	mg/Kg	1	20.0	<1.22	106	70 - 130	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0998	0.0990	mg/Kg	1	0.100	100	99	70 - 130
4-Bromofluorobenzene (4-BFB)	0.107	0.100	mg/Kg	1	0.100	107	100	70 - 130

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Laboratory Control Spike (LCS-1)

QC Batch: 95052
Prep Batch: 80538

Date Analyzed: 2012-09-21
QC Preparation: 2012-09-21

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			2690	mg/Kg	1	2500	<3.85	108	85 - 115	5	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95065
Prep Batch: 80556

Date Analyzed: 2012-09-24
QC Preparation: 2012-09-18

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	269	mg/Kg	1	250	<9.09	108	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	263	mg/Kg	1	250	<9.09	105	70 - 130	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	114	116	mg/Kg	1	100	114	116	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95067
Prep Batch: 80559

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.99	mg/Kg	1	2.00	0.0765	100	70 - 130
Toluene		1	1.92	mg/Kg	1	2.00	<0.00980	96	70 - 130
Ethylbenzene		1	1.79	mg/Kg	1	2.00	<0.00500	90	70 - 130
Xylene		1	5.42	mg/Kg	1	6.00	<0.0170	90	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	2.00	mg/Kg	1	2.00	0.0765	100	70 - 130	0	20
Toluene		1	1.93	mg/Kg	1	2.00	<0.00980	96	70 - 130	0	20
Ethylbenzene		1	1.80	mg/Kg	1	2.00	<0.00500	90	70 - 130	1	20
Xylene		1	5.43	mg/Kg	1	6.00	<0.0170	90	70 - 130	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.03	2.05	mg/Kg	1	2.00	102	102	70 - 130
4-Bromofluorobenzene (4-BFB)	2.02	2.03	mg/Kg	1	2.00	101	102	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95077
Prep Batch: 80559

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	18.6	mg/Kg	1	20.0	<1.22	93	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	20.9	mg/Kg	1	20.0	<1.22	104	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)	1.90	2.00	mg/Kg	1	2.00	95	100	70 - 130
4-Bromofluorobenzene (4-BFB)	2.14	2.18	mg/Kg	1	2.00	107	109	70 - 130

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Matrix Spike (MS-1) Spiked Sample: 309041

QC Batch: 94898
Prep Batch: 80415

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	263	mg/Kg	1	250	<9.09	105	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	268	mg/Kg	1	250	<9.09	107	70 - 130	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	114	120	mg/Kg	1	100	114	120	70 - 130

Matrix Spike (MS-1) Spiked Sample: 308972

QC Batch: 94942
Prep Batch: 80432

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			9980	mg/Kg	10	2500	7140	114	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			9840	mg/Kg	10	2500	7140	108	78.9 - 121	1	20

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

Matrix Spike (MS-1) Spiked Sample: 308980

QC Batch: 94943
Prep Batch: 80432

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: AR
Prepared By: AR

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Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2500	mg/Kg	1	2500	<3.85	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			2620	mg/Kg	1	2500	<3.85	105	78.9 - 121	5	20

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

Matrix Spike (MS-1) Spiked Sample: 308956

QC Batch: 95015
Prep Batch: 80512

Date Analyzed: 2012-09-20
QC Preparation: 2012-09-18

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	292	mg/Kg	1	250	<9.09	117	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	262	mg/Kg	1	250	<9.09	105	70 - 130	11	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	126	120	mg/Kg	1	100	126	120	70 - 130

Matrix Spike (MS-1) Spiked Sample: 308963

QC Batch: 95020
Prep Batch: 80514

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.107	mg/Kg	1	0.100	<0.00470	107	70 - 130
Toluene		1	0.118	mg/Kg	1	0.100	<0.00980	118	70 - 130
Ethylbenzene		1	0.108	mg/Kg	1	0.100	<0.00500	108	70 - 130
Xylene		1	0.330	mg/Kg	1	0.300	<0.0170	110	70 - 130

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

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Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.107	mg/Kg	1	0.100	<0.00470	107	70 - 130	0	20
Toluene		1	0.118	mg/Kg	1	0.100	<0.00980	118	70 - 130	0	20
Ethylbenzene		1	0.108	mg/Kg	1	0.100	<0.00500	108	70 - 130	0	20
Xylene		1	0.331	mg/Kg	1	0.300	<0.0170	110	70 - 130	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.105	0.106	mg/Kg	1	0.1	105	106	70 - 130
4-Bromofluorobenzene (4-BFB)	0.113	0.115	mg/Kg	1	0.1	113	115	70 - 130

Matrix Spike (MS-1) Spiked Sample: 308963

QC Batch: 95031
Prep Batch: 80524

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-18

Analyzed By: YG
Prepared By: YG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs	1	26.2	mg/Kg	1	20.0	<1.22	131

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	24.4	mg/Kg	1	20.0	<1.22	122	70 - 130	7	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)	0.103	0.100	mg/Kg	1	0.1	103	100	70 - 130
4-Bromofluorobenzene (4-BFB)	0.113	0.110	mg/Kg	1	0.1	113	110	70 - 130

Matrix Spike (MS-1) Spiked Sample: 309232

QC Batch: 95052
Prep Batch: 80538

Date Analyzed: 2012-09-21
QC Preparation: 2012-09-21

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2640	mg/Kg	5	2500	73.7	103	78.9 - 121

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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			2750	mg/Kg	5	2500	73.7	107	78.9 - 121	4	20

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

Matrix Spike (MS-1) Spiked Sample: 308962

QC Batch: 95065
Prep Batch: 80556

Date Analyzed: 2012-09-24
QC Preparation: 2012-09-18

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	317	mg/Kg	1	250	60.7	102	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	306	mg/Kg	1	250	60.7	98	70 - 130	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane Qsr Qsr	135	130	mg/Kg	1	100	135	130	70 - 130

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Calibration Standards

Standard (CCV-1)

QC Batch: 94898

Date Analyzed: 2012-09-18

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	278	111	80 - 120	2012-09-18

Standard (CCV-2)

QC Batch: 94898

Date Analyzed: 2012-09-18

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	288	115	80 - 120	2012-09-18

Standard (CCV-3)

QC Batch: 94898

Date Analyzed: 2012-09-18

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	256	102	80 - 120	2012-09-18

Standard (CCV-1)

QC Batch: 94942

Date Analyzed: 2012-09-18

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.0	99	85 - 115	2012-09-18

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Standard (CCV-2)

QC Batch: 94942

Date Analyzed: 2012-09-18

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-09-18

Standard (CCV-1)

QC Batch: 94943

Date Analyzed: 2012-09-18

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.5	100	85 - 115	2012-09-18

Standard (CCV-2)

QC Batch: 94943

Date Analyzed: 2012-09-18

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-09-18

Standard (CCV-1)

QC Batch: 95015

Date Analyzed: 2012-09-20

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	275	110	80 - 120	2012-09-20

Standard (CCV-2)

QC Batch: 95015

Date Analyzed: 2012-09-20

Analyzed By: CW

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	251	100	80 - 120	2012-09-20

Standard (CCV-1)

QC Batch: 95020

Date Analyzed: 2012-09-18

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.104	104	80 - 120	2012-09-18
Toluene		1	mg/kg	0.100	0.107	107	80 - 120	2012-09-18
Ethylbenzene		1	mg/kg	0.100	0.0938	94	80 - 120	2012-09-18
Xylene		1	mg/kg	0.300	0.288	96	80 - 120	2012-09-18

Standard (CCV-2)

QC Batch: 95020

Date Analyzed: 2012-09-18

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.103	103	80 - 120	2012-09-18
Toluene		1	mg/kg	0.100	0.110	110	80 - 120	2012-09-18
Ethylbenzene		1	mg/kg	0.100	0.0940	94	80 - 120	2012-09-18
Xylene		1	mg/kg	0.300	0.287	96	80 - 120	2012-09-18

Standard (CCV-3)

QC Batch: 95020

Date Analyzed: 2012-09-18

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.103	103	80 - 120	2012-09-18
Toluene		1	mg/kg	0.100	0.110	110	80 - 120	2012-09-18
Ethylbenzene		1	mg/kg	0.100	0.0938	94	80 - 120	2012-09-18
Xylene		1	mg/kg	0.300	0.287	96	80 - 120	2012-09-18

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Standard (CCV-1)

QC Batch: 95031

Date Analyzed: 2012-09-18

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	0.986	99	80 - 120	2012-09-18

Standard (CCV-2)

QC Batch: 95031

Date Analyzed: 2012-09-18

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	2012-09-18

Standard (CCV-3)

QC Batch: 95031

Date Analyzed: 2012-09-18

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	2012-09-18

Standard (CCV-1)

QC Batch: 95052

Date Analyzed: 2012-09-21

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-09-21

Standard (CCV-2)

QC Batch: 95052

Date Analyzed: 2012-09-21

Analyzed By: AR

Report Date: September 25, 2012
114-6401501

Work Order: 12091205
COG/Magnum Pronto State Com. #2

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NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.9	99	85 - 115	2012-09-21

Standard (CCV-1)

QC Batch: 95065

Date Analyzed: 2012-09-24

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	271	108	80 - 120	2012-09-24

Standard (CCV-2)

QC Batch: 95065

Date Analyzed: 2012-09-24

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	281	112	80 - 120	2012-09-24

Standard (CCV-3)

QC Batch: 95065

Date Analyzed: 2012-09-24

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	268	107	80 - 120	2012-09-24

Standard (CCV-1)

QC Batch: 95067

Date Analyzed: 2012-09-18

Analyzed By: YG

Report Date: September 25, 2012
114-6401501

Work Order: 12091205
COG/Magnum Pronto State Com. #2

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NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.103	103	80 - 120	2012-09-18
Toluene		1	mg/kg	0.100	0.0990	99	80 - 120	2012-09-18
Ethylbenzene		1	mg/kg	0.100	0.0917	92	80 - 120	2012-09-18
Xylene		1	mg/kg	0.300	0.278	93	80 - 120	2012-09-18

Standard (CCV-2)

QC Batch: 95067

Date Analyzed: 2012-09-18

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.103	103	80 - 120	2012-09-18
Toluene		1	mg/kg	0.100	0.0987	99	80 - 120	2012-09-18
Ethylbenzene		1	mg/kg	0.100	0.0913	91	80 - 120	2012-09-18
Xylene		1	mg/kg	0.300	0.277	92	80 - 120	2012-09-18

Standard (CCV-1)

QC Batch: 95077

Date Analyzed: 2012-09-18

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	0.983	98	80 - 120	2012-09-18

Standard (CCV-2)

QC Batch: 95077

Date Analyzed: 2012-09-18

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	0.959	96	80 - 120	2012-09-18

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.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

Analysis Request of Chain of Custody Record

PAGE: 1 OF:

OF:

ANALYSIS REQUEST

(Circle or Specify Method No.)



TETRA TECH

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

[illegible]**REMARKS:**

2.1 Please fill out all tables - Labor

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

Mr. and Mrs. Deepen Campbell of Greensboro, N.C. 10/13/1950. J. E. D. 10/13/50.

12091205

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>Ike Tavares</u>	
PROJECT NO.: <u>114-6401501</u>		PROJECT NAME: <u>Magnum Procto State Com #2</u>	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
973	9-5-12		1 AH3 0-1
974			1 AH3 1-1.5
975			1 AH3 2-2.5
976			1 AH3 3-3.5
977			1 AH3 4-4.5
978			1 AH4 0-1
979			1 AH4 1-1.5
980			1 AH4 2-2.5

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

RELINQUISHED BY: (Signature)	Date:	Time:	RECEIVED BY: (Signature)	Date:	Time:
<u>[Signature]</u>	9/4/12	16:45	<u>[Signature]</u>	9/4/12	16:45
RELINQUISHED BY: (Signature)	Date:	Time:	RECEIVED BY: (Signature)	Date:	Time:
RELINQUISHED BY: (Signature)	Date:	Time:	RECEIVED BY: (Signature)	Date:	Time:
RECEIVING LABORATORY: <u>Tetra</u>	RECEIVED BY: (Signature)				
ADDRESS:	CITY:				
STATE:	ZIP:				
CONTACT:	PHONE:				
SAMPLE CONDITION WHEN RECEIVED: <u>2.1</u>					
REMARKS:					

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

SAMPLED BY: (Print & Initial)	Date:	Time:

SAMPLE SHIPPED BY: (Circle)	FEDEX	HAND DELIVERED	UPS

OTHER:	Results by:

RUSH Charges Authorized:	Yes	No

Ike Tavares att