



AE Order Number Banner

Report Description

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App Number: pTO1426943859

1RP - 3359

COG OPERATING LLC

3/11/2016

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

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Pronghorn 8" main SWD line	Facility Type	8" SWD line
Surface Owner	Federal	Mineral Owner	
		Lease No.	API# 30-025-32735

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	14	18S	32E					Lea

Latitude 32 44.456 Longitude 103 44.114

NATURE OF RELEASE

Type of Release	Produced fluid	Volume of Release	400bbls	Volume Recovered	75bbls
Source of Release	8" main SWD line at valve box	Date and Hour of Occurrence	08/04/2010	Date and Hour of Discovery	08/04/2010 8:00 a.m.
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES. To Whom?	Larry Johnson—OCD Geoffrey Leking—OCD Paul Evans—BLM		
By Whom?	Josh Russo	Date and Hour	08/04/2010 6:17 p.m.		
Was a Watercourse Reached?	☐ Yes ☒ No	If YES. Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

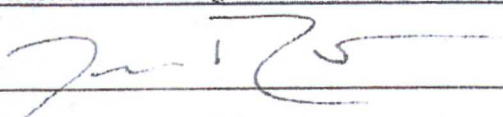
Describe Cause of Problem and Remedial Action Taken.*

The 8" PVC line ruptured inside the valve box due. The ruptured section has been replaced and the line has been put back into service.

Describe Area Affected and Cleanup Action Taken.*

Initially we released 400bbls of produced fluid out main 8" SWD line inside the valve box and we were able to recover 75bbls with a vacuum truck. The fluid flowed to the west down a nearby lease road with the dimensions of 1 yard x 170 yards. The lease road has been scraped and returned to its original condition. The fluid also flowed in the pasture west from the valve box with the dimensions of 30 yards x 125 yards. Also, while draining the line for repairs, we recovered 300bbls of produced water from inside the valve box. The chloride concentration in this area is 135,000 mg/l. (The closest well location to this release is the Mewbourne Oil Company QPBSSU 12A-1, NM OCD Order # R-9985, Unit O, 660' PSL 1980' FEL, Sec.14-T18S-R32E, Lea Co., NM, GPS 32 44.463 - 103 44.019). 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/BLM for approval prior to any significant remediation work.

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

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: Josh Russo		Approved by District Supervisor:	
Title: HSE Coordinator	Approval Date:	Expiration Date:	
E-mail Address: jrusso@conchoresources.com	Conditions of Approval:		Attached ☐
Date: 08/13/2010	Phone: 432-212-2399		

* Attach Additional Sheets If Necessary



TETRA TECH

RECEIVED

MAR 31 2011

HOBBSOCD

March 16, 2011

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., Pronghorn 8" Main SWD Line Leak, Unit O, Section 14, Township 18 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 at the Pronghorn 8" Main SWD Line Leak located in Unit O, Section 14, Township 18 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.74087°, W 103.73528°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak on the main SWD line was discovered on August 4, 2010. Approximately 400 barrels of produced water was released from the 8" SWD PVC line ruptured inside the valve box. Vacuum trucks were utilized to recover 75 barrels of standing fluids. The spill migrated west and impacted area in the pasture measuring length of approximately 325', with a width of 20' to 40'. COG immediately excavated the spill area approximately 3.0' below surface and hauled the soil to proper disposal. The initial C-141 is included in Appendix C.

Groundwater

The United States Geological Survey (USGS) database did showed wells in Section 7 and 16, Township 18 South, Range 32 East, with a reported depth to water of approximately 82' and 84', respectively. The New Mexico State

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com



Engineer Well Reports showed wells with reported depths of 65' (Section 4) and 460' (Section 7). The NMOCD groundwater map shows also shows wells in Section 20, 22 and 34, with a depth to groundwater at approximately 164', 429' and 117', respectively. Based on the groundwater map, the depth to groundwater for the Site appears to be greater than 100' bgs. The well report data and average depth to water map are shown in Appendix A.

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 Results

The produced water impacted an area west of the valve box in the pasture. The foot print of the spill measured approximately 325' in length and a width of 20' to 40'. Recently, COG has installed a new SWD line (poly line) to replace the old SWD (PVC) line. The new line was installed west of the old SWD line, approximately 10' to 15'. Prior installation of the line, the area of SB-7 was excavated down to 4.0' to 5.0' below surface and hauled the soil to proper disposal. The excavated area measured approximately 40' x 60'. The bottom of the excavation was lined with a 40 mil liner and new SWD poly line was then laid top of the liner and backfilled with clean soil.

Soil Borings

From August 27 through 31, 2010, Tetra Tech personnel supervised the installation of twelve (12) soil borings (SB-1 through SB-12) utilizing an air rotary rig. The area north of the excavation was not assessed due to an active line running east and west of the area. The soil borings were extended to a maximum depth of 120 feet below surface, with samples collected at 2 to 3 foot intervals for the first 10 feet and 5 foot intervals to 30' and 10' intervals thereafter. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix



B. The results of the sampling are summarized in Table 1. The soil boring locations are shown on Figure 3.

Referring to Table 1, none of the selected for TPH and BTEX exceeded the RRAL. The analytical results indicate the maximum extent of chloride impact greater than 1,000 mg/kg extended from 7' to 10' (SB-5, SB-10 and SB-12) and 20' to 30' (SB-2, SB-9 and SB-11). The deepest impact was found at (SB-7 and SB-8), which extended down to 80' to 100', respectively. The perimeter soil borings (SB-1, SB-3, SB-4 and SB-6) did not show a chloride impact to the subsurface soils. All samples had chloride concentrations that decreased with depth, with the exception of SB-7. The sand formation in the deeper soils were collapsing and not allow the hole to remain open and possibly the deeper samples may have been cross contaminated with the upper soils.

Based on the data, Figure 5 (Cross-Section A-A') was developed to evaluate distribution of the chloride impact in the subsurface soils. As shown in the A-A' Cross Section, the deepest chloride impact were encountered near the source area at SB-7, SB-8 and SB-9, with chloride concentrations significantly decline around 80', 70' and 30', respectively. The remaining soil borings (SB-1, SB-2, SB-10, SB-11 and SB-12) showed chlorides declining at approximately 10.0' to 20.0' below surface.

Work Plan

In order to remediate the site, COG proposes to excavate the impacted soils. The goal of the remediation is to establish surface growth and to reduce the environmental liabilities for the protection of the groundwater.

On March 15, 2011, Tetra Tech and COG met with Geoffrey Leking with NMOCD to discuss the results of the investigation. Based on groundwater depth and results, Mr. Leking approved the removal of 5.0' of the impacted soil and capping the excavation with a 40 mil liner. The proposed excavation depth and liner installation are shown on Figure 5 (Cross-Section A-A') and Table 1. During the excavation, Tetra Tech will field screen the soil (chlorides) to capture the spill foot print (horizontal extents) on the north and south of the spill. Once completed, the liner (40 mil) will be installed at a depth of 5' below surface and the excavation backfilled with clean soil to grade.



TETRA TECH

If you require any additional information or have any questions or comments concerning this report, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez, P.G.
Senior Project Manager

cc: Pat Ellis – COG
Paul Evans - BLM

Table 1
COG Operating LLC.
PRONGHORN 8 IN. SEC. 14
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-1	8/27/2010	0-1'		X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<200
	"	3'		X		-	-	-	-	-	-	-	<200
	"	5'		X		-	-	-	-	-	-	-	<200
	"	7'		X		-	-	-	-	-	-	-	<200
	"	10'		X		-	-	-	-	-	-	-	<200
SB-2	8/27/2010	0-1'		X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	8,970
	"	3'		X		-	-	-	-	-	-	-	10,000
	"	5'		X		-	-	-	-	-	-	-	11,700
	"	7'		X		-	-	-	-	-	-	-	7,480
	"	10'		X		-	-	-	-	-	-	-	10,200
	"	15'		X		-	-	-	-	-	-	-	4,970
	"	20'		X		-	-	-	-	-	-	-	2,710
	"	25'		X		-	-	-	-	-	-	-	419
	"	30'		X		-	-	-	-	-	-	-	301

Table 1
COG Operating LLC.
PRONGHORN 8 IN. SEC. 14
Lea County, New Mexico

[illegible]

Table 1

[illegible]

Table 1
COG Operating LLC.
PRONGHORN 8 IN. SEC. 14
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-7	8/27/2010	0-1'	3' BEB	X		<2.00	<50.0	<50.0	-	-	-	-	9,960
	"	3'		X		-	-	-	-	-	-	-	13,400
	"	5'		X		-	-	-	-	-	-	-	12,400
	"	7'		X		-	-	-	-	-	-	-	9,510
	"	10'		X		-	-	-	-	-	-	-	6,320
	"	15'		X		-	-	-	-	-	-	-	7,050
	"	20'		X		-	-	-	-	-	-	-	5,240
	"	25'		X		-	-	-	-	-	-	-	7,680
	"	30'		X		-	-	-	-	-	-	-	5,550
	"	40'		X		-	-	-	-	-	-	-	8,500
	"	50'		X		-	-	-	-	-	-	-	6,290
	"	60'		X		-	-	-	-	-	-	-	5,360
	"	70'		X		-	-	-	-	-	-	-	1,590
		80'		X		-	-	-	-	-	-	-	3,360
	"	90'		X		-	-	-	-	-	-	-	814
	"	100'		X		-	-	-	-	-	-	-	3,290
	"	110'		X		-	-	-	-	-	-	-	467
	"	120'		X		-	-	-	-	-	-	-	834

Table 1
COG Operating LLC.
PRONGHORN 8 IN. SEC. 14
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-8	3/30/2010	1'	3' BEB	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	14,100
	"	3'		X		-	-	-	-	-	-	-	11,600
	"	5'		X		-	-	-	-	-	-	-	13,200
	"	7'		X		-	-	-	-	-	-	-	7,900
	"	10'		X		-	-	-	-	-	-	-	7,720
	"	15'		X		-	-	-	-	-	-	-	5,900
	"	20'		X		-	-	-	-	-	-	-	7,560
	"	25'		X		-	-	-	-	-	-	-	10,400
	"	30'		X		-	-	-	-	-	-	-	9,780
	"	40'		X		-	-	-	-	-	-	-	10,500
	"	50'		X		-	-	-	-	-	-	-	4,880
	"	60'		X		-	-	-	-	-	-	-	8,430
	"	70'		X		-	-	-	-	-	-	-	3,490
	"	80'		X		-	-	-	-	-	-	-	1,350
	"	90'		X		-	-	-	-	-	-	-	569
	"	100'		X		-	-	-	-	-	-	-	553
	"	110'		X		-	-	-	-	-	-	-	<200
	"	120'		X		-	-	-	-	-	-	-	258

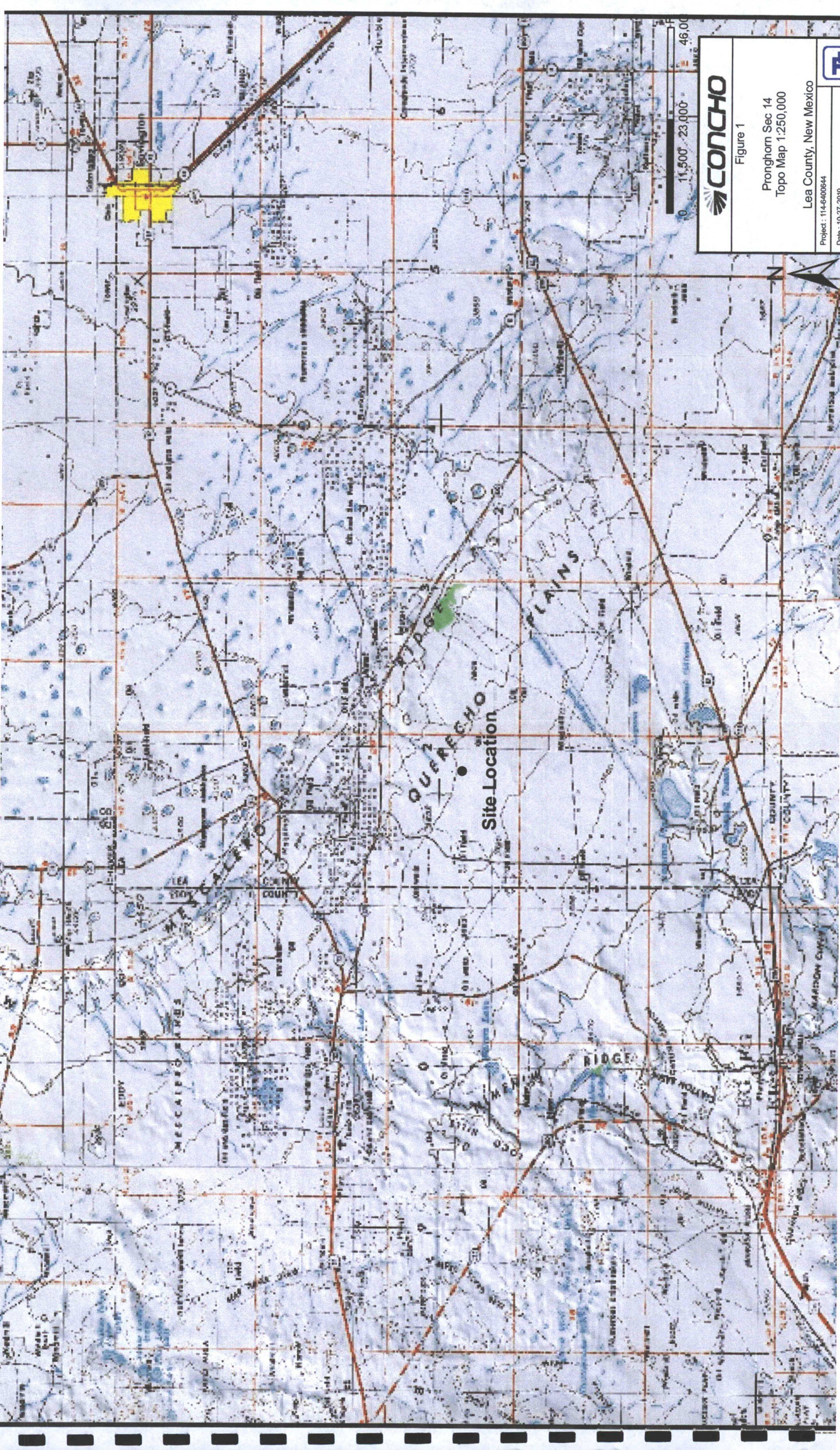


Figure 1

Pronghorn Sec 14
Topo Map 1:250,000

Lea County, New Mexico

Project : 114-640644
Date : 10-27-2010



Figure 2

Pronghorn Sec 14
Topo Map 1:24,000

Lea County, New Mexico

Project : 114-6400644



Figure 3

Pronghorn Sec 14
Spill Assessment Map

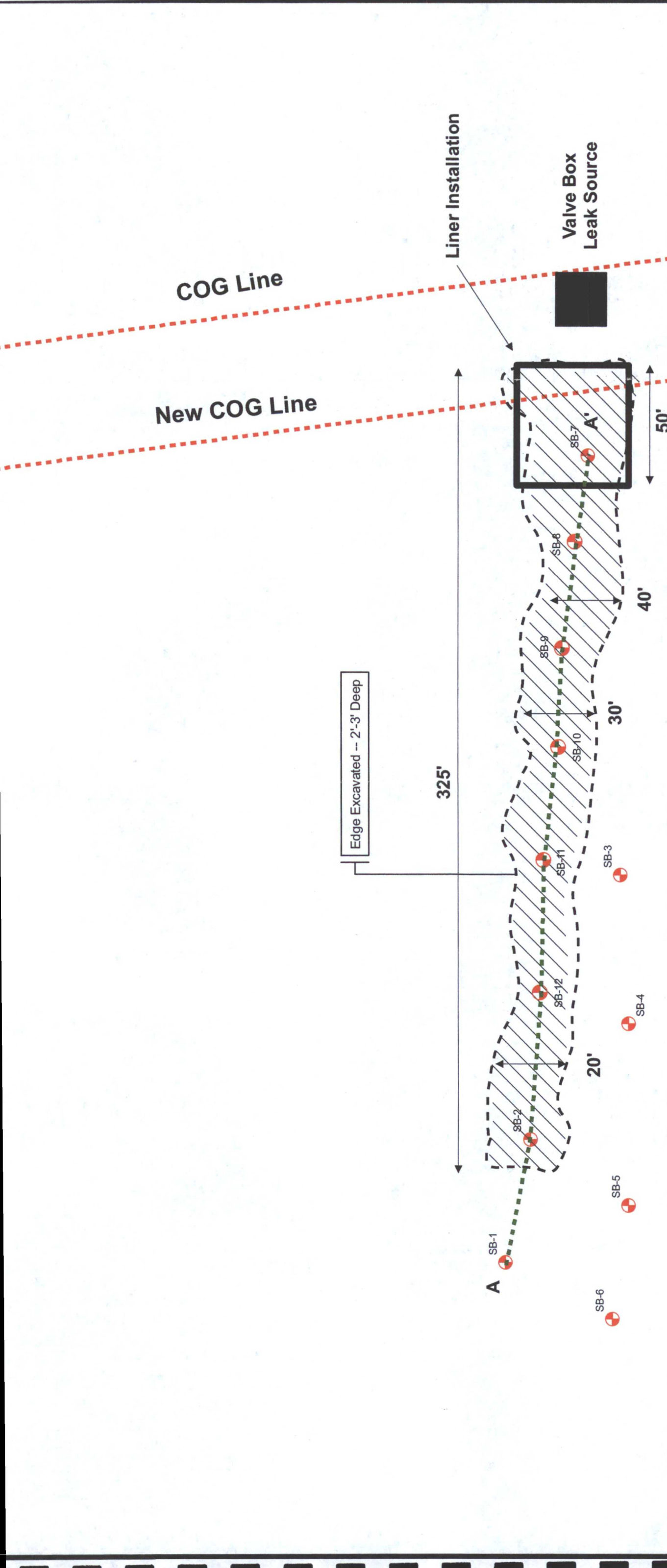
Lea County, New Mexico

Project : 114-6400644

Explanation

Soil Boring Location





LEASE ROAD



Figure 4

Pronghorn Sec 14
 Soil Boring Location &
 Cross Section Reference Map
 Lea County, New Mexico

Project : 114-6400644

Explanation

Soil Boring Location

EXPLANATION

Chlorides < 1,000

Chlorides 1,000-5,000

Chlorides 5,000-10,000

Chlorides 10,000+

Previously Installed Liner

Proposed Excavation Depth

Proposed Liner

CONCHO

Figure 5

Pronghorn Section 14

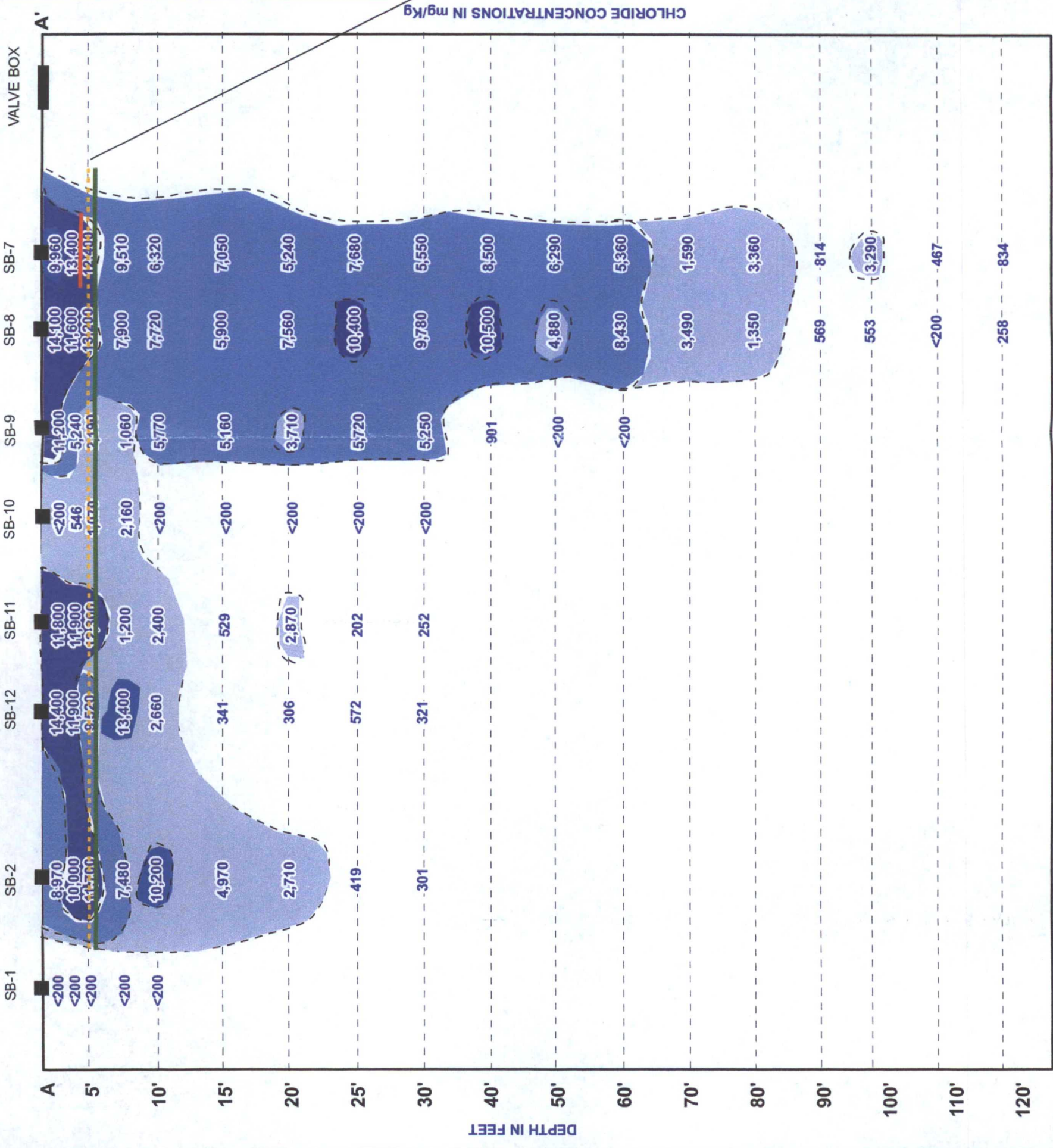
A to A' Analytical Cross Section

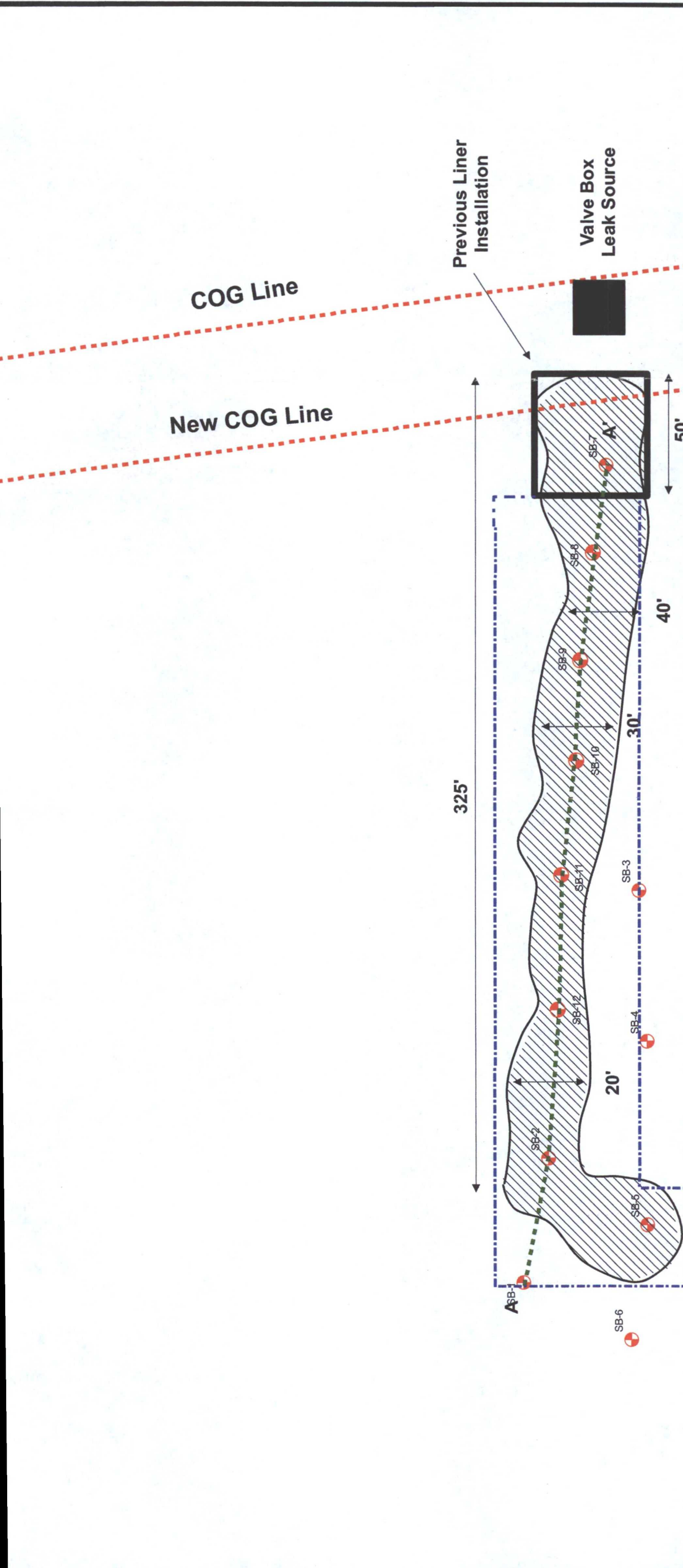
Lea County, New Mexico

PROJECT: 114-6400644

DATE: 3-18-2011

FILE: H:\GIS\114-66400644





LEASE ROAD



Figure 6

Pronghorn Sec 14
Proposed Excavation & Liner
Lea County, New Mexico

Project : 114-5400844
Date : 3-18-2011

Explanation	
	Soil Boring Location
	Proposed Excavation & Liner

Table 1
COG Operating LLC.
PRONGHORN 8 IN. SEC. 14
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-11	8/31/2010	1'	3' BEB	X		<2.00	<50.0	<50.0	-	-	-	-	11,800
	"	3'	3' BEB	X		-	-	-	-	-	-	-	11,900
	"	5'	3' BEB	X		-	-	-	-	-	-	-	12,300
	"	7'	3' BEB	X		-	-	-	-	-	-	-	1,200
	"	10'	3' BEB	X		-	-	-	-	-	-	-	2,400
	"	15'	3' BEB	X		-	-	-	-	-	-	-	529
	"	20'	3' BEB	X		-	-	-	-	-	-	-	2,870
	"	25'	3' BEB	X		-	-	-	-	-	-	-	202
	"	30'	3' BEB	X		-	-	-	-	-	-	-	252
SB-12	8/31/2010	1'	3' BEB	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	14,400
	"	3'	3' BEB	X		-	-	-	-	-	-	-	11,900
	"	5'	3' BEB	X		-	-	-	-	-	-	-	9,520
	"	7'	3' BEB	X		-	-	-	-	-	-	-	13,400
	"	10'	3' BEB	X		-	-	-	-	-	-	-	2,660
	"	15'	3' BEB	X		-	-	-	-	-	-	-	341
	"	20'	3' BEB	X		-	-	-	-	-	-	-	306
	"	25'	3' BEB	X		-	-	-	-	-	-	-	572
	"	30'	3' BEB	X		-	-	-	-	-	-	-	321

(--) Not Analyzed

BEB Below Excavation Bottom

 Proposed Excavated Depths

 Liner Installation

Water Well Data
Average Depth to Groundwater (ft)
Pronghorn Section 14
Lea County, New Mexico

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

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

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
		180			
		101			130

17 South 32 East					
6	5	4	3	2	1
		82		60	225
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	180	29	28	27	26
31	32	33	34	35	36

18 South 32 East					
6	5	4	3	2	1
7	460	8	9	10	11
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

17 South 33 East					
6	90	5	4	3	2
7	167	8	9	10	11
18	17	16	15	14	13
19	20	21	22	23	24
30	69	29	28	27	26
31	32	33	34	35	36

18 South 33 East					
6	5	4	3	2	1
7	8	100	9	10	11
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

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location

Summary Report

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

Report Date: September 7, 2010

Work Order: 10083111



Project Location: Lea Co., NM
Project Name: COG/Pronghorn 8 in. Sec. 14
Project Number: 114-6400644

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243017	SB-1 0-1'	soil	2010-08-27	00:00	2010-08-30
243018	SB-1 3'	soil	2010-08-27	00:00	2010-08-30
243019	SB-1 5'	soil	2010-08-27	00:00	2010-08-30
243020	SB-1 7'	soil	2010-08-27	00:00	2010-08-30
243021	SB-1 10'	soil	2010-08-27	00:00	2010-08-30
243024	SB-2 0-1'	soil	2010-08-27	00:00	2010-08-30
243025	SB-2 3'	soil	2010-08-27	00:00	2010-08-30
243026	SB-2 5'	soil	2010-08-27	00:00	2010-08-30
243027	SB-2 7'	soil	2010-08-27	00:00	2010-08-30
243028	SB-2 10'	soil	2010-08-27	00:00	2010-08-30
243029	SB-2 15'	soil	2010-08-27	00:00	2010-08-30
243030	SB-2 20'	soil	2010-08-27	00:00	2010-08-30
243031	SB-2 25'	soil	2010-08-27	00:00	2010-08-30
243032	SB-2 30'	soil	2010-08-27	00:00	2010-08-30
243034	SB-3 0-1'	soil	2010-08-27	00:00	2010-08-30
243035	SB-3 3'	soil	2010-08-27	00:00	2010-08-30
243036	SB-3 5'	soil	2010-08-27	00:00	2010-08-30
243037	SB-3 7'	soil	2010-08-27	00:00	2010-08-30
243038	SB-3 10'	soil	2010-08-27	00:00	2010-08-30
243039	SB-3 15'	soil	2010-08-27	00:00	2010-08-30
243041	SB-4 0-1'	soil	2010-08-27	00:00	2010-08-30
243042	SB-4 3'	soil	2010-08-27	00:00	2010-08-30
243043	SB-4 5'	soil	2010-08-27	00:00	2010-08-30
243044	SB-4 7'	soil	2010-08-27	00:00	2010-08-30
243045	SB-4 10'	soil	2010-08-27	00:00	2010-08-30
243046	SB-4 15'	soil	2010-08-27	00:00	2010-08-30
243048	SB-5 0-1'	soil	2010-08-27	00:00	2010-08-30
243049	SB-5 3'	soil	2010-08-27	00:00	2010-08-30
243050	SB-5 5'	soil	2010-08-27	00:00	2010-08-30
243051	SB-5 7'	soil	2010-08-27	00:00	2010-08-30

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243052	SB-5 10'	soil	2010-08-27	00:00	2010-08-30
243053	SB-5 15'	soil	2010-08-27	00:00	2010-08-30
243054	SB-5 20'	soil	2010-08-27	00:00	2010-08-30
243055	SB-5 25'	soil	2010-08-27	00:00	2010-08-30
243058	SB-6 0-1'	soil	2010-08-27	00:00	2010-08-30
243059	SB-6 3'	soil	2010-08-27	00:00	2010-08-30
243060	SB-6 5'	soil	2010-08-27	00:00	2010-08-30
243061	SB-6 7'	soil	2010-08-27	00:00	2010-08-30
243062	SB-6 10'	soil	2010-08-27	00:00	2010-08-30
243063	SB-6 15'	soil	2010-08-27	00:00	2010-08-30
243065	SB-7 0-1' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243066	SB-7 3' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243067	SB-7 5' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243068	SB-7 7' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243069	SB-7 10' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243070	SB-7 15' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243071	SB-7 20' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243072	SB-7 25' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243073	SB-7 30' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243074	SB-7 40' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243075	SB-7 50' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243076	SB-7 60' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243077	SB-7 70' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243078	SB-7 80' (3' BEB)	soil	2010-08-27	00:00	2010-08-30

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)
243017 - SB-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243024 - SB-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243034 - SB-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243041 - SB-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243048 - SB-5 0-1'					<50.0	<2.00
243058 - SB-6 0-1'					<50.0	<2.00
243065 - SB-7 0-1' (3' BEB)					<50.0	<2.00

Sample: 243017 - SB-1 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243018 - SB-1 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243019 - SB-1 5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243020 - SB-1 7'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243021 - SB-1 10'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243024 - SB-2 0-1'

Param	Flag	Result	Units	RL
Chloride		8970	mg/Kg	4.00

Sample: 243025 - SB-2 3'

Param	Flag	Result	Units	RL
Chloride		10000	mg/Kg	4.00

Sample: 243026 - SB-2 5'

Param	Flag	Result	Units	RL
Chloride		11700	mg/Kg	4.00

Sample: 243027 - SB-2 7'

Param	Flag	Result	Units	RL
Chloride		7480	mg/Kg	4.00

Sample: 243028 - SB-2 10'

Param	Flag	Result	Units	RL
Chloride		10200	mg/Kg	4.00

Sample: 243029 - SB-2 15'

Param	Flag	Result	Units	RL
Chloride		4970	mg/Kg	4.00

Sample: 243030 - SB-2 20'

Param	Flag	Result	Units	RL
Chloride		2710	mg/Kg	4.00

Sample: 243031 - SB-2 25'

Param	Flag	Result	Units	RL
Chloride		419	mg/Kg	4.00

Sample: 243032 - SB-2 30'

Param	Flag	Result	Units	RL
Chloride		301	mg/Kg	4.00

Sample: 243034 - SB-3 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243035 - SB-3 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243036 - SB-3 5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243037 - SB-3 7'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243038 - SB-3 10'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243039 - SB-3 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243041 - SB-4 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243042 - SB-4 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243043 - SB-4 5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243044 - SB-4 7'

Param	Flag	Result	Units	RL
Chloride		222	mg/Kg	4.00

Sample: 243045 - SB-4 10'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243046 - SB-4 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243048 - SB-5 0-1'

Param	Flag	Result	Units	RL
Chloride		4160	mg/Kg	4.00

Sample: 243049 - SB-5 3'

Param	Flag	Result	Units	RL
Chloride		11900	mg/Kg	4.00

Sample: 243050 - SB-5 5'

Param	Flag	Result	Units	RL
Chloride		10400	mg/Kg	4.00

Sample: 243051 - SB-5 7'

Param	Flag	Result	Units	RL
Chloride		7830	mg/Kg	4.00

Sample: 243052 - SB-5 10'

Param	Flag	Result	Units	RL
Chloride		473	mg/Kg	4.00

Sample: 243053 - SB-5 15'

Param	Flag	Result	Units	RL
Chloride		737	mg/Kg	4.00

Sample: 243054 - SB-5 20'

Param	Flag	Result	Units	RL
Chloride		380	mg/Kg	4.00

Sample: 243055 - SB-5 25'

Param	Flag	Result	Units	RL
Chloride		312	mg/Kg	4.00

Sample: 243058 - SB-6 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243059 - SB-6 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243060 - SB-6 5'

Param	Flag	Result	Units	RL
Chloride		210	mg/Kg	4.00

Sample: 243061 - SB-6 7'

Param	Flag	Result	Units	RL
Chloride		224	mg/Kg	4.00

Sample: 243062 - SB-6 10'

Param	Flag	Result	Units	RL
Chloride		371	mg/Kg	4.00

Sample: 243063 - SB-6 15'

Param	Flag	Result	Units	RL
Chloride		391	mg/Kg	4.00

Sample: 243065 - SB-7 0-1' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		9960	mg/Kg	4.00

Sample: 243066 - SB-7 3' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		13400	mg/Kg	4.00

Sample: 243067 - SB-7 5' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		12400	mg/Kg	4.00

Sample: 243068 - SB-7 7' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		9510	mg/Kg	4.00

Sample: 243069 - SB-7 10' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		6320	mg/Kg	4.00

Sample: 243070 - SB-7 15' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		7050	mg/Kg	4.00

Sample: 243071 - SB-7 20' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		5240	mg/Kg	4.00

Sample: 243072 - SB-7 25' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		7680	mg/Kg	4.00

Sample: 243073 - SB-7 30' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		5550	mg/Kg	4.00

Sample: 243074 - SB-7 40' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		8500	mg/Kg	4.00

Sample: 243075 - SB-7 50' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		6290	mg/Kg	4.00

Sample: 243076 - SB-7 60' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		5360	mg/Kg	4.00

Sample: 243077 - SB-7 70' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		1590	mg/Kg	4.00

Sample: 243078 - SB-7 80' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		3640	mg/Kg	4.00



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6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: September 7, 2010

Work Order: 10083111



Project Location: Lea Co., NM
Project Name: COG/Pronghorn 8 in. Sec. 14
Project Number: 114-6400644

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
243017	SB-1 0-1'	soil	2010-08-27	00:00	2010-08-30
243018	SB-1 3'	soil	2010-08-27	00:00	2010-08-30
243019	SB-1 5'	soil	2010-08-27	00:00	2010-08-30
243020	SB-1 7'	soil	2010-08-27	00:00	2010-08-30
243021	SB-1 10'	soil	2010-08-27	00:00	2010-08-30
243024	SB-2 0-1'	soil	2010-08-27	00:00	2010-08-30
243025	SB-2 3'	soil	2010-08-27	00:00	2010-08-30
243026	SB-2 5'	soil	2010-08-27	00:00	2010-08-30
243027	SB-2 7'	soil	2010-08-27	00:00	2010-08-30
243028	SB-2 10'	soil	2010-08-27	00:00	2010-08-30

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243029	SB-2 15'	soil	2010-08-27	00:00	2010-08-30
243030	SB-2 20'	soil	2010-08-27	00:00	2010-08-30
243031	SB-2 25'	soil	2010-08-27	00:00	2010-08-30
243032	SB-2 30'	soil	2010-08-27	00:00	2010-08-30
243034	SB-3 0-1'	soil	2010-08-27	00:00	2010-08-30
243035	SB-3 3'	soil	2010-08-27	00:00	2010-08-30
243036	SB-3 5'	soil	2010-08-27	00:00	2010-08-30
243037	SB-3 7'	soil	2010-08-27	00:00	2010-08-30
243038	SB-3 10'	soil	2010-08-27	00:00	2010-08-30
243039	SB-3 15'	soil	2010-08-27	00:00	2010-08-30
243041	SB-4 0-1'	soil	2010-08-27	00:00	2010-08-30
243042	SB-4 3'	soil	2010-08-27	00:00	2010-08-30
243043	SB-4 5'	soil	2010-08-27	00:00	2010-08-30
243044	SB-4 7'	soil	2010-08-27	00:00	2010-08-30
243045	SB-4 10'	soil	2010-08-27	00:00	2010-08-30
243046	SB-4 15'	soil	2010-08-27	00:00	2010-08-30
243048	SB-5 0-1'	soil	2010-08-27	00:00	2010-08-30
243049	SB-5 3'	soil	2010-08-27	00:00	2010-08-30
243050	SB-5 5'	soil	2010-08-27	00:00	2010-08-30
243051	SB-5 7'	soil	2010-08-27	00:00	2010-08-30
243052	SB-5 10'	soil	2010-08-27	00:00	2010-08-30
243053	SB-5 15'	soil	2010-08-27	00:00	2010-08-30
243054	SB-5 20'	soil	2010-08-27	00:00	2010-08-30
243055	SB-5 25'	soil	2010-08-27	00:00	2010-08-30
243058	SB-6 0-1'	soil	2010-08-27	00:00	2010-08-30
243059	SB-6 3'	soil	2010-08-27	00:00	2010-08-30
243060	SB-6 5'	soil	2010-08-27	00:00	2010-08-30
243061	SB-6 7'	soil	2010-08-27	00:00	2010-08-30
243062	SB-6 10'	soil	2010-08-27	00:00	2010-08-30
243063	SB-6 15'	soil	2010-08-27	00:00	2010-08-30
243065	SB-7 0-1' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243066	SB-7 3' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243067	SB-7 5' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243068	SB-7 7' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243069	SB-7 10' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243070	SB-7 15' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243071	SB-7 20' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243072	SB-7 25' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243073	SB-7 30' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243074	SB-7 40' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243075	SB-7 50' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243076	SB-7 60' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243077	SB-7 70' (3' BEB)	soil	2010-08-27	00:00	2010-08-30
243078	SB-7 80' (3' BEB)	soil	2010-08-27	00:00	2010-08-30

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 38 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

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project COG/Pronghorn 8 in. Sec. 14 were received by TraceAnalysis, Inc. on 2010-08-30 and assigned to work order 10083111. Samples for work order 10083111 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
BTEX	S 8021B	62762	2010-09-01 at 12:00	73174	2010-09-01 at 09:52
Chloride (Titration)	SM 4500-Cl B	62738	2010-09-01 at 09:46	73196	2010-09-02 at 13:41
Chloride (Titration)	SM 4500-Cl B	62739	2010-09-01 at 09:47	73197	2010-09-02 at 13:42
Chloride (Titration)	SM 4500-Cl B	62740	2010-09-01 at 09:47	73198	2010-09-02 at 13:43
Chloride (Titration)	SM 4500-Cl B	62741	2010-09-01 at 09:47	73199	2010-09-02 at 13:44
Chloride (Titration)	SM 4500-Cl B	62742	2010-09-01 at 09:48	73200	2010-09-02 at 13:44
Chloride (Titration)	SM 4500-Cl B	62743	2010-09-01 at 09:48	73201	2010-09-02 at 13:45
TPH DRO - NEW	S 8015 D	62730	2010-08-31 at 14:41	73146	2010-08-31 at 14:41
TPH GRO	S 8015 D	62762	2010-09-01 at 12:00	73175	2010-09-01 at 10:20

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 10083111 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: September 7, 2010
114-6400644

Work Order: 10083111
COG/Pronghorn 8 in. Sec. 14

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Lea Co., NM

Analytical Report

Sample: 243017 - SB-1 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 73174
Prep Batch: 62762

Analytical Method: S 8021B
Date Analyzed: 2010-09-01
Sample Preparation: 2010-09-01

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.26	mg/Kg	1	2.00	113	38.4 - 157

Sample: 243017 - SB-1 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243017 - SB-1 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73146
Prep Batch: 62730

Analytical Method: S 8015 D
Date Analyzed: 2010-08-31
Sample Preparation: 2010-08-31

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

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

Report Date: September 7, 2010
114-6400644

Work Order: 10083111
COG/Pronghorn 8 in. Sec. 14

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		108	mg/Kg	1	100	108	70 - 130

Sample: 243017 - SB-1 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73175
Prep Batch: 62762

Analytical Method: S 8015 D
Date Analyzed: 2010-09-01
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.16	mg/Kg	1	2.00	108	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.06	mg/Kg	1	2.00	103	42 - 159

Sample: 243018 - SB-1 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243019 - SB-1 5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: September 7, 2010
114-6400644

Work Order: 10083111
COG/Pronghorn 8 in. Sec. 14

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Lea Co., NM

Sample: 243020 - SB-1 7'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243021 - SB-1 10'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243024 - SB-2 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 73174
Prep Batch: 62762

Analytical Method: S 8021B
Date Analyzed: 2010-09-01
Sample Preparation: 2010-09-01

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.09	mg/Kg	1	2.00	104	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.31	mg/Kg	1	2.00	116	38.4 - 157

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Sample: 243024 - SB-2 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8970	mg/Kg	100	4.00

Sample: 243024 - SB-2 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73146
Prep Batch: 62730

Analytical Method: S 8015 D
Date Analyzed: 2010-08-31
Sample Preparation: 2010-08-31

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		108	mg/Kg	1	100	108	70 - 130

Sample: 243024 - SB-2 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73175
Prep Batch: 62762

Analytical Method: S 8015 D
Date Analyzed: 2010-09-01
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.05	mg/Kg	1	2.00	102	42 - 159

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Sample: 243025 - SB-2 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10000	mg/Kg	100	4.00

Sample: 243026 - SB-2 5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11700	mg/Kg	100	4.00

Sample: 243027 - SB-2 7'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7480	mg/Kg	100	4.00

Sample: 243028 - SB-2 10'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73196
Prep Batch: 62738

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10200	mg/Kg	100	4.00

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Sample: 243029 - SB-2 15'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73197
Prep Batch: 62739

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4970	mg/Kg	100	4.00

Sample: 243030 - SB-2 20'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73197
Prep Batch: 62739

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2710	mg/Kg	100	4.00

Sample: 243031 - SB-2 25'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73197
Prep Batch: 62739

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		419	mg/Kg	50	4.00

Sample: 243032 - SB-2 30'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73197
Prep Batch: 62739

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		301	mg/Kg	50	4.00

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Sample: 243034 - SB-3 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 73174
Prep Batch: 62762

Analytical Method: S 8021B
Date Analyzed: 2010-09-01
Sample Preparation: 2010-09-01

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.30	mg/Kg	1	2.00	115	38.4 - 157

Sample: 243034 - SB-3 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73197
Prep Batch: 62739

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243034 - SB-3 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73146
Prep Batch: 62730

Analytical Method: S 8015 D
Date Analyzed: 2010-08-31
Sample Preparation: 2010-08-31

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		106	mg/Kg	1	100	106	70 - 130

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Sample: 243034 - SB-3 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73175
Prep Batch: 62762

Analytical Method: S 8015 D
Date Analyzed: 2010-09-01
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.04	mg/Kg	1	2.00	102	42 - 159

Sample: 243035 - SB-3 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73197
Prep Batch: 62739

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243036 - SB-3 5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73197
Prep Batch: 62739

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243037 - SB-3 7'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73197
Prep Batch: 62739

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

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Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243038 - SB-3 10'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73197 Date Analyzed: 2010-09-02 Analyzed By: AR
Prep Batch: 62739 Sample Preparation: 2010-09-01 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243039 - SB-3 15'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73198 Date Analyzed: 2010-09-02 Analyzed By: AR
Prep Batch: 62740 Sample Preparation: 2010-09-01 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243041 - SB-4 0-1'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 73174 Date Analyzed: 2010-09-01 Analyzed By: AG
Prep Batch: 62762 Sample Preparation: 2010-09-01 Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.13	mg/Kg	1	2.00	106	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.45	mg/Kg	1	2.00	122	38.4 - 157

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Sample: 243041 - SB-4 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73198
Prep Batch: 62740

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243041 - SB-4 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73146
Prep Batch: 62730

Analytical Method: S 8015 D
Date Analyzed: 2010-08-31
Sample Preparation: 2010-08-31

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		110	mg/Kg	1	100	110	70 - 130

Sample: 243041 - SB-4 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73175
Prep Batch: 62762

Analytical Method: S 8015 D
Date Analyzed: 2010-09-01
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.13	mg/Kg	1	2.00	106	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.16	mg/Kg	1	2.00	108	42 - 159

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Sample: 243042 - SB-4 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73198
Prep Batch: 62740

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243043 - SB-4 5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73198
Prep Batch: 62740

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243044 - SB-4 7'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73198
Prep Batch: 62740

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		222	mg/Kg	50	4.00

Sample: 243045 - SB-4 10'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73198
Prep Batch: 62740

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

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Sample: 243046 - SB-4 15'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73198 Date Analyzed: 2010-09-02 Analyzed By: AR
Prep Batch: 62740 Sample Preparation: 2010-09-01 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243048 - SB-5 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73198 Date Analyzed: 2010-09-02 Analyzed By: AR
Prep Batch: 62740 Sample Preparation: 2010-09-01 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4160	mg/Kg	100	4.00

Sample: 243048 - SB-5 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 73146 Date Analyzed: 2010-08-31 Analyzed By: kg
Prep Batch: 62730 Sample Preparation: 2010-08-31 Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		99.3	mg/Kg	1	100	99	70 - 130

Sample: 243048 - SB-5 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 73175 Date Analyzed: 2010-09-01 Analyzed By: AG
Prep Batch: 62762 Sample Preparation: 2010-09-01 Prepared By: AG

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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.01	mg/Kg	1	2.00	100	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.27	mg/Kg	1	2.00	114	42 - 159

Sample: 243049 - SB-5 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73198
Prep Batch: 62740

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11900	mg/Kg	100	4.00

Sample: 243050 - SB-5 5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73198
Prep Batch: 62740

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10400	mg/Kg	100	4.00

Sample: 243051 - SB-5 7'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7830	mg/Kg	100	4.00

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Sample: 243052 - SB-5 10'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		473	mg/Kg	50	4.00

Sample: 243053 - SB-5 15'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		737	mg/Kg	50	4.00

Sample: 243054 - SB-5 20'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		380	mg/Kg	50	4.00

Sample: 243055 - SB-5 25'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		312	mg/Kg	50	4.00

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Sample: 243058 - SB-6 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243058 - SB-6 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73146
Prep Batch: 62730

Analytical Method: S 8015 D
Date Analyzed: 2010-08-31
Sample Preparation: 2010-08-31

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

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

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

Sample: 243058 - SB-6 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73175
Prep Batch: 62762

Analytical Method: S 8015 D
Date Analyzed: 2010-09-01
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.36	mg/Kg	1	2.00	118	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.63	mg/Kg	1	2.00	132	42 - 159

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Sample: 243059 - SB-6 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243060 - SB-6 5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		210	mg/Kg	50	4.00

Sample: 243061 - SB-6 7'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		224	mg/Kg	50	4.00

Sample: 243062 - SB-6 10'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73199
Prep Batch: 62741

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		371	mg/Kg	50	4.00

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Sample: 243063 - SB-6 15'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73200
Prep Batch: 62742

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		391	mg/Kg	50	4.00

Sample: 243065 - SB-7 0-1' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73200
Prep Batch: 62742

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-02
Sample Preparation: 2010-09-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9960	mg/Kg	100	4.00

Sample: 243065 - SB-7 0-1' (3' BEB)

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73146
Prep Batch: 62730

Analytical Method: S 8015 D
Date Analyzed: 2010-08-31
Sample Preparation: 2010-08-31

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		99.6	mg/Kg	1	100	100	70 - 130

Sample: 243065 - SB-7 0-1' (3' BEB)

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73175
Prep Batch: 62762

Analytical Method: S 8015 D
Date Analyzed: 2010-09-01
Sample Preparation: 2010-09-01

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

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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.01	mg/Kg	1	2.00	100	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.18	mg/Kg	1	2.00	109	42 - 159

Sample: 243066 - SB-7 3' (3' BEB)

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	73200	Date Analyzed:	2010-09-02	Analyzed By: AR
Prep Batch:	62742	Sample Preparation:	2010-09-01	Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		13400	mg/Kg	100	4.00

Sample: 243067 - SB-7 5' (3' BEB)

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	73200	Date Analyzed:	2010-09-02	Analyzed By: AR
Prep Batch:	62742	Sample Preparation:	2010-09-01	Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		12400	mg/Kg	100	4.00

Sample: 243068 - SB-7 7' (3' BEB)

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	73200	Date Analyzed:	2010-09-02	Analyzed By: AR
Prep Batch:	62742	Sample Preparation:	2010-09-01	Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9510	mg/Kg	100	4.00

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Sample: 243069 - SB-7 10' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73200	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62742				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6320	mg/Kg	100	4.00

Sample: 243070 - SB-7 15' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73200	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62742				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7050	mg/Kg	100	4.00

Sample: 243071 - SB-7 20' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73200	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62742				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5240	mg/Kg	100	4.00

Sample: 243072 - SB-7 25' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73200	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62742				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7680	mg/Kg	100	4.00

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Sample: 243073 - SB-7 30' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73200	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62742				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5550	mg/Kg	100	4.00

Sample: 243074 - SB-7 40' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73201	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62743				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8500	mg/Kg	100	4.00

Sample: 243075 - SB-7 50' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73201	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62743				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6290	mg/Kg	100	4.00

Sample: 243076 - SB-7 60' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73201	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62743				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5360	mg/Kg	100	4.00

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Sample: 243077 - SB-7 70' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73201	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62743				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1590	mg/Kg	100	4.00

Sample: 243078 - SB-7 80' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-02	Analyzed By:	AR
QC Batch:	73201	Sample Preparation:	2010-09-01	Prepared By:	AR
Prep Batch:	62743				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3640	mg/Kg	100	4.00

Method Blank (1) QC Batch: 73146

QC Batch:	73146	Date Analyzed:	2010-08-31	Analyzed By:	kg
Prep Batch:	62730	QC Preparation:	2010-08-31	Prepared By:	kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.5	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		99.5	mg/Kg	1	100	100	70 - 130

Method Blank (1) QC Batch: 73174

QC Batch:	73174	Date Analyzed:	2010-09-01	Analyzed By:	AG
Prep Batch:	62762	QC Preparation:	2010-09-01	Prepared By:	AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02

continued ...

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.05	mg/Kg	1	2.00	102	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.87	mg/Kg	1	2.00	94	55.4 - 132

Method Blank (1) QC Batch: 73175

QC Batch: 73175
Prep Batch: 62762

Date Analyzed: 2010-09-01
QC Preparation: 2010-09-01

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.02	mg/Kg	1	2.00	101	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.68	mg/Kg	1	2.00	84	52.4 - 130

Method Blank (1) QC Batch: 73196

QC Batch: 73196
Prep Batch: 62738

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 73197

QC Batch: 73197
Prep Batch: 62739

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

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Method Blank (1) QC Batch: 73198

QC Batch: 73198
Prep Batch: 62740

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 73199

QC Batch: 73199
Prep Batch: 62741

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 73200

QC Batch: 73200
Prep Batch: 62742

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 73201

QC Batch: 73201
Prep Batch: 62743

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch: 73146
Prep Batch: 62730

Date Analyzed: 2010-08-31
QC Preparation: 2010-08-31

Analyzed By: kg
Prepared By: kg

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	242	mg/Kg	1	250	<14.5	97	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	233	mg/Kg	1	250	<14.5	93	57.4 - 133.4	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	107	103	mg/Kg	1	100	107	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 73174
Prep Batch: 62762

Date Analyzed: 2010-09-01
QC Preparation: 2010-09-01

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.12	mg/Kg	1	2.00	<0.0150	106	81.9 - 108
Toluene	2.10	mg/Kg	1	2.00	<0.00950	105	81.9 - 107
Ethylbenzene	2.14	mg/Kg	1	2.00	<0.0106	107	78.4 - 107
Xylene	6.38	mg/Kg	1	6.00	<0.00930	106	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.11	mg/Kg	1	2.00	<0.0150	106	81.9 - 108	0	20
Toluene	2.10	mg/Kg	1	2.00	<0.00950	105	81.9 - 107	0	20
Ethylbenzene	2.14	mg/Kg	1	2.00	<0.0106	107	78.4 - 107	0	20
Xylene	6.41	mg/Kg	1	6.00	<0.00930	107	79.1 - 107	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.97	2.02	mg/Kg	1	2.00	98	101	70.2 - 114
4-Bromofluorobenzene (4-BFB)	2.18	2.23	mg/Kg	1	2.00	109	112	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 73175
Prep Batch: 62762

Date Analyzed: 2010-09-01
QC Preparation: 2010-09-01

Analyzed By: AG
Prepared By: AG

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.7	mg/Kg	1	20.0	<1.65	84	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.6	mg/Kg	1	20.0	<1.65	88	69.9 - 95.4	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.05	2.04	mg/Kg	1	2.00	102	102	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.86	1.81	mg/Kg	1	2.00	93	90	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 73196
Prep Batch: 62738

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.9	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 73197
Prep Batch: 62739

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.9	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	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: 73198
Prep Batch: 62740

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.5	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 73199
Prep Batch: 62741

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	95.6	mg/Kg	1	100	<2.18	96	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 73200
Prep Batch: 62742

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.9	mg/Kg	1	100	<2.18	97	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	5	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: 73201
Prep Batch: 62743

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.9	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	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: 243065

QC Batch: 73146
Prep Batch: 62730

Date Analyzed: 2010-08-31
QC Preparation: 2010-08-31

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	218	mg/Kg	1	250	<14.5	87	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	221	mg/Kg	1	250	<14.5	88	35.2 - 167.1	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
n-Tricosane	95.2	94.9	mg/Kg	1	100	95	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 243259

QC Batch: 73174
Prep Batch: 62762

Date Analyzed: 2010-09-01
QC Preparation: 2010-09-01

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.95	mg/Kg	1	2.00	<0.0150	98	80.5 - 112
Toluene	2.01	mg/Kg	1	2.00	<0.00950	100	82.4 - 113

continued ...

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Ethylbenzene	2.17	mg/Kg	1	2.00	<0.0106	108	83.9 - 114
Xylene	6.38	mg/Kg	1	6.00	<0.00930	106	84 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.92	mg/Kg	1	2.00	<0.0150	96	80.5 - 112	2	20
Toluene	2.00	mg/Kg	1	2.00	<0.00950	100	82.4 - 113	0	20
Ethylbenzene	2.18	mg/Kg	1	2.00	<0.0106	109	83.9 - 114	0	20
Xylene	6.42	mg/Kg	1	6.00	<0.00930	107	84 - 114	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)	2.10	2.11	mg/Kg	1	2	105	106	41.3 - 117
4-Bromofluorobenzene (4-BFB)	2.31	2.28	mg/Kg	1	2	116	114	35.5 - 129

Matrix Spike (MS-1) Spiked Sample: 243065

QC Batch: 73175
Prep Batch: 62762

Date Analyzed: 2010-09-01
QC Preparation: 2010-09-01

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.9	mg/Kg	1	20.0	<1.65	94	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	20.2	mg/Kg	1	20.0	<1.65	101	61.8 - 114	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)	2.10	2.19	mg/Kg	1	2	105	110	50 - 162
4-Bromofluorobenzene (4-BFB)	2.46	2.48	mg/Kg	1	2	123	124	50 - 162

Matrix Spike (MS-1) Spiked Sample: 243028

QC Batch: 73196
Prep Batch: 62738

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Report Date: September 7, 2010
114-6400644

Work Order: 10083111
COG/Pronghorn 8 in. Sec. 14

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Lea Co., NM

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	19900	mg/Kg	100	10000	10200	97	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	20600	mg/Kg	100	10000	10200	104	85 - 115	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: 243038

QC Batch: 73197
Prep Batch: 62739

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9800	mg/Kg	100	10000	<218	98	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10100	mg/Kg	100	10000	<218	101	85 - 115	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: 243050

QC Batch: 73198
Prep Batch: 62740

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	20500	mg/Kg	100	10000	10400	101	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	20800	mg/Kg	100	10000	10400	104	85 - 115	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: 243062

QC Batch: 73199
Prep Batch: 62741

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Report Date: September 7, 2010
114-6400644

Work Order: 10083111
COG/Pronghorn 8 in. Sec. 14

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9990	mg/Kg	100	10000	371	96	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10600	mg/Kg	100	10000	371	102	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 243073

QC Batch: 73200
Prep Batch: 62742

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	15600	mg/Kg	100	10000	5550	100	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	15900	mg/Kg	100	10000	5550	104	85 - 115	2	20

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

Matrix Spike (MS-1) Spiked Sample: 243175

QC Batch: 73201
Prep Batch: 62743

Date Analyzed: 2010-09-02
QC Preparation: 2010-09-01

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9830	mg/Kg	100	10000	<218	98	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10100	mg/Kg	100	10000	<218	101	85 - 115	3	20

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

Standard (CCV-2)

QC Batch: 73146

Date Analyzed: 2010-08-31

Analyzed By: kg

Report Date: September 7, 2010
114-6400644

Work Order: 10083111
COG/Pronghorn 8 in. Sec. 14

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	256	102	80 - 120	2010-08-31

Standard (CCV-3)

QC Batch: 73146

Date Analyzed: 2010-08-31

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	233	93	80 - 120	2010-08-31

Standard (CCV-4)

QC Batch: 73146

Date Analyzed: 2010-08-31

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	216	86	80 - 120	2010-08-31

Standard (CCV-1)

QC Batch: 73174

Date Analyzed: 2010-09-01

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.104	104	80 - 120	2010-09-01
Toluene		mg/Kg	0.100	0.102	102	80 - 120	2010-09-01
Ethylbenzene		mg/Kg	0.100	0.0992	99	80 - 120	2010-09-01
Xylene		mg/Kg	0.300	0.303	101	80 - 120	2010-09-01

Standard (CCV-2)

QC Batch: 73174

Date Analyzed: 2010-09-01

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.103	103	80 - 120	2010-09-01
Toluene		mg/Kg	0.100	0.100	100	80 - 120	2010-09-01
Ethylbenzene		mg/Kg	0.100	0.0984	98	80 - 120	2010-09-01

continued ...

Report Date: September 7, 2010
114-6400644

Work Order: 10083111
COG/Pronghorn 8 in. Sec. 14

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standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Xylene		mg/Kg	0.300	0.291	97	80 - 120	2010-09-01

Standard (CCV-1)

QC Batch: 73175 Date Analyzed: 2010-09-01 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.11	111	80 - 120	2010-09-01

Standard (CCV-2)

QC Batch: 73175 Date Analyzed: 2010-09-01 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.882	88	80 - 120	2010-09-01

Standard (ICV-1)

QC Batch: 73196 Date Analyzed: 2010-09-02 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-02

Standard (CCV-1)

QC Batch: 73196 Date Analyzed: 2010-09-02 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2010-09-02

Standard (ICV-1)

QC Batch: 73197 Date Analyzed: 2010-09-02 Analyzed By: AR

Report Date: September 7, 2010
114-6400644

Work Order: 10083111
COG/Pronghorn 8 in. Sec. 14

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Lea Co., NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2010-09-02

Standard (CCV-1)

QC Batch: 73197 Date Analyzed: 2010-09-02 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-02

Standard (ICV-1)

QC Batch: 73198 Date Analyzed: 2010-09-02 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-02

Standard (CCV-1)

QC Batch: 73198 Date Analyzed: 2010-09-02 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.9	100	85 - 115	2010-09-02

Standard (ICV-1)

QC Batch: 73199 Date Analyzed: 2010-09-02 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.9	99	85 - 115	2010-09-02

Standard (CCV-1)

QC Batch: 73199 Date Analyzed: 2010-09-02 Analyzed By: AR

Report Date: September 7, 2010
114-6400644

Work Order: 10083111
COG/Pronghorn 8 in. Sec. 14

Page Number: 38 of 38
Lea Co., NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-02

Standard (ICV-1)

QC Batch: 73200

Date Analyzed: 2010-09-02

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-02

Standard (CCV-1)

QC Batch: 73200

Date Analyzed: 2010-09-02

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.9	100	85 - 115	2010-09-02

Standard (ICV-1)

QC Batch: 73201

Date Analyzed: 2010-09-02

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-02

Standard (CCV-1)

QC Batch: 73201

Date Analyzed: 2010-09-02

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-02

WD #: 10083111

Analysis Request of Chain of Custody Record



TETRA TECH

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

CLIENT NAME:

COG

SITE MANAGER:

Ike Tavaraz

PROJECT NO.:

114-6400644

PROJECT NAME:

Pronghorn 8" Sec 14

LAB I.D. NUMBER

2010

DATE

TIME

MATRIX

GRAB

COMP

TIME

SAMPLE IDENTIFICATION

Len Co., Wm

NUMBER OF CONTAINERS

1

PRELIMINARY

Y/N

HCL

HN03

ICE

NONE

BTX 8021B

TPH 8015 MOD

PAH 8270

RCRA 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. B240/B260/B24

GC/MS Semi. Vol. B270/B25

PCB's 8080/808

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

RELINQUISHED BY: (Signature)

RELINQUISHED BY: (Signature)

RECEIVING LABORATORY:

ADDRESS:

QTY:

CONTACT:

STATE:

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REMARKS: * BTX on STX on 4 highest TPHs

** IF TPH 2 1000 mg/kg do not sample down for TPH

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

SAMPLED BY: (Print & Initial)

SAMPLE SHIPPED BY: (Circle)

FEDEX

BUS

UPS

TETRA TECH CONTACT PERSON:

Ike Tavaraz

Results by:

RUSH Charges

Authorized:

Yes

No

DATE:

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WO # 10083111

Analysis Request of Chain of Custody Record



TETRA TECH

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

CLIENT NAME: COG		SITE MANAGER: Ike Tavaraz	
PROJECT NO.: 114-6100644		PROJECT NAME: Prighon 8" Sec 14	
LAB I.D. NUMBER	DATE	TIME	MATRIX
243017	8/27		S
018			/
019			/
020			/
021			/
022			/
023			/
024			/
025			/
026			/

LAB I.D. NUMBER	DATE	TIME	MATRIX	GRAB	SAMPLE IDENTIFICATION	PRESERVATIVE METHOD				NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HN03	ICE	NONE	
SB-1	0-1'			X												
SB-1	3'															
SB-1	5'															
SB-1	7'															
SB-1	10'															
SB-1	15'															
SB-1	20'															
SB-2	0-1'															
SB-2	3'															
SB-2	5'															

RELINQUISHED BY: (Signature)	Date: 8/27/10	RECEIVED BY: (Signature)	Date: 8/27/10
RELINQUISHED BY: (Signature)	Date: 10/25	RECEIVED BY: (Signature)	Date: 10/25
RELINQUISHED BY: (Signature)	Date: _____	RECEIVED BY: (Signature)	Date: _____
RELINQUISHED BY: (Signature)	Date: _____	RECEIVED BY: (Signature)	Date: _____

RECEIVING LABORATORY: TRACE	STATE: TX	ZIP: _____
CITY: Midland	PHONE: _____	
CONTACT: _____		

REMARKS: 4.3c intact	
SAMPLE CONDITION WHEN RECEIVED: 4.3c intact	

RECEIVED BY: (Signature) Ike Tavaraz	
TETRA TECH CONTACT PERSON:	
HAND DELIVERED: FEDEX	
SAMPLE SHIPPED BY: (Circle) BUS	
AIRBILL #: _____	
OTHER: _____	
Results by: _____	
RUSH Charges Authorized: _____	
Yes _____ No _____	

Analysis Request of Chain of Custody Record

TETRA TECH

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

(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Tavaraz		PROJECT NAME: Prighom 8" Sec 14		LAB I.D. NUMBER		DATE	TIME	MATRIX	COMR	GRAB	SAMPLE IDENTIFICATION				PRESERVATIVE METHOD				NUMBER OF CONTAINERS		FILTERED (Y/N)	HCL	HNO3	ICE	NONE
243027	028	8/27	2010			S	X	SB-2	7'																		
028	029							SB-2	10'																		
029	030							SB-2	15'																		
030	031							SB-2	20'																		
031	032							SB-2	25'																		
032	033							SB-2	30'																		
033	034							SB-2	40'																		
034	035							SB-3	0-1'																		
035	036							SB-3	3'																		
036								SB-3	5'																		

RELINQUISHED BY: (Signature) [Signature] Date: 08/30/10 Time: 1645

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RECEIVED BY: (Signature) [Signature] Date: 08/30/10 Time: 1645

RECEIVED BY: (Signature) [Signature] Date: 08/30/10 Time: 1645

RECEIVED BY: (Signature) [Signature] Date: 08/30/10 Time: 1645

RECEIVING LABORATORY: TRACE

ADDRESS: Missed

CITY: TX STATE: TX ZIP:

CONTACT: PHONE: DATE: TIME:

REMARKS: * BTEX on OTEX on 4 highest TMS

* 24 24 TPN 2,000 mg/kg run next sample down for TPN

4.0°C instant

*44 IF TPH $\geq$ 1,000 mg/kg run next sample down for TPH

WO # 10083111

Analysis Request of Chain of Custody Record



TETRA TECH

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

CLIENT NAME: COG		SITE MANAGER: Ike Tavaraz		PRESERVATIVE METHOD	
PROJECT NO.: 114-6100644		PROJECT NAME: Pronghorn 8" Sec 14		NUMBER OF CONTAINERS	
LAB I.D. NUMBER		DATE		TIME	
243037		8/27		2010	
038					
039					
040					
041					
042					
043					
044					
045					
046					
MATRIX		COMB		GRAB	
S		X		X	
SB-3		7'		X	
SB-3		10'		X	
SB-3		15'		X	
SB-3		20'		X	
SB-4		0-1'		X	
SB-4		3'		X	
SB-4		5'		X	
SB-4		7'		X	
SB-4		10'		X	
SB-4		15'		X	
SAMPLE IDENTIFICATION		Lea Co., NM			
BTX 80218					
TPH 8015 MOD					
TX1005 (Ext to C36)					
PAH 8270					
RCRA 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 8080/808					
Pest. 808/608					
Chloride					
Gamma Spec.					
Alpha Beta (Air)					
PLM (Asbestos)					
Major Anions/Cations, pH, TDS					

RECEIVED BY: (Signature)		RECEIVED BY: (Signature)		DATE: 8/20/10		DATE: 8/29/10	
RELINQUISHED BY: (Signature)		RELINQUISHED BY: (Signature)		DATE: 8/20/10		DATE: 8/29/10	
RELINQUISHED BY: (Signature)		RELINQUISHED BY: (Signature)		DATE: 8/20/10		DATE: 8/29/10	
RECEIVING LABORATORY: TRACE		RECEIVED BY: (Signature)		DATE: 8/20/10		DATE: 8/29/10	
CITY: Midland		STATE: TX		ZIP: 79701		PHONE: (432) 682-4559	
CONTACT: TX		REMARKS: BTX run BTX on 4 high TPH's		BTX 80218 1000 mg/kg run next sample for TPH		BTX 80218 1000 mg/kg run next sample for TPH	
SAMPLE CONDITION WHEN RECEIVED: 40°C intact		LABORATORY RETAINS YELLOW COPY - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.		LABORATORY RETAINS YELLOW COPY - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.		LABORATORY RETAINS YELLOW COPY - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.	

ANALYSIS REQUEST
(Circle or Specify Method No.)

SAMPLED BY: (Print & Initial) **Kim** Date: 8/29/10
 SAMPLE SHIPPED BY: (Circle) **BUS**
 FEDEX ☐ HAND DELIVERED ☒ UPS
 TETRA TECH CONTACT PERSON: **Ike Tavaraz**
 Results by: **RUSH Charges Authorized:** Yes No

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 7

(F: 7



TETRA TECH

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

[illegible]

SAMPLE CONDITION WHEN RECEIVED:	REMARKS:
4.3° intact	STEEL, run STEEL on 4 highest TPN'S STEEL TPN'S 1000 m/ks run not steady down for TPN'S

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

WO #: 10083111

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		PROJECT NAME		SITE MANAGER		PRESERVATIVE METHOD		ANALYSIS REQUEST	
COG		114-6400644		Ike Tavaraz		NONE		(Circle or Specify Method No.)	
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMPR	GRAB	SAMPLE IDENTIFICATION			
213077	8/27		S	X	X	SB-7 70' (3' BEB)			
078	8/27		S	X	X	SB-7 80' (3' BEB)			
									PAH 8270
									TCRA Metals Ag As Ba Cd Cr Pb Hg Se
									TCRP Metals Ag As Ba Cd Vr Pd Hg Se
									TCRP Volatiles
									TCRP Semi Volatiles
									RCI
									GC/MS Vol. 8240/8250/624
									GC/MS Semi. Vol. 8270/625
									PCB's 8080/608
									Pest. 808/608
									Chloride
									Gamma Spec.
									Alpha Beta (Air)
									PLM (Asbestos)
									Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)		Date:	Time:	RECEIVED BY: (Signature)		Date:	Time:
<i>[Signature]</i>		8/30/10	1645	<i>[Signature]</i>		8/30/10	1645
RELINQUISHED BY: (Signature)		Date:	Time:	RECEIVED BY: (Signature)		Date:	Time:
RELINQUISHED BY: (Signature)		Date:	Time:	RECEIVED BY: (Signature)		Date:	Time:
RECEIVING LABORATORY: TRACE		RECEIVED BY: (Signature)					
ADDRESS: Midland		STATE: TX	ZIP:	DATE:			
CONTACT:		PHONE:	REMARKS: 2 BTX run BTX on 4 higher TPH's				
SAMPLE CONDITION WHEN RECEIVED: 4.0c intact		** BTXPH 2 1000 mg/kg run next sample down for TPH					

Summary Report

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

Report Date: September 14, 2010

Work Order: 10090307



Project Location: Lea Co., NM
Project Name: COG/Pronghorn 8 in. Sec. 14
Project Number: 114-6400644

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243526	SB-8 1' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243527	SB-8 3' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243528	SB-8 5' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243529	SB-8 7' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243530	SB-8 10' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243531	SB-8 15' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243532	SB-8 20' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243533	SB-8 25' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243534	SB-8 30' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243535	SB-8 40' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243536	SB-8 50' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243537	SB-8 60' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243538	SB-8 70' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243539	SB-8 80' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243540	SB-8 90' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243541	SB-8 100' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243542	SB-8 110' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243543	SB-8 120' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243544	SB-9 1' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243545	SB-9 3' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243546	SB-9 5' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243547	SB-9 7' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243548	SB-9 10' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243549	SB-9 15' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243550	SB-9 20' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243551	SB-9 25' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243552	SB-9 30' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243553	SB-9 40' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243554	SB-9 50' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243555	SB-9 60' (3' BEB)	soil	2010-08-30	00:00	2010-09-02

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243556	SB-10 1' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243557	SB-10 3' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243558	SB-10 5' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243559	SB-10 7' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243560	SB-10 10' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243561	SB-10 15' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243562	SB-10 20' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243563	SB-10 25' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243564	SB-10 30' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243566	SB-11 1' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243567	SB-11 3' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243568	SB-11 5' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243569	SB-11 7' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243570	SB-11 10' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243571	SB-11 15' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243572	SB-11 20' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243573	SB-11 25' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243574	SB-11 30' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243576	SB-12 1' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243577	SB-12 3' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243578	SB-12 5' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243579	SB-12 7' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243580	SB-12 10' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243581	SB-12 15' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243582	SB-12 20' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243583	SB-12 25' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243584	SB-12 30' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243587	SB-7 80' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243588	SB-7 90' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243589	SB-7 100' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243590	SB-7 110' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243591	SB-7 120' (3' BEB)	soil	2010-08-31	00:00	2010-09-02

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)
243526 - SB-8 1' (3' BEB)	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243544 - SB-9 1' (3' BEB)	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243556 - SB-10 1' (3' BEB)	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243566 - SB-11 1' (3' BEB)	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243576 - SB-12 1' (3' BEB)	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 243526 - SB-8 1' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		14100	mg/Kg	4.00

Sample: 243527 - SB-8 3' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		11600	mg/Kg	4.00

Sample: 243528 - SB-8 5' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		13200	mg/Kg	4.00

Sample: 243529 - SB-8 7' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		7900	mg/Kg	4.00

Sample: 243530 - SB-8 10' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		7720	mg/Kg	4.00

Sample: 243531 - SB-8 15' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		5900	mg/Kg	4.00

Sample: 243532 - SB-8 20' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		7560	mg/Kg	4.00

Sample: 243533 - SB-8 25' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		10400	mg/Kg	4.00

Sample: 243534 - SB-8 30' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		9780	mg/Kg	4.00

Sample: 243535 - SB-8 40' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		10500	mg/Kg	4.00

Sample: 243536 - SB-8 50' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		4880	mg/Kg	4.00

Sample: 243537 - SB-8 60' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		8430	mg/Kg	4.00

Sample: 243538 - SB-8 70' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		3490	mg/Kg	4.00

Sample: 243539 - SB-8 80' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		1350	mg/Kg	4.00

Sample: 243540 - SB-8 90' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		569	mg/Kg	4.00

Sample: 243541 - SB-8 100' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		553	mg/Kg	4.00

Sample: 243542 - SB-8 110' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243543 - SB-8 120' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		258	mg/Kg	4.00

Sample: 243544 - SB-9 1' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		11200	mg/Kg	4.00

Sample: 243545 - SB-9 3' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		5240	mg/Kg	4.00

Sample: 243546 - SB-9 5' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		2190	mg/Kg	4.00

Sample: 243547 - SB-9 7' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		1060	mg/Kg	4.00

Sample: 243548 - SB-9 10' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		5770	mg/Kg	4.00

Sample: 243549 - SB-9 15' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		5160	mg/Kg	4.00

Sample: 243550 - SB-9 20' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		3710	mg/Kg	4.00

Sample: 243551 - SB-9 25' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		5720	mg/Kg	4.00

Sample: 243552 - SB-9 30' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		5250	mg/Kg	4.00

Sample: 243553 - SB-9 40' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		901	mg/Kg	4.00

Sample: 243554 - SB-9 50' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243555 - SB-9 60' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243556 - SB-10 1' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243557 - SB-10 3' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		546	mg/Kg	4.00

Sample: 243558 - SB-10 5' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		1070	mg/Kg	4.00

Sample: 243559 - SB-10 7' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		2160	mg/Kg	4.00

Sample: 243560 - SB-10 10' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243561 - SB-10 15' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243562 - SB-10 20' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243563 - SB-10 25' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243564 - SB-10 30' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 243566 - SB-11 1' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		11800	mg/Kg	4.00

Sample: 243567 - SB-11 3' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		11900	mg/Kg	4.00

Sample: 243568 - SB-11 5' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		12300	mg/Kg	4.00

Sample: 243569 - SB-11 7' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		1200	mg/Kg	4.00

Sample: 243570 - SB-11 10' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		2400	mg/Kg	4.00

Sample: 243571 - SB-11 15' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		529	mg/Kg	4.00

Sample: 243572 - SB-11 20' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		2870	mg/Kg	4.00

Sample: 243573 - SB-11 25' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		202	mg/Kg	4.00

Sample: 243574 - SB-11 30' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		252	mg/Kg	4.00

Sample: 243576 - SB-12 1' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		14400	mg/Kg	4.00

Sample: 243577 - SB-12 3' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		11900	mg/Kg	4.00

Sample: 243578 - SB-12 5' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		9520	mg/Kg	4.00

Sample: 243579 - SB-12 7' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		13400	mg/Kg	4.00

Sample: 243580 - SB-12 10' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		2660	mg/Kg	4.00

Sample: 243581 - SB-12 15' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		341	mg/Kg	4.00

Sample: 243582 - SB-12 20' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		306	mg/Kg	4.00

Sample: 243583 - SB-12 25' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		572	mg/Kg	4.00

Sample: 243584 - SB-12 30' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		321	mg/Kg	4.00

Sample: 243587 - SB-7 80' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		3360	mg/Kg	4.00

Sample: 243588 - SB-7 90' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		814	mg/Kg	4.00

Sample: 243589 - SB-7 100' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		3290	mg/Kg	4.00

Sample: 243590 - SB-7 110' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		467	mg/Kg	4.00

Sample: 243591 - SB-7 120' (3' BEB)

Param	Flag	Result	Units	RL
Chloride		834	mg/Kg	4.00



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 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: September 14, 2010

Work Order: 10090307



Project Location: Lea Co., NM
Project Name: COG/Pronghorn 8 in. Sec. 14
Project Number: 114-6400644

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
243526	SB-8 1' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243527	SB-8 3' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243528	SB-8 5' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243529	SB-8 7' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243530	SB-8 10' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243531	SB-8 15' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243532	SB-8 20' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243533	SB-8 25' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243534	SB-8 30' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243535	SB-8 40' (3' BEB)	soil	2010-08-30	00:00	2010-09-02

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243536	SB-8 50' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243537	SB-8 60' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243538	SB-8 70' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243539	SB-8 80' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243540	SB-8 90' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243541	SB-8 100' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243542	SB-8 110' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243543	SB-8 120' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243544	SB-9 1' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243545	SB-9 3' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243546	SB-9 5' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243547	SB-9 7' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243548	SB-9 10' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243549	SB-9 15' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243550	SB-9 20' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243551	SB-9 25' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243552	SB-9 30' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243553	SB-9 40' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243554	SB-9 50' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243555	SB-9 60' (3' BEB)	soil	2010-08-30	00:00	2010-09-02
243556	SB-10 1' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243557	SB-10 3' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243558	SB-10 5' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243559	SB-10 7' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243560	SB-10 10' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243561	SB-10 15' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243562	SB-10 20' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243563	SB-10 25' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243564	SB-10 30' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243566	SB-11 1' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243567	SB-11 3' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243568	SB-11 5' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243569	SB-11 7' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243570	SB-11 10' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243571	SB-11 15' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243572	SB-11 20' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243573	SB-11 25' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243574	SB-11 30' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243576	SB-12 1' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243577	SB-12 3' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243578	SB-12 5' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243579	SB-12 7' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243580	SB-12 10' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243581	SB-12 15' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243582	SB-12 20' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243583	SB-12 25' (3' BEB)	soil	2010-08-31	00:00	2010-09-02

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243584	SB-12 30' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243587	SB-7 80' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243588	SB-7 90' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243589	SB-7 100' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243590	SB-7 110' (3' BEB)	soil	2010-08-31	00:00	2010-09-02
243591	SB-7 120' (3' BEB)	soil	2010-08-31	00:00	2010-09-02

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

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project COG/Pronghorn 8 in. Sec. 14 were received by TraceAnalysis, Inc. on 2010-09-02 and assigned to work order 10090307. Samples for work order 10090307 were received intact at a temperature of 3.7 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	62833	2010-09-03 at 09:00	73284	2010-09-03 at 09:58
Chloride (Titration)	SM 4500-Cl B	62848	2010-09-07 at 09:01	73314	2010-09-08 at 10:46
Chloride (Titration)	SM 4500-Cl B	62849	2010-09-07 at 09:02	73315	2010-09-08 at 10:46
Chloride (Titration)	SM 4500-Cl B	62850	2010-09-07 at 09:02	73316	2010-09-08 at 10:47
Chloride (Titration)	SM 4500-Cl B	62851	2010-09-07 at 09:03	73317	2010-09-08 at 10:48
Chloride (Titration)	SM 4500-Cl B	62852	2010-09-07 at 09:03	73393	2010-09-10 at 11:22
Chloride (Titration)	SM 4500-Cl B	62929	2010-09-09 at 09:21	73394	2010-09-10 at 11:22
Chloride (Titration)	SM 4500-Cl B	62930	2010-09-09 at 09:22	73395	2010-09-10 at 11:23
TPH DRO - NEW	S 8015 D	62827	2010-09-03 at 10:09	73259	2010-09-03 at 10:09
TPH GRO	S 8015 D	62833	2010-09-03 at 09:00	73268	2010-09-03 at 10:26

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 10090307 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: 243526 - SB-8 1' (3' BEB)

Laboratory: Midland
Analysis: BTEX
QC Batch: 73284
Prep Batch: 62833

Analytical Method: S 8021B
Date Analyzed: 2010-09-03
Sample Preparation: 2010-09-03

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.74	mg/Kg	1	2.00	87	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.71	mg/Kg	1	2.00	86	38.4 - 157

Sample: 243526 - SB-8 1' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73314
Prep Batch: 62848

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-07

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14100	mg/Kg	100	4.00

Sample: 243526 - SB-8 1' (3' BEB)

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73259
Prep Batch: 62827

Analytical Method: S 8015 D
Date Analyzed: 2010-09-03
Sample Preparation: 2010-09-03

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

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

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		92.8	mg/Kg	1	100	93	70 - 130

Sample: 243526 - SB-8 1' (3' BEB)

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73268
Prep Batch: 62833

Analytical Method: S 8015 D
Date Analyzed: 2010-09-03
Sample Preparation: 2010-09-03

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.71	mg/Kg	1	2.00	86	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.51	mg/Kg	1	2.00	76	42 - 159

Sample: 243527 - SB-8 3' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73314
Prep Batch: 62848

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-07

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11600	mg/Kg	100	4.00

Sample: 243528 - SB-8 5' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73314
Prep Batch: 62848

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-07

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		13200	mg/Kg	100	4.00

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Sample: 243529 - SB-8 7' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73314	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62848				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7900	mg/Kg	100	4.00

Sample: 243530 - SB-8 10' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73314	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62848				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7720	mg/Kg	100	4.00

Sample: 243531 - SB-8 15' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73314	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62848				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5900	mg/Kg	100	4.00

Sample: 243532 - SB-8 20' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73314	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62848				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7560	mg/Kg	100	4.00

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Sample: 243533 - SB-8 25' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73314	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62848				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10400	mg/Kg	100	4.00

Sample: 243534 - SB-8 30' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9780	mg/Kg	100	4.00

Sample: 243535 - SB-8 40' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10500	mg/Kg	100	4.00

Sample: 243536 - SB-8 50' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4880	mg/Kg	100	4.00

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Sample: 243537 - SB-8 60' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8430	mg/Kg	100	4.00

Sample: 243538 - SB-8 70' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3490	mg/Kg	100	4.00

Sample: 243539 - SB-8 80' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1350	mg/Kg	100	4.00

Sample: 243540 - SB-8 90' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		569	mg/Kg	50	4.00

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Sample: 243541 - SB-8 100' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		553	mg/Kg	50	4.00

Sample: 243542 - SB-8 110' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243543 - SB-8 120' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73315	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62849				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		258	mg/Kg	50	4.00

Sample: 243544 - SB-9 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73316	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62850				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11200	mg/Kg	100	4.00

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Sample: 243544 - SB-9 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-03	Analyzed By:	kg
QC Batch:	73259	Sample Preparation:	2010-09-03	Prepared By:	kg
Prep Batch:	62827				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		93.7	mg/Kg	1	100	94	70 - 130

Sample: 243544 - SB-9 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-03	Analyzed By:	AG
QC Batch:	73268	Sample Preparation:	2010-09-03	Prepared By:	AG
Prep Batch:	62833				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.74	mg/Kg	1	2.00	87	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.46	mg/Kg	1	2.00	73	42 - 159

Sample: 243545 - SB-9 3' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73316	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62850				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5240	mg/Kg	100	4.00

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Sample: 243546 - SB-9 5' (3' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73316	Date Analyzed:	2010-09-08
Prep Batch:	62850	Sample Preparation:	2010-09-07
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2190	mg/Kg	100	4.00

Sample: 243547 - SB-9 7' (3' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73316	Date Analyzed:	2010-09-08
Prep Batch:	62850	Sample Preparation:	2010-09-07
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1060	mg/Kg	100	4.00

Sample: 243548 - SB-9 10' (3' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73316	Date Analyzed:	2010-09-08
Prep Batch:	62850	Sample Preparation:	2010-09-07
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5770	mg/Kg	100	4.00

Sample: 243549 - SB-9 15' (3' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73316	Date Analyzed:	2010-09-08
Prep Batch:	62850	Sample Preparation:	2010-09-07
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5160	mg/Kg	100	4.00

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Sample: 243550 - SB-9 20' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73316	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62850				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3710	mg/Kg	100	4.00

Sample: 243551 - SB-9 25' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73316	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62850				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5720	mg/Kg	100	4.00

Sample: 243552 - SB-9 30' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73316	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62850				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5250	mg/Kg	100	4.00

Sample: 243553 - SB-9 40' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73316	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62850				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		901	mg/Kg	50	4.00

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Sample: 243554 - SB-9 50' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243555 - SB-9 60' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243556 - SB-10 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2010-09-03	Analyzed By:	AG
QC Batch:	73284	Sample Preparation:	2010-09-03	Prepared By:	AG
Prep Batch:	62833				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.08	mg/Kg	1	2.00	104	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	1	2.00	97	38.4 - 157

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Sample: 243556 - SB-10 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243556 - SB-10 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-03	Analyzed By:	kg
QC Batch:	73259	Sample Preparation:	2010-09-03	Prepared By:	kg
Prep Batch:	62827				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		97.1	mg/Kg	1	100	97	70 - 130

Sample: 243556 - SB-10 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-03	Analyzed By:	AG
QC Batch:	73268	Sample Preparation:	2010-09-03	Prepared By:	AG
Prep Batch:	62833				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.06	mg/Kg	1	2.00	103	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.72	mg/Kg	1	2.00	86	42 - 159

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Sample: 243557 - SB-10 3' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		546	mg/Kg	50	4.00

Sample: 243558 - SB-10 5' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1070	mg/Kg	100	4.00

Sample: 243559 - SB-10 7' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2160	mg/Kg	100	4.00

Sample: 243560 - SB-10 10' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

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Sample: 243561 - SB-10 15' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243562 - SB-10 20' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243563 - SB-10 25' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-08	Analyzed By:	AR
QC Batch:	73317	Sample Preparation:	2010-09-07	Prepared By:	AR
Prep Batch:	62851				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 243564 - SB-10 30' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

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Sample: 243566 - SB-11 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11800	mg/Kg	100	4.00

Sample: 243566 - SB-11 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-03	Analyzed By:	kg
QC Batch:	73259	Sample Preparation:	2010-09-03	Prepared By:	kg
Prep Batch:	62827				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		92.9	mg/Kg	1	100	93	70 - 130

Sample: 243566 - SB-11 1' (3' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-03	Analyzed By:	AG
QC Batch:	73268	Sample Preparation:	2010-09-03	Prepared By:	AG
Prep Batch:	62833				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.80	mg/Kg	1	2.00	90	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.47	mg/Kg	1	2.00	74	42 - 159

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Sample: 243567 - SB-11 3' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11900	mg/Kg	100	4.00

Sample: 243568 - SB-11 5' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		12300	mg/Kg	100	4.00

Sample: 243569 - SB-11 7' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1200	mg/Kg	50	4.00

Sample: 243570 - SB-11 10' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2400	mg/Kg	100	4.00

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Sample: 243571 - SB-11 15' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		529	mg/Kg	50	4.00

Sample: 243572 - SB-11 20' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2870	mg/Kg	100	4.00

Sample: 243573 - SB-11 25' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		202	mg/Kg	50	4.00

Sample: 243574 - SB-11 30' (3' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73393	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62852				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		252	mg/Kg	50	4.00

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Sample: 243576 - SB-12 1' (3' BEB)

Laboratory: Midland
Analysis: BTEX
QC Batch: 73284
Prep Batch: 62833

Analytical Method: S 8021B
Date Analyzed: 2010-09-03
Sample Preparation: 2010-09-03

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.03	mg/Kg	1	2.00	102	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.83	mg/Kg	1	2.00	92	38.4 - 157

Sample: 243576 - SB-12 1' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73394
Prep Batch: 62929

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14400	mg/Kg	100	4.00

Sample: 243576 - SB-12 1' (3' BEB)

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73259
Prep Batch: 62827

Analytical Method: S 8015 D
Date Analyzed: 2010-09-03
Sample Preparation: 2010-09-03

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		94.5	mg/Kg	1	100	94	70 - 130

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Sample: 243576 - SB-12 1' (3' BEB)

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73268
Prep Batch: 62833

Analytical Method: S 8015 D
Date Analyzed: 2010-09-03
Sample Preparation: 2010-09-03

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.01	mg/Kg	1	2.00	100	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.62	mg/Kg	1	2.00	81	42 - 159

Sample: 243577 - SB-12 3' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73394
Prep Batch: 62929

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11900	mg/Kg	100	4.00

Sample: 243578 - SB-12 5' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73394
Prep Batch: 62929

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9520	mg/Kg	100	4.00

Sample: 243579 - SB-12 7' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73394
Prep Batch: 62929

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

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Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		13400	mg/Kg	100	4.00

Sample: 243580 - SB-12 10' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73394 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62929 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2660	mg/Kg	100	4.00

Sample: 243581 - SB-12 15' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73394 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62929 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		341	mg/Kg	50	4.00

Sample: 243582 - SB-12 20' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73394 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62929 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		306	mg/Kg	50	4.00

Sample: 243583 - SB-12 25' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73394 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62929 Sample Preparation: 2010-09-09 Prepared By: AR

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Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		572	mg/Kg	50	4.00

Sample: 243584 - SB-12 30' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73394 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62929 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		321	mg/Kg	50	4.00

Sample: 243587 - SB-7 80' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73394 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62929 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3360	mg/Kg	100	4.00

Sample: 243588 - SB-7 90' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73395 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62930 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		814	mg/Kg	50	4.00

Sample: 243589 - SB-7 100' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73395 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62930 Sample Preparation: 2010-09-09 Prepared By: AR

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Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3290	mg/Kg	100	4.00

Sample: 243590 - SB-7 110' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73395 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62930 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		467	mg/Kg	50	4.00

Sample: 243591 - SB-7 120' (3' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73395 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62930 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		834	mg/Kg	50	4.00

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QC Batch: 73259 Date Analyzed: 2010-09-03 Analyzed By: kg
Prep Batch: 62827 QC Preparation: 2010-09-03 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.5	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		82.6	mg/Kg	1	100	83	70 - 130

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Method Blank (1) QC Batch: 73268

QC Batch: 73268
Prep Batch: 62833

Date Analyzed: 2010-09-03
QC Preparation: 2010-09-03

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.96	mg/Kg	1	2.00	98	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.19	mg/Kg	1	2.00	60	52.4 - 130

Method Blank (1) QC Batch: 73284

QC Batch: 73284
Prep Batch: 62833

Date Analyzed: 2010-09-03
QC Preparation: 2010-09-03

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.96	mg/Kg	1	2.00	98	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.32	mg/Kg	1	2.00	66	55.4 - 132

Method Blank (1) QC Batch: 73314

QC Batch: 73314
Prep Batch: 62848

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 73315

QC Batch: 73315
Prep Batch: 62849

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

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Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 73316

QC Batch: 73316 Date Analyzed: 2010-09-08 Analyzed By: AR
Prep Batch: 62850 QC Preparation: 2010-09-07 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 73317

QC Batch: 73317 Date Analyzed: 2010-09-08 Analyzed By: AR
Prep Batch: 62851 QC Preparation: 2010-09-07 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 73393

QC Batch: 73393 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62852 QC Preparation: 2010-09-07 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 73394

QC Batch: 73394 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62929 QC Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

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Method Blank (1) QC Batch: 73395

QC Batch: 73395
Prep Batch: 62930

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch: 73259
Prep Batch: 62827

Date Analyzed: 2010-09-03
QC Preparation: 2010-09-03

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	196	mg/Kg	1	250	<14.5	78	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	205	mg/Kg	1	250	<14.5	82	57.4 - 133.4	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	100	99.1	mg/Kg	1	100	100	99	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 73268
Prep Batch: 62833

Date Analyzed: 2010-09-03
QC Preparation: 2010-09-03

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.8	mg/Kg	1	20.0	<1.65	79	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.3	mg/Kg	1	20.0	<1.65	82	69.9 - 95.4	3	20

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

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.95	1.94	mg/Kg	1	2.00	98	97	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.54	1.49	mg/Kg	1	2.00	77	74	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 73284
Prep Batch: 62833

Date Analyzed: 2010-09-03
QC Preparation: 2010-09-03

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.00	mg/Kg	1	2.00	<0.0150	100	81.9 - 108
Toluene	1.97	mg/Kg	1	2.00	<0.00950	98	81.9 - 107
Ethylbenzene	1.98	mg/Kg	1	2.00	<0.0106	99	78.4 - 107
Xylene	5.90	mg/Kg	1	6.00	<0.00930	98	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.01	mg/Kg	1	2.00	<0.0150	100	81.9 - 108	0	20
Toluene	1.98	mg/Kg	1	2.00	<0.00950	99	81.9 - 107	0	20
Ethylbenzene	2.02	mg/Kg	1	2.00	<0.0106	101	78.4 - 107	2	20
Xylene	6.03	mg/Kg	1	6.00	<0.00930	100	79.1 - 107	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.03	2.01	mg/Kg	1	2.00	102	100	70.2 - 114
4-Bromofluorobenzene (4-BFB)	2.02	2.02	mg/Kg	1	2.00	101	101	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 73314
Prep Batch: 62848

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	95.7	mg/Kg	1	100	<2.18	96	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	6	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: 73315
Prep Batch: 62849

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.4	mg/Kg	1	100	<2.18	96	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	6	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 73316
Prep Batch: 62850

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.7	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 73317
Prep Batch: 62851

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.3	mg/Kg	1	100	<2.18	97	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	104	mg/Kg	1	100	<2.18	104	85 - 115	7	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: 73393
Prep Batch: 62852

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.8	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 73394
Prep Batch: 62929

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.4	mg/Kg	1	100	<2.18	96	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	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: 73395
Prep Batch: 62930

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.1	mg/Kg	1	100	<2.18	96	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	99.8	mg/Kg	1	100	<2.18	100	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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Matrix Spike (MS-1) Spiked Sample: 243576

QC Batch: 73259
Prep Batch: 62827

Date Analyzed: 2010-09-03
QC Preparation: 2010-09-03

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	237	mg/Kg	1	250	<14.5	95	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	229	mg/Kg	1	250	<14.5	92	35.2 - 167.1	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	94.4	92.3	mg/Kg	1	100	94	92	70 - 130

Matrix Spike (MS-1) Spiked Sample: 243478

QC Batch: 73268
Prep Batch: 62833

Date Analyzed: 2010-09-03
QC Preparation: 2010-09-03

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.7	mg/Kg	1	20.0	<1.65	88	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	18.3	mg/Kg	1	20.0	<1.65	92	61.8 - 114	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.61	1.83	mg/Kg	1	2	80	92	50 - 162
4-Bromofluorobenzene (4-BFB)	1.63	1.85	mg/Kg	1	2	82	92	50 - 162

Matrix Spike (MS-1) Spiked Sample: 243533

QC Batch: 73314
Prep Batch: 62848

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	20400	mg/Kg	100	10000	10400	100	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	21000	mg/Kg	100	10000	10400	106	85 - 115	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: 243543

QC Batch: 73315
Prep Batch: 62849

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10200	mg/Kg	100	10000	258	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10600	mg/Kg	100	10000	258	103	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: 243553

QC Batch: 73316
Prep Batch: 62850

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10800	mg/Kg	100	10000	901	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11000	mg/Kg	100	10000	901	101	85 - 115	2	20

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

Matrix Spike (MS-1) Spiked Sample: 243563

QC Batch: 73317
Prep Batch: 62851

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9940	mg/Kg	100	10000	<218	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10500	mg/Kg	100	10000	<218	105	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 243574

QC Batch: 73393
Prep Batch: 62852

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-07

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10100	mg/Kg	100	10000	252	98	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10300	mg/Kg	100	10000	252	100	85 - 115	2	20

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

Matrix Spike (MS-1) Spiked Sample: 243587

QC Batch: 73394
Prep Batch: 62929

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	12900	mg/Kg	100	10000	3360	95	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	13200	mg/Kg	100	10000	3360	98	85 - 115	2	20

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

Matrix Spike (MS-1) Spiked Sample: 243665

QC Batch: 73395
Prep Batch: 62930

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	22200	mg/Kg	100	10000	12300	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	22600	mg/Kg	100	10000	12300	103	85 - 115	2	20

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

Standard (CCV-2)

QC Batch: 73259

Date Analyzed: 2010-09-03

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	234	94	80 - 120	2010-09-03

Standard (CCV-3)

QC Batch: 73259

Date Analyzed: 2010-09-03

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	278	111	80 - 120	2010-09-03

Standard (CCV-4)

QC Batch: 73259

Date Analyzed: 2010-09-03

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	249	100	80 - 120	2010-09-03

Standard (CCV-2)

QC Batch: 73268

Date Analyzed: 2010-09-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.960	96	80 - 120	2010-09-03

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Standard (CCV-3)

QC Batch: 73268

Date Analyzed: 2010-09-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	80 - 120	2010-09-03

Standard (CCV-2)

QC Batch: 73284

Date Analyzed: 2010-09-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.106	106	80 - 120	2010-09-03
Toluene		mg/Kg	0.100	0.106	106	80 - 120	2010-09-03
Ethylbenzene		mg/Kg	0.100	0.107	107	80 - 120	2010-09-03
Xylene		mg/Kg	0.300	0.314	105	80 - 120	2010-09-03

Standard (CCV-3)

QC Batch: 73284

Date Analyzed: 2010-09-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.102	102	80 - 120	2010-09-03
Toluene		mg/Kg	0.100	0.100	100	80 - 120	2010-09-03
Ethylbenzene		mg/Kg	0.100	0.0997	100	80 - 120	2010-09-03
Xylene		mg/Kg	0.300	0.294	98	80 - 120	2010-09-03

Standard (ICV-1)

QC Batch: 73314

Date Analyzed: 2010-09-08

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-08

Standard (CCV-1)

QC Batch: 73314

Date Analyzed: 2010-09-08

Analyzed By: AR

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.2	99	85 - 115	2010-09-08

Standard (ICV-1)

QC Batch: 73315

Date Analyzed: 2010-09-08

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-08

Standard (CCV-1)

QC Batch: 73315

Date Analyzed: 2010-09-08

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-08

Standard (ICV-1)

QC Batch: 73316

Date Analyzed: 2010-09-08

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2010-09-08

Standard (CCV-1)

QC Batch: 73316

Date Analyzed: 2010-09-08

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-08

Standard (ICV-1)

QC Batch: 73317

Date Analyzed: 2010-09-08

Analyzed By: AR

Report Date: September 14, 2010
114-6400644

Work Order: 10090307
COG/Pronghorn 8 in. Sec. 14

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Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-08

Standard (CCV-1)

QC Batch: 73317

Date Analyzed: 2010-09-08

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.3	99	85 - 115	2010-09-08

Standard (ICV-1)

QC Batch: 73393

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.7	100	85 - 115	2010-09-10

Standard (CCV-1)

QC Batch: 73393

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-10

Standard (ICV-1)

QC Batch: 73394

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.9	100	85 - 115	2010-09-10

Standard (CCV-1)

QC Batch: 73394

Date Analyzed: 2010-09-10

Analyzed By: AR

Report Date: September 14, 2010
114-6400644

Work Order: 10090307
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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-10

Standard (ICV-1)

QC Batch: 73395

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-10

Standard (CCV-1)

QC Batch: 73395

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2010-09-10

WO #: 10090307

Analysis Request of Chain of Custody Record



TETRA TECH

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

CLIENT NAME: COG		SITE MANAGER: Ike Tavaraz	
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