



TETRA TECH

June 15, 2010

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
1301 West Grand Avenue
Artesia, NM 88210

**Re: Assessment, Remediation and Closure Report for the COG Operating, LLC,
Loco Hills SWD Line, Located in Unit Letters H, Section 25, Township 17
South, Range 30 East, Eddy County, New Mexico.**

Mr. Bratcher:

Tetra Tech, Inc. was contacted by COG Operating, LLC to investigate and remediate a spill that occurred at the COG Loco Hills SWD Line. The SWD line (source area) is located in Unit Letter H, Section 25, Township 17 South, Range 30 East, Eddy County, New Mexico. The site coordinates are N 32.80680°, W 103.91776°. The Site is shown on Figures 1 and 2.

Background

On September 2, 2009, an 8" line opened due to a faulty installation, releasing approximately 300 barrels of produced water. Approximately 260 barrels were recovered using a vacuum truck. The spill area measured approximately 560' long, with a width ranging from 5' to 20'. The spill area was immediately scraped and covered with a liner to prevent further vertical migration. The spill location is shown on Figure 3. The C-141 (initial and final) are included in Appendix A.

Groundwater and Regulatory

No water wells were located in Section 25, Township 17 South, Range 30 East, in which the site is located. However, one well is located in Section 34, Township 17 South, Range 31 East with a depth to water at 217' and three wells in Township 16 South, Range 31 East with reported groundwater depths of 288' (Section 12), 113' (Section 13) and 290' (Section 31). See Appendix B for groundwater data.

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,

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TETRA TECH

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 on the regional groundwater data, the proposed RRAL for TPH is 5,000 mg/kg.

Assessment and Corrective Action

On September 16, 2009, Tetra Tech personnel inspected the spill area. A total of twelve (12) auger holes were installed using a stainless steel hand auger. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chlorides by EPA method SM 4500-Cl B. The auger hole results are summarized in Table 1. The auger hole locations are shown on Figure 3.

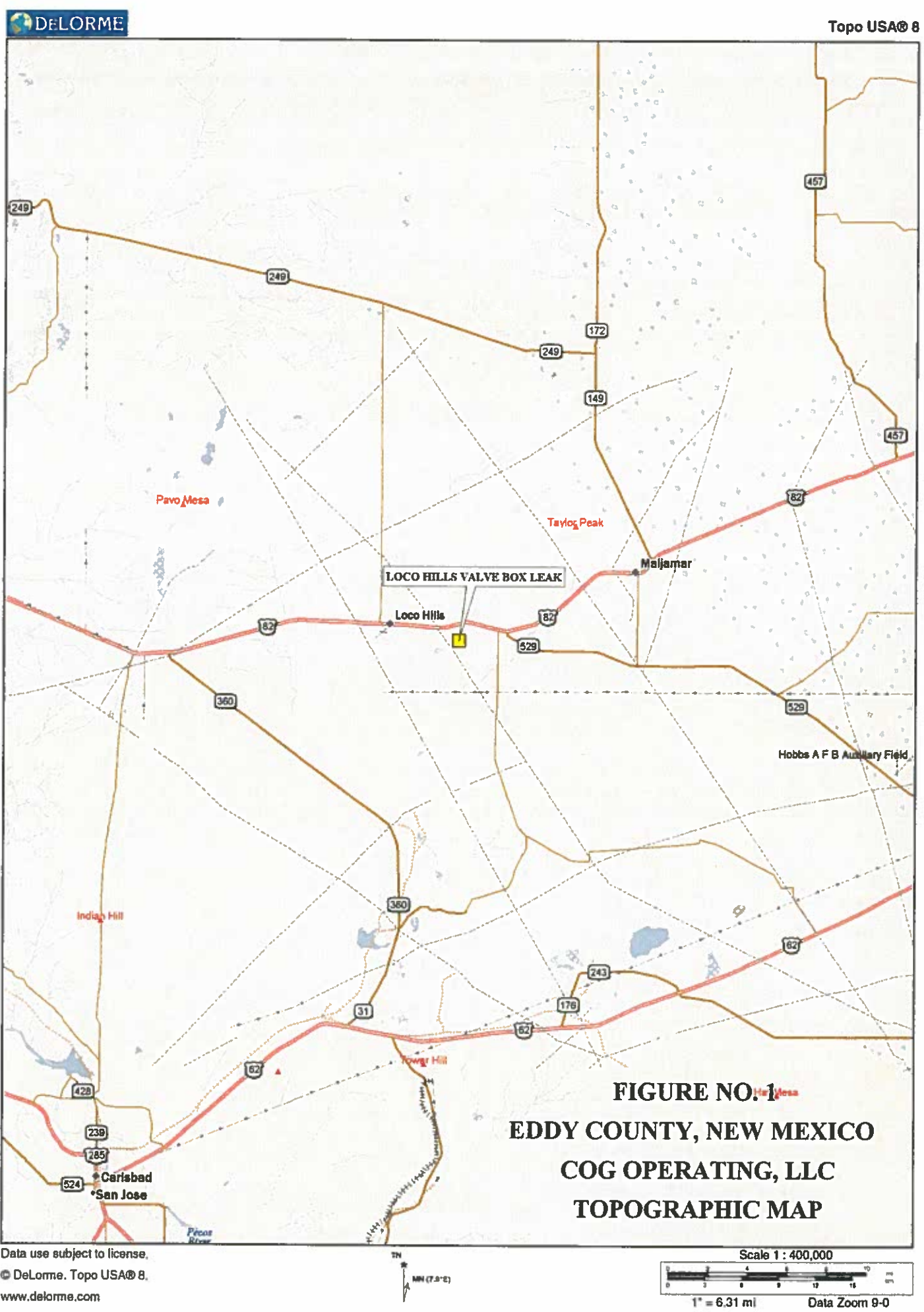
Referring to Table 1, all of the TPH and BTEX samples were below their respective RRAL. Elevated chloride concentrations were detected in the majority of the auger holes. Auger holes (AH-1, AH-2 and AH-11) did not exhibit any chloride impact to the subsurface soils. Auger holes (AH-6, AH-7, and AH-9) did show declining chloride concentrations with depth of <200 mg/kg at 4', 360 mg/kg at 3' and <200 at 7', respectively. The remaining auger holes were not vertically defined.

Tetra Tech personnel discussed the chloride cleanup concentrations for the Site with Mr. Mike Bratcher of the NMOCD. Based upon our discussion of the site setting and depth to groundwater, Mike Bratcher requested that chloride concentrations in the pasture greater than 5,000 mg/kg be excavated and transported offsite for disposal. In addition, upon completion of the removal of the impacted soils above 5,000 mg/kg, Mr. Bratcher requested the remaining chloride impact be vertically defined.

On April 4, 2010, Tetra Tech personnel supervised the excavation of the impacted soil. During the excavation, confirmation samples were collected and submitted to the laboratory for analysis of chlorides to verify depths of impact. A total of nine (9) confirmation samples were collected and analyzed across the site. The confirmation sample locations are shown on Figure 3 and the analytical results are summarized in Table 2. The remaining soils of less than 5,000 mg/kg were vertically defined. Based on the confirmation sampling, approximately 2,300 tons of chloride impacted soil was excavated from the release area and transported offsite for disposal at Lea Land, Inc. located in Carlsbad, New Mexico. Upon completion of the excavation, the site was backfilled with clean soil and brought up to surface.

As part of the surface restoration activities, sand bags were installed at the site for rainwater runoff and erosion controls. In addition, the disturbed areas were seeded with a BLM recommended mixture to establish growth at the Site. The BLM will continue to monitor the site until growth is established at the site.

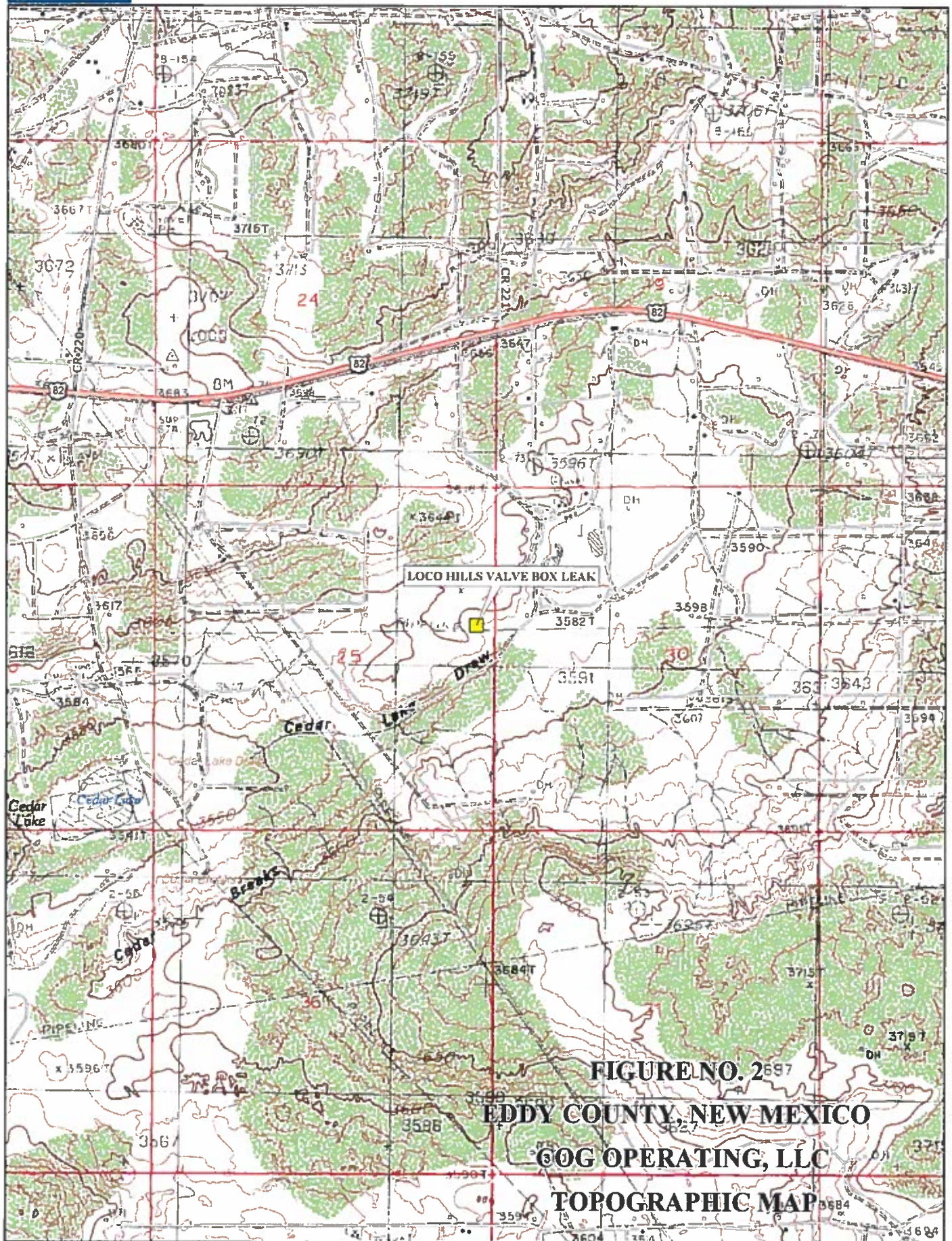
FIGURES



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Scale 1 : 400,000
1" = 6.31 mi
Data Zoom 9-0


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Scale 1 : 24,000

$$1'' = 2,000.0 \text{ ft}$$

Data Zoom 13-0

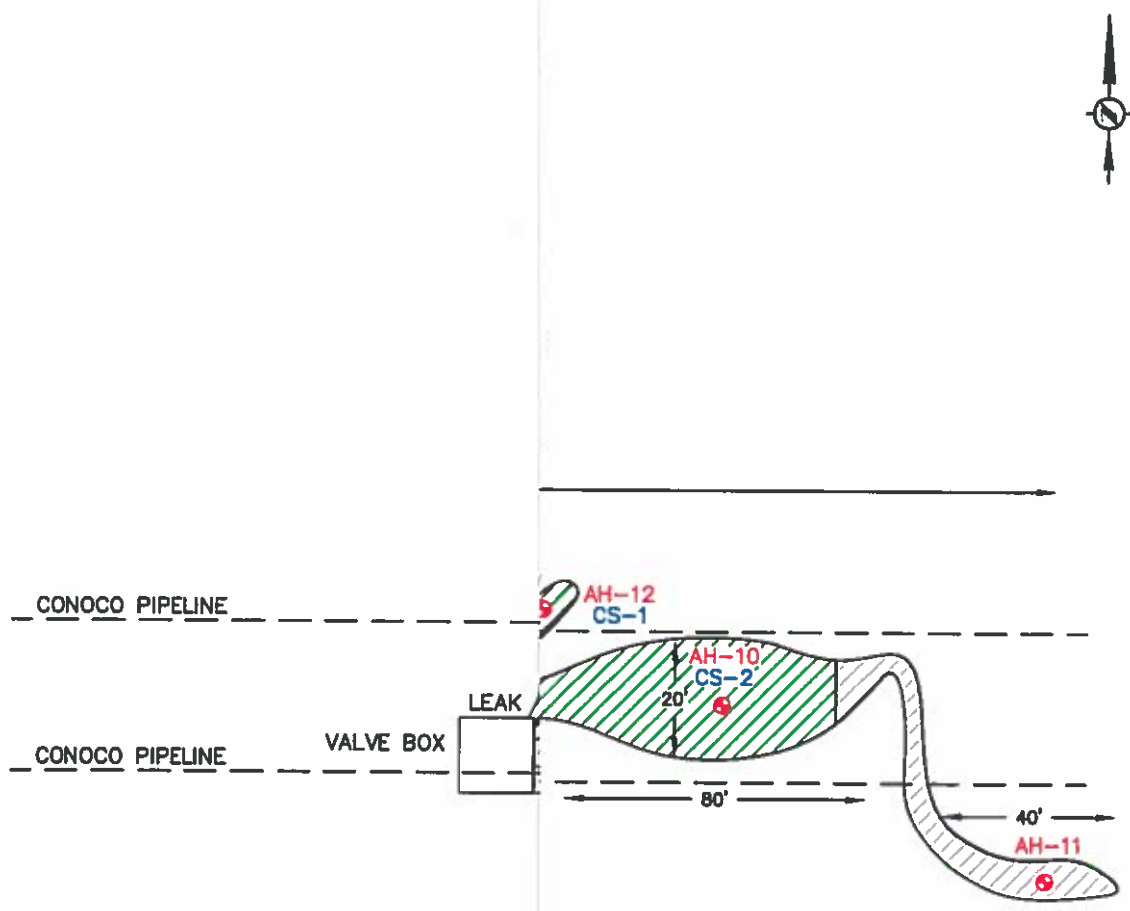


FIGURE NO. 3

EDDY COUNTY, NEW MEXICO

COG OPERATING, LLC

LOCO HILLS
VALVE BOX LEAK

TETRA TECH, INC.
MIDLAND, TEXAS

- SPILL AREA
- EXCAVATED AREA
- SAMPLE LOCATIONS (9-16-10)
- CONFIRMATION SAMPLE LOCATIONS

E:
0/19/09
I. BY:
J
3
20\8400293
LAY VALVE BOX

TABLES

Table 1
COG OPERATING LLC
Ondalay Pipe - Loco Hills Line Leak
Assessment - Augerholes
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
AH-1	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<200
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	<200
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	<200
AH-2	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	<200
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	<200
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	<200
	9/16/2009	3-3.5'	X		-	-	-	-	-	-	-	<200
AH-3	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	1,230
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	8,050
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	9,130
	9/16/2009	3-3.5'	X		-	-	-	-	-	-	-	8,860
	9/16/2009	4-4.5'	X		-	-	-	-	-	-	-	8,200
	9/16/2009	5-5.5'	X		-	-	-	-	-	-	-	10,700
	9/16/2009	6	X		-	-	-	-	-	-	-	13,800
AH-4	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	1,050
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	2,110
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	2,610
	9/16/2009	3-3.5'	X		-	-	-	-	-	-	-	1,690
	9/16/2009	4-4.5'	X		-	-	-	-	-	-	-	350
	9/16/2009	5-5.5'	X		-	-	-	-	-	-	-	680
	9/16/2009	6-6.5'	X		-	-	-	-	-	-	-	4,720
	9/16/2009	7-7.5'	X		-	-	-	-	-	-	-	2,760
	9/16/2009	8-8.5'	X		-	-	-	-	-	-	-	2,460

(-) Not Analyzed

Table 1
COG OPERATING LLC
Ondalay Pipe - Loco Hills Line Leak
Assessment - Augerholes
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
AH-5	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	4,680
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	8,660
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	11,500
AH-6	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	2,970
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	3,750
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	10,400
	9/16/2009	3-3.5'	X		-	-	-	-	-	-	-	3,480
	9/16/2009	4-4.5'	X		-	-	-	-	-	-	-	<200
	9/16/2009	5-5.5'	X		-	-	-	-	-	-	-	<200
AH-7	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	1,710
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	10,000
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	2,640
	9/16/2009	3-3.5'	X		-	-	-	-	-	-	-	360
AH-8	9/16/2009	0-1'	X		177	<1.00	177	-	-	-	-	<200
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	7,930
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	10,200
	9/16/2009	3-3.5'	X		-	-	-	-	-	-	-	11,600
	9/16/2009	4-4.5'	X		-	-	-	-	-	-	-	9,880
	9/16/2009	5-5.5'	X		-	-	-	-	-	-	-	19,100
	9/16/2009	6-6.5'	X		-	-	-	-	-	-	-	5,530
	9/16/2009	7-7.5'	X		-	-	-	-	-	-	-	<200
	9/16/2009	8-8.5'	X		-	-	-	-	-	-	-	<200
	9/16/2009	9-9.5'	X		-	-	-	-	-	-	-	<200

(-) Not Analyzed

Table 1
COG OPERATING LLC
Ondalay Pipe - Loco Hills Line Leak
Assessment - Augerholes
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
AH-9	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	563
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	7,810
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	8,880
	9/16/2009	3-3.5'	X		-	-	-	-	-	-	-	14,000
	9/16/2009	4-4.5'	X		-	-	-	-	-	-	-	12,800
	9/16/2009	5-5.5'	X		-	-	-	-	-	-	-	4,710
	9/16/2009	6-6.5'	X		-	-	-	-	-	-	-	14,900
	9/16/2009	7-7.5'	X		-	-	-	-	-	-	-	<200
	9/16/2009	8-8.5'	X		-	-	-	-	-	-	-	<200
AH-10	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	1,620
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	7,150
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	8,060
	9/16/2009	3-3.5'	X		-	-	-	-	-	-	-	9,340
	9/16/2009	4-4.5'	X		-	-	-	-	-	-	-	7,400
	9/16/2009	5-5.5'	X		-	-	-	-	-	-	-	10,300
AH-11	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	<200
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	<200
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	<200
AH-12	9/16/2009	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	6,780
	9/16/2009	1-1.5'	X		-	-	-	-	-	-	-	7,990
	9/16/2009	2-2.5'	X		-	-	-	-	-	-	-	7,220

(-) Not Analyzed

Table 2
COG Operating
Ondalay - Loco Hills Leak
Confirmation Sampling
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
			In-Situ	Removed	
CS-1	04/05/10	4'		X	9950
	04/05/10	6'		X	5050
	04/05/10	8'		X	6380
	04/05/10	10'		X	7850
	04/05/10	12'		X	6640
	04/05/10	15'		X	6930
	04/05/10	19'		X	6060
	04/06/10	22' Bottom hole	X		4,890
	04/06/10	25'	X		4,500
	04/06/10	28'	X		<200
CS-2	04/06/10	10'		X	420
	04/06/10	12' Bottom hole	X		218
CS-3	04/06/10	7'		X	6,370
	04/06/10	10'		X	11,200
	04/06/10	13'		X	6,300
	04/06/10	15' Bottom Hole	X		<200
	04/06/10	18'	X		218
	04/06/10	21'	X		<200
CS-4	04/07/10	8' Bottom Hole	X		<200
	04/07/10	11'	X		<200
	04/07/10	14'	X		<200

(-) Not Analyzed

Table 2
COG Operating
Ondalay - Loco Hills Leak
Confirmation Sampling
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
			In-Situ	Removed	
CS-5	04/07/10	3' Bottom Hole	X		<200
	04/07/10	6'	X		518
	04/07/10	9'	X		<200
	04/07/10	12'	X		243
CS-6	04/06/10	4'		X	13,000
	04/07/10	7'		X	8,780
	04/07/10	10' Bottom Hole	X		<200
	04/07/10	13'	X		<200
CS-7	04/07/10	5' Bottom Hole	X		217
	04/07/10	8'	X		<200
	04/07/10	11'	X		<200
CS-8	04/08/10	9' Bottom Hole	X		212
	04/08/10	12'	X		<200
	04/08/10	15'	X		<200
CS-9	04/08/10	9' Bottom Hole	X		<200
	04/08/10	12'	X		<200

(-) Not Analyzed

APPENDIX A

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Road, Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural ResourcesOil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505Form C-1
Revised October 10, 20Submit 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	Kanicia Carrillo
Address	550 W. Texas, Suite 100 Midland, TX 79701	Telephone No.	432-685-4332
Facility Name	8" Loco Hills SWD line	Facility Type	SWD waterline (.4 miles South of the Jackson B #5)
Surface Owner	State	Mineral Owner	
		Lease No. 30-015-04037	

*** Jackson B #5, Operator – Burnett Oil Company LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	I	17S	30E	660	North	1980	East	Eddy

Latitude N 32° 48.409

Longitude W 103° 55.067

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	300bbls	Volume Recovered	260bbls
Source of Release	SWD valve	Date and Hour of Occurrence	09/02/09	Date and Hour of Discovery	09/02/09
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required				
By Whom?	If YES, To Whom?				
Pat Ellis	Mike Bratcher – OCD				
Was a Watercourse Reached?	Date and Hour				
☐ Yes ☒ No	08/10/09 4:25pm				
			If YES, Volume Impacting the Watercourse.		

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

8" line open due to faulty installation. We picked up water and removed 12" of the contaminated soil.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for your 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: Kanicia Castillo	Approved by District Supervisor:		
Title: Regulatory Analyst	Approval Date:	Expiration Date:	
E-mail Address: kcarrillo@conchoresources.com	Conditions of Approval:		Attached ☐
Date: 09/14/09	Phone: 432-685-4332		

* Attach Additional Sheets If Necessary

District I
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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-14
Revised October 10, 2001
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 1300 Midland, Texas 79701	Telephone No.	(432) 685-4332
Facility Name	8" Loco Hills SWD Line	Facility Type	SWD waterline (0.4 miles south of Jackson B #5)
Surface Owner	Federal and State	Mineral Owner	
		Lease No.	30-015-04037

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	25	17S	30E					Eddy

Latitude N 32°48.409 Longitude W 103°55.067

NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	300 bbls	Volume Recovered	260 bbls
Source of Release	SWD valve	Date and Hour of Occurrence	Unknown 9/2/09	Date and Hour of Discovery	9/2/09
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Mike Bratcher - OCD		
By Whom?	Rick Wright	Date and Hour	9/2/09		
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	N/A		

If a Watercourse was Impacted, Describe Fully.*

N/A

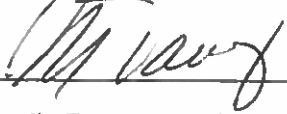
Describe Cause of Problem and Remedial Action Taken.*

8" line open due to a faulty installation. We picked up water and removed 12" of the contaminated soil.

Describe Area Affected and Cleanup Action Taken.*

The spill area was assessed to evaluate the soil impact at the Site. All soil samples were below the RRAL for TPH and BTEX. Elevated chloride concentrations were removed and hauled to Lea Land for disposal. Confirmation samples were all below NMOCD recommended levels. The excavation was backfilled with clean soil and surface restored to BLM requirements. A closure report has been prepared and submitted to the NMOCD and BLM for review and approval.

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

Signature:				OIL CONSERVATION DIVISION	
Printed Name:	Ike Tavarez (agent for COG)			Approved by District Supervisor: 	
Title:	Project Manager			Approval Date:	5/3/2023
E-mail Address:	ike.tavarez@tetrattech.com			Expiration Date:	N/A
Date:	6-17-10			Conditions of Approval:	
Phone:	(432) 682-4559			Closed under previous rules	Attached ☐

Attach Additional Sheets If Necessary

APPENDIX B

**Water Well Data
Average Depth to Groundwater (ft)
COG - 8" Loco Hills SWD Line Leak
Eddy County, New Mexico**

16 South			29 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
110	30	29	28	27	26
31	32	33	34	35	36

16 South			30 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

16 South			31 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	288
19	20	21	22	23	113
30	29	28	27	26	25
31	32	33	34	35	290

17 South			29 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	210	28	27	26
31	32	33	34	35	36

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

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

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

18 South			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

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 Field water level

143 NMOCD Groundwater map well location



New Mexico Office of the State Engineer Water Column/Average Depth to Water

No records found.

PLSS Search:

Township: 17S Range: 30E



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Sub basin Use County	Q Q Q 64 16 4	Sec Tws Rng	X	Y	Depth Well	Depth Water	Water Column
RA 11590 POD1	ED	2 1 3	32 17S 31E	603315	3628545	158		
RA 11590 POD3	ED	3 1 2	32 17S 31E	603932	3629260	60		
RA 11590 POD4	ED	4 1 1	32 17S 31E	603308	3629253	55		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 3

PLSS Search:

Township: 17S

Range: 31E

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WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Depth Y	Depth Well	Water Column
CP 00896	STK	ED		1	4	4	14	18S	31E	609166 3623398*	400		
Average Depth to Water:												--	
Minimum Depth:												--	
Maximum Depth:												--	

Record Count: 1

PLSS Search:

Township: 18S Range: 31E

*UTM location was derived from PLSS - see Help

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New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 03435 APPRO	PRO	LE		1	1	05	16S	31E		602954	3646955*			
L 04671	PRO	LE		1	1	2	12	16S	31E	610114	3645538*	340	288	52
L 04671 APPRO	PRO	LE		1	1	2	12	16S	31E	610114	3645538*	340	288	52
L 10203	STK	LE		4	4	2	14	16S	31E	609130	3643310*	310		
L 10206	STK	LE		2	2	23	16S	31E		609045	3642204*	280		

Average Depth to Water: 288 feet

Minimum Depth: 288 feet

Maximum Depth: 288 feet

Record Count: 5

PLSS Search:

Township: 16S

Range: 31E

*UTM location was derived from PLSS - see Help

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WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00818	STK	LE		1	4	26	18S	30E		599289	3620364*	240		
CP 00819	STK	LE		2	4	32	18S	30E		594878	3618720*	150		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 2

PLSS Search:

Township: 18S

Range: 30E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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WATER COLUMN/ AVERAGE
DEPTH TO WATER

APPENDIX C

Report Date: September 28, 2009

Work Order: 9091807

Page Number: 1 of 11

Summary Report

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

Report Date: September 28, 2009

Work Order: 9091807



Project Location: Eddy Co., NM
Project Name: Ondalay/COG-Lochills Line Leak
Project Number: 114-6400293

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
210217	AH-1 0-1'	soil	2009-09-16	00:00	2009-09-17
210218	AH-1 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210219	AH-1 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210220	AH-2 0-1'	soil	2009-09-16	00:00	2009-09-17
210221	AH-2 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210222	AH-2 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210223	AH-2 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210224	AH-3 0-1'	soil	2009-09-16	00:00	2009-09-17
210225	AH-3 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210226	AH-3 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210227	AH-3 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210228	AH-3 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210229	AH-3 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210230	AH-3 6'	soil	2009-09-16	00:00	2009-09-17
210231	AH-4 0-1'	soil	2009-09-16	00:00	2009-09-17
210232	AH-4 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210233	AH-4 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210234	AH-4 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210235	AH-4 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210236	AH-4 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210237	AH-4 6'-6.5'	soil	2009-09-16	00:00	2009-09-17
210238	AH-4 7'-7.5'	soil	2009-09-16	00:00	2009-09-17
210239	AH-4 8'-8.5'	soil	2009-09-16	00:00	2009-09-17
210240	AH-5 0-1'	soil	2009-09-16	00:00	2009-09-17
210241	AH-5 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210242	AH-5 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210243	AH-6 0-1'	soil	2009-09-16	00:00	2009-09-17
210244	AH-6 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210245	AH-6 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210246	AH-6 3'-3.5'	soil	2009-09-16	00:00	2009-09-17

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Report Date: September 28, 2009

Work Order: 9091807

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Sample	Description	Matrix	Date Taken	Time Taken	Date Received
210247	AH-6 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210248	AH-6 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210249	AH-7 0-1'	soil	2009-09-16	00:00	2009-09-17
210250	AH-7 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210251	AH-7 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210252	AH-7 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210253	AH-8 0-1'	soil	2009-09-16	00:00	2009-09-17
210254	AH-8 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210255	AH-8 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210256	AH-8 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210257	AH-8 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210258	AH-8 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210259	AH-8 6'-6.5'	soil	2009-09-16	00:00	2009-09-17
210260	AH-8 7'-7.5'	soil	2009-09-16	00:00	2009-09-17
210261	AH-8 8'-8.5'	soil	2009-09-16	00:00	2009-09-17
210262	AH-8 9'-9.5'	soil	2009-09-16	00:00	2009-09-17
210263	AH-9 0-1'	soil	2009-09-16	00:00	2009-09-17
210264	AH-9 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210265	AH-9 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210266	AH-9 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210267	AH-9 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210268	AH-9 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210269	AH-9 6'-6.5'	soil	2009-09-16	00:00	2009-09-17
210270	AH-9 7'-7.5'	soil	2009-09-16	00:00	2009-09-17
210271	AH-9 8'-8.5'	soil	2009-09-16	00:00	2009-09-17
210272	AH-10 0-1'	soil	2009-09-16	00:00	2009-09-17
210273	AH-10 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210274	AH-10 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210275	AH-10 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210276	AH-10 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210277	AH-10 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210278	AH-11 0-1'	soil	2009-09-16	00:00	2009-09-17
210279	AH-11 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210280	AH-11 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210281	AH-12 0-1'	soil	2009-09-16	00:00	2009-09-17
210282	AH-12 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210283	AH-12 2'-2.5'	soil	2009-09-16	00:00	2009-09-17

Sample - Field Code	BTEX				TPH DRO DRO	TPH GRO GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)		
210217 - AH-1 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
210220 - AH-2 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
210224 - AH-3 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
210231 - AH-4 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
210240 - AH-5 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
210243 - AH-6 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
210249 - AH-7 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00

continued ...

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... continued

Sample - Field Code	BTEX				TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
210253 - AH-8 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	177	<1.00
210263 - AH-9 0-1'					<50.0	<1.00
210272 - AH-10 0-1'					<50.0	<1.00
210278 - AH-11 0-1'					<50.0	<1.00
210281 - AH-12 0-1'					<50.0	<1.00

Sample: 210217 - AH-1 0-1'

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

Sample: 210218 - AH-1 1'-1.5'

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

Sample: 210219 - AH-1 2'-2.5'

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

Sample: 210220 - AH-2 0-1'

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

Sample: 210221 - AH-2 1'-1.5'

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

Sample: 210222 - AH-2 2'-2.5'

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

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Sample: 210223 - AH-2 3'-3.5'

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

Sample: 210224 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		1230	mg/Kg	4.00

Sample: 210225 - AH-3 1'-1.5'

Param	Flag	Result	Units	RL
Chloride		8050	mg/Kg	4.00

Sample: 210226 - AH-3 2'-2.5'

Param	Flag	Result	Units	RL
Chloride		9130	mg/Kg	4.00

Sample: 210227 - AH-3 3'-3.5'

Param	Flag	Result	Units	RL
Chloride		8860	mg/Kg	4.00

Sample: 210228 - AH-3 4'-4.5'

Param	Flag	Result	Units	RL
Chloride		8200	mg/Kg	4.00

Sample: 210229 - AH-3 5'-5.5'

Param	Flag	Result	Units	RL
Chloride		10700	mg/Kg	4.00

Sample: 210230 - AH-3 6'

Param	Flag	Result	Units	RL
Chloride		13800	mg/Kg	4.00

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Sample: 210231 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		1050	mg/Kg	4.00

Sample: 210232 - AH-4 1'-1.5'

Param	Flag	Result	Units	RL
Chloride		2110	mg/Kg	4.00

Sample: 210233 - AH-4 2'-2.5'

Param	Flag	Result	Units	RL
Chloride		2610	mg/Kg	4.00

Sample: 210234 - AH-4 3'-3.5'

Param	Flag	Result	Units	RL
Chloride		1690	mg/Kg	4.00

Sample: 210235 - AH-4 4'-4.5'

Param	Flag	Result	Units	RL
Chloride		350	mg/Kg	4.00

Sample: 210236 - AH-4 5'-5.5'

Param	Flag	Result	Units	RL
Chloride		680	mg/Kg	4.00

Sample: 210237 - AH-4 6'-6.5'

Param	Flag	Result	Units	RL
Chloride		4720	mg/Kg	4.00

Sample: 210238 - AH-4 7'-7.5'

Param	Flag	Result	Units	RL
Chloride		2760	mg/Kg	4.00

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Sample: 210239 - AH-4 8'-8.5'

Param	Flag	Result	Units	RL
Chloride		2460	mg/Kg	4.00

Sample: 210240 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		4680	mg/Kg	4.00

Sample: 210241 - AH-5 1'-1.5'

Param	Flag	Result	Units	RL
Chloride		8660	mg/Kg	4.00

Sample: 210242 - AH-5 2'-2.5'

Param	Flag	Result	Units	RL
Chloride		11500	mg/Kg	4.00

Sample: 210243 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		2970	mg/Kg	4.00

Sample: 210244 - AH-6 1'-1.5'

Param	Flag	Result	Units	RL
Chloride		3750	mg/Kg	4.00

Sample: 210245 - AH-6 2'-2.5'

Param	Flag	Result	Units	RL
Chloride		10400	mg/Kg	4.00

Sample: 210246 - AH-6 3'-3.5'

Param	Flag	Result	Units	RL
Chloride		3480	mg/Kg	4.00

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Sample: 210247 - AH-6 4'-4.5'

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

Sample: 210248 - AH-6 5'-5.5'

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

Sample: 210249 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		1710	mg/Kg	4.00

Sample: 210250 - AH-7 1'-1.5'

Param	Flag	Result	Units	RL
Chloride		10000	mg/Kg	4.00

Sample: 210251 - AH-7 2'-2.5'

Param	Flag	Result	Units	RL
Chloride		2640	mg/Kg	4.00

Sample: 210252 - AH-7 3'-3.5'

Param	Flag	Result	Units	RL
Chloride		360	mg/Kg	4.00

Sample: 210253 - AH-8 0-1'

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

Sample: 210254 - AH-8 1'-1.5'

Param	Flag	Result	Units	RL
Chloride		7930	mg/Kg	4.00

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Sample: 210255 - AH-8 2'-2.5'

Param	Flag	Result	Units	RL
Chloride		10200	mg/Kg	4.00

Sample: 210256 - AH-8 3'-3.5'

Param	Flag	Result	Units	RL
Chloride		11600	mg/Kg	4.00

Sample: 210257 - AH-8 4'-4.5'

Param	Flag	Result	Units	RL
Chloride		9880	mg/Kg	4.00

Sample: 210258 - AH-8 5'-5.5'

Param	Flag	Result	Units	RL
Chloride		19100	mg/Kg	4.00

Sample: 210259 - AH-8 6'-6.5'

Param	Flag	Result	Units	RL
Chloride		5530	mg/Kg	4.00

Sample: 210260 - AH-8 7'-7.5'

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

Sample: 210261 - AH-8 8'-8.5'

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

Sample: 210262 - AH-8 9'-9.5'

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

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Sample: 210263 - AH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		563	mg/Kg	4.00

Sample: 210264 - AH-9 1'-1.5'

Param	Flag	Result	Units	RL
Chloride		7810	mg/Kg	4.00

Sample: 210265 - AH-9 2'-2.5'

Param	Flag	Result	Units	RL
Chloride		8880	mg/Kg	4.00

Sample: 210266 - AH-9 3'-3.5'

Param	Flag	Result	Units	RL
Chloride		14000	mg/Kg	4.00

Sample: 210267 - AH-9 4'-4.5'

Param	Flag	Result	Units	RL
Chloride		12800	mg/Kg	4.00

Sample: 210268 - AH-9 5'-5.5'

Param	Flag	Result	Units	RL
Chloride		4710	mg/Kg	4.00

Sample: 210269 - AH-9 6'-6.5'

Param	Flag	Result	Units	RL
Chloride		14900	mg/Kg	4.00

Sample: 210270 - AH-9 7'-7.5'

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

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Report Date: September 28, 2009

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Sample: 210271 - AH-9 8'-8.5'

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

Sample: 210272 - AH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		1620	mg/Kg	4.00

Sample: 210273 - AH-10 1'-1.5'

Param	Flag	Result	Units	RL
Chloride		7150	mg/Kg	4.00

Sample: 210274 - AH-10 2'-2.5'

Param	Flag	Result	Units	RL
Chloride		8060	mg/Kg	4.00

Sample: 210275 - AH-10 3'-3.5'

Param	Flag	Result	Units	RL
Chloride		9340	mg/Kg	4.00

Sample: 210276 - AH-10 4'-4.5'

Param	Flag	Result	Units	RL
Chloride		7400	mg/Kg	4.00

Sample: 210277 - AH-10 5'-5.5'

Param	Flag	Result	Units	RL
Chloride		10300	mg/Kg	4.00

Sample: 210278 - AH-11 0-1'

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

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296
This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: September 28, 2009

Work Order: 9091807

Page Number: 11 of 11

Sample: 210279 - AH-11 1'-1.5'

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

Sample: 210280 - AH-11 2'-2.5'

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

Sample: 210281 - AH-12 0-1'

Param	Flag	Result	Units	RL
Chloride		6780	mg/Kg	4.00

Sample: 210282 - AH-12 1'-1.5'

Param	Flag	Result	Units	RL
Chloride		7990	mg/Kg	4.00

Sample: 210283 - AH-12 2'-2.5'

Param	Flag	Result	Units	RL
Chloride		7220	mg/Kg	4.00



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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 28, 2009

Work Order: 9091807



Project Location: Eddy Co., NM
Project Name: Ondalay/COG-Lochills Line Leak
Project Number: 114-6400293

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
210217	AH-1 0-1'	soil	2009-09-16	00:00	2009-09-17
210218	AH-1 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210219	AH-1 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210220	AH-2 0-1'	soil	2009-09-16	00:00	2009-09-17
210221	AH-2 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210222	AH-2 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210223	AH-2 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210224	AH-3 0-1'	soil	2009-09-16	00:00	2009-09-17
210225	AH-3 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210226	AH-3 2'-2.5'	soil	2009-09-16	00:00	2009-09-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
210227	AH-3 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210228	AH-3 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210229	AH-3 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210230	AH-3 6'	soil	2009-09-16	00:00	2009-09-17
210231	AH-4 0-1'	soil	2009-09-16	00:00	2009-09-17
210232	AH-4 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210233	AH-4 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210234	AH-4 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210235	AH-4 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210236	AH-4 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210237	AH-4 6'-6.5'	soil	2009-09-16	00:00	2009-09-17
210238	AH-4 7'-7.5'	soil	2009-09-16	00:00	2009-09-17
210239	AH-4 8'-8.5'	soil	2009-09-16	00:00	2009-09-17
210240	AH-5 0-1'	soil	2009-09-16	00:00	2009-09-17
210241	AH-5 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210242	AH-5 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210243	AH-6 0-1'	soil	2009-09-16	00:00	2009-09-17
210244	AH-6 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210245	AH-6 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210246	AH-6 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210247	AH-6 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210248	AH-6 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210249	AH-7 0-1'	soil	2009-09-16	00:00	2009-09-17
210250	AH-7 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210251	AH-7 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210252	AH-7 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210253	AH-8 0-1'	soil	2009-09-16	00:00	2009-09-17
210254	AH-8 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210255	AH-8 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210256	AH-8 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210257	AH-8 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210258	AH-8 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210259	AH-8 6'-6.5'	soil	2009-09-16	00:00	2009-09-17
210260	AH-8 7'-7.5'	soil	2009-09-16	00:00	2009-09-17
210261	AH-8 8'-8.5'	soil	2009-09-16	00:00	2009-09-17
210262	AH-8 9'-9.5'	soil	2009-09-16	00:00	2009-09-17
210263	AH-9 0-1'	soil	2009-09-16	00:00	2009-09-17
210264	AH-9 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210265	AH-9 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210266	AH-9 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210267	AH-9 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210268	AH-9 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210269	AH-9 6'-6.5'	soil	2009-09-16	00:00	2009-09-17
210270	AH-9 7'-7.5'	soil	2009-09-16	00:00	2009-09-17
210271	AH-9 8'-8.5'	soil	2009-09-16	00:00	2009-09-17
210272	AH-10 0-1'	soil	2009-09-16	00:00	2009-09-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
210273	AH-10 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210274	AH-10 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210275	AH-10 3'-3.5'	soil	2009-09-16	00:00	2009-09-17
210276	AH-10 4'-4.5'	soil	2009-09-16	00:00	2009-09-17
210277	AH-10 5'-5.5'	soil	2009-09-16	00:00	2009-09-17
210278	AH-11 0-1'	soil	2009-09-16	00:00	2009-09-17
210279	AH-11 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210280	AH-11 2'-2.5'	soil	2009-09-16	00:00	2009-09-17
210281	AH-12 0-1'	soil	2009-09-16	00:00	2009-09-17
210282	AH-12 1'-1.5'	soil	2009-09-16	00:00	2009-09-17
210283	AH-12 2'-2.5'	soil	2009-09-16	00:00	2009-09-17

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

This report consists of a total of 49 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 Ondalay/COG-Locohills Line Leak were received by TraceAnalysis, Inc. on 2009-09-17 and assigned to work order 9091807. Samples for work order 9091807 were received intact at a temperature of 12.4 deg. 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	54462	2009-09-21 at 09:00	63787	2009-09-21 at 09:12
Chloride (Titration)	SM 4500-Cl B	54511	2009-09-22 at 08:11	63866	2009-09-23 at 15:10
Chloride (Titration)	SM 4500-Cl B	54512	2009-09-23 at 08:11	63867	2009-09-23 at 15:11
Chloride (Titration)	SM 4500-Cl B	54513	2009-09-23 at 08:12	63864	2009-09-23 at 15:06
Chloride (Titration)	SM 4500-Cl B	54514	2009-09-23 at 08:12	63924	2009-09-25 at 11:40
Chloride (Titration)	SM 4500-Cl B	54515	2009-09-23 at 12:13	63925	2009-09-25 at 11:41
Chloride (Titration)	SM 4500-Cl B	54564	2009-09-24 at 14:12	63938	2009-09-25 at 15:15
Chloride (Titration)	SM 4500-Cl B	54565	2009-09-24 at 14:13	63939	2009-09-25 at 15:16
Chloride (Titration)	SM 4500-Cl B	54566	2009-09-24 at 14:13	63941	2009-09-25 at 15:17
TPH DRO	Mod. 8015B	54404	2009-09-18 at 10:18	63717	2009-09-18 at 10:18
TPH GRO	S 8015B	54462	2009-09-21 at 09:00	63788	2009-09-21 at 09:40

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 9091807 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 28, 2009
114-6400293

Work Order: 9091807
Ondalay/COG-Lochills Line Leak

Page Number: 5 of 49
Eddy Co., NM

Analytical Report

Sample: 210217 - AH-1 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 63787
Prep Batch: 54462

Analytical Method: S 8021B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.10	mg/Kg	1	2.00	105	84.4 - 111.2
4-Bromofluorobenzene (4-BFB)		2.17	mg/Kg	1	2.00	108	43.1 - 128.4

Sample: 210217 - AH-1 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63866
Prep Batch: 54511

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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: 210217 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 63717
Prep Batch: 54404

Analytical Method: Mod. 8015B
Date Analyzed: 2009-09-18
Sample Preparation: 2009-09-18

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 28, 2009
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Work Order: 9091807
Ondalay/COG-Lochills Line Leak

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Eddy Co., NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		117	mg/Kg	1	100	117	13.2 - 219.3

Sample: 210217 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63788
Prep Batch: 54462

Analytical Method: S 8015B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.99	mg/Kg	1	2.00	100	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.98	mg/Kg	1	2.00	99	61.7 - 119.9

Sample: 210218 - AH-1 1'-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63866
Prep Batch: 54511

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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: 210219 - AH-1 2'-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63866
Prep Batch: 54511

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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 28, 2009
114-6400293

Work Order: 9091807
Ondalay/COG-Locehills Line Leak

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Eddy Co., NM

Sample: 210220 - AH-2 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63866
Prep Batch: 54511

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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: 210220 - AH-2 0-1'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 63717
Prep Batch: 54404

Analytical Method: Mod. 8015B
Date Analyzed: 2009-09-18
Sample Preparation: 2009-09-18

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-Triacontane		116	mg/Kg	1	100	116	13.2 - 219.3

Sample: 210220 - AH-2 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63788
Prep Batch: 54462

Analytical Method: S 8015B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.95	mg/Kg	1	2.00	98	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.88	mg/Kg	1	2.00	94	61.7 - 119.9

Report Date: September 28, 2009
114-6400293

Work Order: 9091807
Ondalay/COG-Locohills Line Leak

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Eddy Co., NM

Sample: 210221 - AH-2 1'-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63867
Prep Batch: 54512

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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: 210222 - AH-2 2'-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63867
Prep Batch: 54512

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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: 210223 - AH-2 3'-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63867
Prep Batch: 54512

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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: 210224 - AH-3 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 63787
Prep Batch: 54462

Analytical Method: S 8021B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100

continued ...

Report Date: September 28, 2009
114-6400293

Work Order: 9091807
Ondalay/COG-Locohills Line Leak

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Eddy Co., NM

sample 210224 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.04	mg/Kg	1	2.00	102	84.4 - 111.2
4-Bromofluorobenzene (4-BFB)		2.06	mg/Kg	1	2.00	103	43.1 - 128.4

Sample: 210224 - AH-3 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63867
Prep Batch: 54512

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1230	mg/Kg	50	4.00

Sample: 210224 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 63717
Prep Batch: 54404

Analytical Method: Mod. 8015B
Date Analyzed: 2009-09-18
Sample Preparation: 2009-09-18

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-Triacontane		115	mg/Kg	1	100	115	13.2 - 219.3

Sample: 210224 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63788
Prep Batch: 54462

Analytical Method: S 8015B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Report Date: September 28, 2009
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Work Order: 9091807
Ondalay/COG-Locohills Line Leak

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Eddy Co., NM

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.94	mg/Kg	1	2.00	97	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.86	mg/Kg	1	2.00	93	61.7 - 119.9

Sample: 210225 - AH-3 1'-1.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-23	Analyzed By: AR
QC Batch: 63867	Sample Preparation: 2009-09-22	Prepared By: AR
Prep Batch: 54512		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8050	mg/Kg	100	4.00

Sample: 210226 - AH-3 2'-2.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-23	Analyzed By: AR
QC Batch: 63867	Sample Preparation: 2009-09-22	Prepared By: AR
Prep Batch: 54512		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9130	mg/Kg	100	4.00

Sample: 210227 - AH-3 3'-3.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-23	Analyzed By: AR
QC Batch: 63867	Sample Preparation: 2009-09-22	Prepared By: AR
Prep Batch: 54512		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8860	mg/Kg	100	4.00

Report Date: September 28, 2009
114-6400293

Work Order: 9091807
Ondalay/COG-Locohills Line Leak

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Eddy Co., NM

Sample: 210228 - AH-3 4'-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63867
Prep Batch: 54512

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8200	mg/Kg	100	4.00

Sample: 210229 - AH-3 5'-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63867
Prep Batch: 54512

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10700	mg/Kg	100	4.00

Sample: 210230 - AH-3 6'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63867
Prep Batch: 54512

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		13800	mg/Kg	100	4.00

Sample: 210231 - AH-4 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63864
Prep Batch: 54513

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1050	mg/Kg	50	4.00

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Sample: 210231 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 63717
Prep Batch: 54404

Analytical Method: Mod. 8015B
Date Analyzed: 2009-09-18
Sample Preparation: 2009-09-18

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-Triacontane		115	mg/Kg	1	100	115	13.2 - 219.3

Sample: 210231 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63788
Prep Batch: 54462

Analytical Method: S 8015B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.94	mg/Kg	1	2.00	97	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.87	mg/Kg	1	2.00	94	61.7 - 119.9

Sample: 210232 - AH-4 1'-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63864
Prep Batch: 54513

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2110	mg/Kg	100	4.00

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Sample: 210233 - AH-4 2'-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63864
Prep Batch: 54513

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2610	mg/Kg	100	4.00

Sample: 210234 - AH-4 3'-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63864
Prep Batch: 54513

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1690	mg/Kg	50	4.00

Sample: 210235 - AH-4 4'-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63864
Prep Batch: 54513

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		350	mg/Kg	50	4.00

Sample: 210236 - AH-4 5'-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63864
Prep Batch: 54513

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		680	mg/Kg	50	4.00

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Sample: 210237 - AH-4 6'-6.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63864
Prep Batch: 54513

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4720	mg/Kg	100	4.00

Sample: 210238 - AH-4 7'-7.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63864
Prep Batch: 54513

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2760	mg/Kg	100	4.00

Sample: 210239 - AH-4 8'-8.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63864
Prep Batch: 54513

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-23
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2460	mg/Kg	100	4.00

Sample: 210240 - AH-5 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 63787
Prep Batch: 54462

Analytical Method: S 8021B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100

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Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.03	mg/Kg	1	2.00	102	84.4 - 111.2
4-Bromofluorobenzene (4-BFB)		2.03	mg/Kg	1	2.00	102	43.1 - 128.4

Sample: 210240 - AH-5 0-1'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-23	Analyzed By: AR
QC Batch: 63864	Sample Preparation: 2009-09-22	Prepared By: AR
Prep Batch: 54513		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4680	mg/Kg	100	4.00

Sample: 210240 - AH-5 0-1'

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2009-09-18	Analyzed By: kg
QC Batch: 63717	Sample Preparation: 2009-09-18	Prepared By: kg
Prep Batch: 54404		

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-Triacontane		115	mg/Kg	1	100	115	13.2 - 219.3

Sample: 210240 - AH-5 0-1'

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2009-09-21	Analyzed By: AG
QC Batch: 63788	Sample Preparation: 2009-09-21	Prepared By: AG
Prep Batch: 54462		

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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.92	mg/Kg	1	2.00	96	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.83	mg/Kg	1	2.00	92	61.7 - 119.9

Sample: 210241 - AH-5 1'-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 63924 Date Analyzed: 2009-09-25 Analyzed By: AR
Prep Batch: 54514 Sample Preparation: 2009-09-22 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8660	mg/Kg	100	4.00

Sample: 210242 - AH-5 2'-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 63924 Date Analyzed: 2009-09-25 Analyzed By: AR
Prep Batch: 54514 Sample Preparation: 2009-09-22 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11500	mg/Kg	100	4.00

Sample: 210243 - AH-6 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 63924 Date Analyzed: 2009-09-25 Analyzed By: AR
Prep Batch: 54514 Sample Preparation: 2009-09-22 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2970	mg/Kg	100	4.00

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Sample: 210243 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 63717
Prep Batch: 54404

Analytical Method: Mod. 8015B
Date Analyzed: 2009-09-18
Sample Preparation: 2009-09-18

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-Triacontane		117	mg/Kg	1	100	117	13.2 - 219.3

Sample: 210243 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63788
Prep Batch: 54462

Analytical Method: S 8015B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.96	mg/Kg	1	2.00	98	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.87	mg/Kg	1	2.00	94	61.7 - 119.9

Sample: 210244 - AH-6 1'-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63924
Prep Batch: 54514

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3750	mg/Kg	100	4.00

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Sample: 210245 - AH-6 2'-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63924
Prep Batch: 54514

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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: 210246 - AH-6 3'-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63924
Prep Batch: 54514

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3480	mg/Kg	100	4.00

Sample: 210247 - AH-6 4'-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63924
Prep Batch: 54514

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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: 210248 - AH-6 5'-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63924
Prep Batch: 54514

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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: 210249 - AH-7 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 63787
Prep Batch: 54462

Analytical Method: S 8021B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.01	mg/Kg	1	2.00	100	84.4 - 111.2
4-Bromofluorobenzene (4-BFB)		2.01	mg/Kg	1	2.00	100	43.1 - 128.4

Sample: 210249 - AH-7 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63924
Prep Batch: 54514

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1710	mg/Kg	100	4.00

Sample: 210249 - AH-7 0-1'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 63717
Prep Batch: 54404

Analytical Method: Mod. 8015B
Date Analyzed: 2009-09-18
Sample Preparation: 2009-09-18

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-Triacontane		115	mg/Kg	1	100	115	13.2 - 219.3

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Sample: 210249 - AH-7 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63788
Prep Batch: 54462

Analytical Method: S 8015B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.91	mg/Kg	1	2.00	96	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.82	mg/Kg	1	2.00	91	61.7 - 119.9

Sample: 210250 - AH-7 1'-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63924
Prep Batch: 54514

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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: 210251 - AH-7 2'-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63925
Prep Batch: 54515

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2640	mg/Kg	100	4.00

Sample: 210252 - AH-7 3'-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63925
Prep Batch: 54515

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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

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Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		360	mg/Kg	50	4.00

Sample: 210253 - AH-8 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 63925 Date Analyzed: 2009-09-25 Analyzed By: AR
Prep Batch: 54515 Sample Preparation: 2009-09-22 Prepared By: AR

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

Sample: 210253 - AH-8 0-1'

Laboratory: Midland
Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 63717 Date Analyzed: 2009-09-18 Analyzed By: kg
Prep Batch: 54404 Sample Preparation: 2009-09-18 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		177	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		97.0	mg/Kg	1	100	97	13.2 - 219.3

Sample: 210253 - AH-8 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 63788 Date Analyzed: 2009-09-21 Analyzed By: AG
Prep Batch: 54462 Sample Preparation: 2009-09-21 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.94	mg/Kg	1	2.00	97	65.3 - 109.9

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		1.85	mg/Kg	1	2.00	92	61.7 - 119.9

Sample: 210254 - AH-8 1'-1.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63925	Sample Preparation: 2009-09-22	Prepared By: AR
Prep Batch: 54515		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7930	mg/Kg	100	4.00

Sample: 210255 - AH-8 2'-2.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63925	Sample Preparation: 2009-09-22	Prepared By: AR
Prep Batch: 54515		

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

Sample: 210256 - AH-8 3'-3.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63925	Sample Preparation: 2009-09-22	Prepared By: AR
Prep Batch: 54515		

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

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Sample: 210257 - AH-8 4'-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63925
Prep Batch: 54515

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9880	mg/Kg	100	4.00

Sample: 210258 - AH-8 5'-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63925
Prep Batch: 54515

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		19100	mg/Kg	100	4.00

Sample: 210259 - AH-8 6'-6.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63925
Prep Batch: 54515

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5530	mg/Kg	100	4.00

Sample: 210260 - AH-8 7'-7.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63925
Prep Batch: 54515

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-22

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: 210261 - AH-8 8'-8.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63938
Prep Batch: 54564

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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: 210262 - AH-8 9'-9.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63938
Prep Batch: 54564

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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: 210263 - AH-9 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 63787
Prep Batch: 54462

Analytical Method: S 8021B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.01	mg/Kg	1	2.00	100	84.4 - 111.2
4-Bromofluorobenzene (4-BFB)		2.01	mg/Kg	1	2.00	100	43.1 - 128.4

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Sample: 210263 - AH-9 0-1'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63938	Sample Preparation: 2009-09-24	Prepared By: AR
Prep Batch: 54564		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		563	mg/Kg	50	4.00

Sample: 210263 - AH-9 0-1'

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2009-09-18	Analyzed By: kg
QC Batch: 63717	Sample Preparation: 2009-09-18	Prepared By: kg
Prep Batch: 54404		

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-Triacontane		88.6	mg/Kg	1	100	89	13.2 - 219.3

Sample: 210263 - AH-9 0-1'

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2009-09-21	Analyzed By: AG
QC Batch: 63788	Sample Preparation: 2009-09-21	Prepared By: AG
Prep Batch: 54462		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.90	mg/Kg	1	2.00	95	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.81	mg/Kg	1	2.00	90	61.7 - 119.9

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Sample: 210264 - AH-9 1'-1.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63938	Sample Preparation: 2009-09-24	Prepared By: AR
Prep Batch: 54564		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7810	mg/Kg	10	4.00

Sample: 210265 - AH-9 2'-2.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63938	Sample Preparation: 2009-09-24	Prepared By: AR
Prep Batch: 54564		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8880	mg/Kg	100	4.00

Sample: 210266 - AH-9 3'-3.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63938	Sample Preparation: 2009-09-24	Prepared By: AR
Prep Batch: 54564		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14000	mg/Kg	100	4.00

Sample: 210267 - AH-9 4'-4.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63938	Sample Preparation: 2009-09-24	Prepared By: AR
Prep Batch: 54564		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		12800	mg/Kg	100	4.00

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Sample: 210268 - AH-9 5'-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63938
Prep Batch: 54564

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4710	mg/Kg	100	4.00

Sample: 210269 - AH-9 6'-6.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63938
Prep Batch: 54564

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14900	mg/Kg	100	4.00

Sample: 210270 - AH-9 7'-7.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63938
Prep Batch: 54564

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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: 210271 - AH-9 8'-8.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63939
Prep Batch: 54565

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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: 210272 - AH-10 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63939
Prep Batch: 54565

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1620	mg/Kg	50	4.00

Sample: 210272 - AH-10 0-1'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 63717
Prep Batch: 54404

Analytical Method: Mod. 8015B
Date Analyzed: 2009-09-18
Sample Preparation: 2009-09-18

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-Triacontane		96.8	mg/Kg	1	100	97	13.2 - 219.3

Sample: 210272 - AH-10 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63788
Prep Batch: 54462

Analytical Method: S 8015B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.92	mg/Kg	1	2.00	96	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.85	mg/Kg	1	2.00	92	61.7 - 119.9

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Sample: 210273 - AH-10 1'-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63939
Prep Batch: 54565

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7150	mg/Kg	100	4.00

Sample: 210274 - AH-10 2'-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63939
Prep Batch: 54565

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8060	mg/Kg	100	4.00

Sample: 210275 - AH-10 3'-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63939
Prep Batch: 54565

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9340	mg/Kg	100	4.00

Sample: 210276 - AH-10 4'-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63939
Prep Batch: 54565

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7400	mg/Kg	100	4.00

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Sample: 210277 - AH-10 5'-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63939
Prep Batch: 54565

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10300	mg/Kg	100	4.00

Sample: 210278 - AH-11 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63939
Prep Batch: 54565

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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: 210278 - AH-11 0-1'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 63717
Prep Batch: 54404

Analytical Method: Mod. 8015B
Date Analyzed: 2009-09-18
Sample Preparation: 2009-09-18

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-Triacontane		99.6	mg/Kg	1	100	100	13.2 - 219.3

Sample: 210278 - AH-11 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63788
Prep Batch: 54462

Analytical Method: S 8015B
Date Analyzed: 2009-09-21
Sample Preparation: 2009-09-21

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

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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.97	mg/Kg	1	2.00	98	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.89	mg/Kg	1	2.00	94	61.7 - 119.9

Sample: 210279 - AH-11 1'-1.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63939	Sample Preparation: 2009-09-24	Prepared By: AR
Prep Batch: 54565		

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

Sample: 210280 - AH-11 2'-2.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63939	Sample Preparation: 2009-09-24	Prepared By: AR
Prep Batch: 54565		

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

Sample: 210281 - AH-12 0-1'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63941	Sample Preparation: 2009-09-24	Prepared By: AR
Prep Batch: 54566		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6780	mg/Kg	100	4.00

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Sample: 210281 - AH-12 0-1'

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2009-09-18	Analyzed By: kg
QC Batch: 63717	Sample Preparation: 2009-09-18	Prepared By: kg
Prep Batch: 54404		

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-Triacontane		106	mg/Kg	1	100	106	13.2 - 219.3

Sample: 210281 - AH-12 0-1'

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2009-09-21	Analyzed By: AG
QC Batch: 63788	Sample Preparation: 2009-09-21	Prepared By: AG
Prep Batch: 54462		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.93	mg/Kg	1	2.00	96	65.3 - 109.9
4-Bromofluorobenzene (4-BFB)		1.85	mg/Kg	1	2.00	92	61.7 - 119.9

Sample: 210282 - AH-12 1'-1.5'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2009-09-25	Analyzed By: AR
QC Batch: 63941	Sample Preparation: 2009-09-24	Prepared By: AR
Prep Batch: 54566		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7990	mg/Kg	100	4.00

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Sample: 210283 - AH-12 2'-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 63941
Prep Batch: 54566

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-09-25
Sample Preparation: 2009-09-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7220	mg/Kg	100	4.00

Method Blank (1) QC Batch: 63717

QC Batch: 63717
Prep Batch: 54404

Date Analyzed: 2009-09-18
QC Preparation: 2009-09-18

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		109	mg/Kg	1	100	109	13 - 178.5

Method Blank (1) QC Batch: 63787

QC Batch: 63787
Prep Batch: 54462

Date Analyzed: 2009-09-21
QC Preparation: 2009-09-21

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00410	mg/Kg	0.01
Toluene		<0.00310	mg/Kg	0.01
Ethylbenzene		<0.00240	mg/Kg	0.01
Xylene		<0.00650	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.02	mg/Kg	1	2.00	101	64.9 - 122.7
4-Bromofluorobenzene (4-BFB)		1.97	mg/Kg	1	2.00	98	43.9 - 121.9

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Method Blank (1) QC Batch: 63788

QC Batch: 63788
Prep Batch: 54462

Date Analyzed: 2009-09-21
QC Preparation: 2009-09-21

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.89	mg/Kg	1	2.00	94	66.2 - 125
4-Bromofluorobenzene (4-BFB)		1.77	mg/Kg	1	2.00	88	62 - 120.5

Method Blank (1) QC Batch: 63864

QC Batch: 63864
Prep Batch: 54513

Date Analyzed: 2009-09-23
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 63866

QC Batch: 63866
Prep Batch: 54511

Date Analyzed: 2009-09-23
QC Preparation: 2009-09-22

Analyzed By: AR
Prepared By: AG

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

Method Blank (1) QC Batch: 63867

QC Batch: 63867
Prep Batch: 54512

Date Analyzed: 2009-09-23
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AG

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

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Method Blank (1) QC Batch: 63924

QC Batch: 63924
Prep Batch: 54514

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AG

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

Method Blank (1) QC Batch: 63925

QC Batch: 63925
Prep Batch: 54515

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 63938

QC Batch: 63938
Prep Batch: 54564

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-24

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 63939

QC Batch: 63939
Prep Batch: 54565

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-24

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 63941

QC Batch: 63941
Prep Batch: 54566

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-24

Analyzed By: AR
Prepared By: AR

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

Laboratory Control Spike (LCS-1)

QC Batch: 63717
Prep Batch: 54404

Date Analyzed: 2009-09-18
QC Preparation: 2009-09-18

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	162	mg/Kg	1	250	<5.86	65	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	157	mg/Kg	1	250	<5.86	63	57.4 - 133.4	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	104	108	mg/Kg	1	100	104	108	48.5 - 146.7

Laboratory Control Spike (LCS-1)

QC Batch: 63787
Prep Batch: 54462

Date Analyzed: 2009-09-21
QC Preparation: 2009-09-21

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.04	mg/Kg	1	2.00	<0.00410	102	75.4 - 115.7
Toluene	2.01	mg/Kg	1	2.00	<0.00310	100	78.4 - 113.6
Ethylbenzene	1.95	mg/Kg	1	2.00	<0.00240	98	76 - 114.2
Xylene	5.97	mg/Kg	1	6.00	<0.00650	100	76.9 - 113.6

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	2.05	mg/Kg	1	2.00	<0.00410	102	75.4 - 115.7	0	20
Toluene	2.01	mg/Kg	1	2.00	<0.00310	100	78.4 - 113.6	0	20
Ethylbenzene	2.02	mg/Kg	1	2.00	<0.00240	101	76 - 114.2	4	20
Xylene	6.11	mg/Kg	1	6.00	<0.00650	102	76.9 - 113.6	2	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)	2.03	2.02	mg/Kg	1	2.00	102	101	65 - 122.9
4-Bromofluorobenzene (4-BFB)	2.10	2.10	mg/Kg	1	2.00	105	105	43.8 - 124.9

Laboratory Control Spike (LCS-1)

QC Batch: 63788
Prep Batch: 54462

Date Analyzed: 2009-09-21
QC Preparation: 2009-09-21

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.1	mg/Kg	1	20.0	<0.396	90	52.5 - 114.3

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	18.5	mg/Kg	1	20.0	<0.396	92	52.5 - 114.3	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)	1.92	1.90	mg/Kg	1	2.00	96	95	66.2 - 128.7
4-Bromofluorobenzene (4-BFB)	1.84	1.87	mg/Kg	1	2.00	92	94	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 63864
Prep Batch: 54513

Date Analyzed: 2009-09-23
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.7	mg/Kg	1	100	<2.18	99	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	99.6	mg/Kg	1	100	<2.18	100	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63866
Prep Batch: 54511

Date Analyzed: 2009-09-23
QC Preparation: 2009-09-22

Analyzed By: AR
Prepared By: AG

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.2	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	99.9	mg/Kg	1	100	<2.18	100	85 - 115	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63867
Prep Batch: 54512

Date Analyzed: 2009-09-23
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	103	mg/Kg	1	100	<2.18	103	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	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63924
Prep Batch: 54514

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.7	mg/Kg	1	100	<2.18	99	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	99.9	mg/Kg	1	100	<2.18	100	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63925
Prep Batch: 54515

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AR

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.8	mg/Kg	1	100	<2.18	99	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	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63938
Prep Batch: 54564

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-24

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.3	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	99.5	mg/Kg	1	100	<2.18	100	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63939
Prep Batch: 54565

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-24

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.6	mg/Kg	1	100	<2.18	99	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	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63941
Prep Batch: 54566

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-24

Analyzed By: AR
Prepared By: AR

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.4	mg/Kg	1	100	<2.18	99	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	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: 210217

QC Batch: 63717
Prep Batch: 54404

Date Analyzed: 2009-09-18
QC Preparation: 2009-09-18

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	194	mg/Kg	1	250	<5.86	78	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	193	mg/Kg	1	250	<5.86	77	35.2 - 167.1	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	109	110	mg/Kg	1	100	109	110	34.5 - 178.4

Matrix Spike (MS-1) Spiked Sample: 210390

QC Batch: 63787
Prep Batch: 54462

Date Analyzed: 2009-09-21
QC Preparation: 2009-09-21

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.16	mg/Kg	1	2.00	<0.00410	108	57.7 - 140.7
Toluene	2.14	mg/Kg	1	2.00	<0.00310	107	53.4 - 146.6
Ethylbenzene	2.15	mg/Kg	1	2.00	<0.00240	108	62.1 - 141.6
Xylene	6.55	mg/Kg	1	6.00	0.014	109	61.2 - 142.7

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

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Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.14	mg/Kg	1	2.00	<0.00410	107	57.7 - 140.7	1	20
Toluene	2.11	mg/Kg	1	2.00	<0.00310	106	53.4 - 146.6	1	20
Ethylbenzene	2.09	mg/Kg	1	2.00	<0.00240	104	62.1 - 141.6	3	20
Xylene	6.41	mg/Kg	1	6.00	0.014	107	61.2 - 142.7	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.01	2.13	mg/Kg	1	2	100	106	62.7 - 119.6
4-Bromofluorobenzene (4-BFB)	2.24	2.25	mg/Kg	1	2	112	112	49.6 - 136.7

Matrix Spike (MS-1) Spiked Sample: 210272

QC Batch: 63788
Prep Batch: 54462

Date Analyzed: 2009-09-21
QC Preparation: 2009-09-21

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.3	mg/Kg	1	20.0	<0.396	86	10 - 198.3

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	15.6	mg/Kg	1	20.0	<0.396	78	10 - 198.3	10	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.88	1.87	mg/Kg	1	2	94	94	65.5 - 123
4-Bromofluorobenzene (4-BFB)	1.98	1.92	mg/Kg	1	2	99	96	58.6 - 140

Matrix Spike (MS-1) Spiked Sample: 210240

QC Batch: 63864
Prep Batch: 54513

Date Analyzed: 2009-09-23
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AR

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	15400	mg/Kg	100	10000	4680	107	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	15200	mg/Kg	100	10000	4680	105	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: 210220

QC Batch: 63866
Prep Batch: 54511

Date Analyzed: 2009-09-23
QC Preparation: 2009-09-22

Analyzed By: AR
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	8680	mg/Kg	100	10000	<218	85	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	8840	mg/Kg	100	10000	<218	87	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: 210230

QC Batch: 63867
Prep Batch: 54512

Date Analyzed: 2009-09-23
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	23200	mg/Kg	100	10000	13800	94	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	23500	mg/Kg	100	10000	13800	97	85 - 115	1	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: 210250

QC Batch: 63924
Prep Batch: 54514

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	20100	mg/Kg	100	10000	10040	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	20200	mg/Kg	100	10000	10040	102	85 - 115	0	20

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

Matrix Spike (MS-1) Spiked Sample: 210260

QC Batch: 63925
Prep Batch: 54515

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-23

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10100	mg/Kg	100	10000	<218	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	10200	mg/Kg	100	10000	<218	102	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: 210270

QC Batch: 63938
Prep Batch: 54564

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-24

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10200	mg/Kg	100	10000	<218	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	10300	mg/Kg	100	10000	<218	102	85 - 115	1	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: 210280

QC Batch: 63939
Prep Batch: 54565

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-24

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10400	mg/Kg	100	10000	<218	104	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	10400	mg/Kg	100	10000	<218	104	85 - 115	0	20

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

Matrix Spike (MS-1) Spiked Sample: 210787

QC Batch: 63941
Prep Batch: 54566

Date Analyzed: 2009-09-25
QC Preparation: 2009-09-24

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10600	mg/Kg	100	10000	<218	105	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	10700	mg/Kg	100	10000	<218	106	85 - 115	1	20

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

Standard (CCV-1)

QC Batch: 63717

Date Analyzed: 2009-09-18

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	219	88	80 - 120	2009-09-18

Standard (CCV-2)

QC Batch: 63717

Date Analyzed: 2009-09-18

Analyzed By: kg

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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	236	94	80 - 120	2009-09-18

Standard (CCV-3)

QC Batch: 63717

Date Analyzed: 2009-09-18

Analyzed By: kg

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	2009-09-18

Standard (CCV-1)

QC Batch: 63787

Date Analyzed: 2009-09-21

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	0.105	105	80 - 120	2009-09-21
Toluene		mg/Kg	0.100	0.105	105	80 - 120	2009-09-21
Ethylbenzene		mg/Kg	0.100	0.105	105	80 - 120	2009-09-21
Xylene		mg/Kg	0.300	0.319	106	80 - 120	2009-09-21

Standard (CCV-2)

QC Batch: 63787

Date Analyzed: 2009-09-21

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	2009-09-21
Toluene		mg/Kg	0.100	0.102	102	80 - 120	2009-09-21
Ethylbenzene		mg/Kg	0.100	0.101	101	80 - 120	2009-09-21
Xylene		mg/Kg	0.300	0.305	102	80 - 120	2009-09-21

Standard (CCV-1)

QC Batch: 63788

Date Analyzed: 2009-09-21

Analyzed By: AG

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.16	116	80 - 120	2009-09-21

Standard (CCV-2)

QC Batch: 63788

Date Analyzed: 2009-09-21

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	2009-09-21

Standard (CCV-3)

QC Batch: 63788

Date Analyzed: 2009-09-21

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	1.08	108	80 - 120	2009-09-21

Standard (ICV-1)

QC Batch: 63864

Date Analyzed: 2009-09-23

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	2009-09-23

Standard (CCV-1)

QC Batch: 63864

Date Analyzed: 2009-09-23

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	2009-09-23

Standard (ICV-1)

QC Batch: 63866

Date Analyzed: 2009-09-23

Analyzed By: AR

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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	102	102	85 - 115	2009-09-23

Standard (CCV-1)

QC Batch: 63866

Date Analyzed: 2009-09-23

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.0	98	85 - 115	2009-09-23

Standard (ICV-1)

QC Batch: 63867

Date Analyzed: 2009-09-23

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2009-09-23

Standard (CCV-1)

QC Batch: 63867

Date Analyzed: 2009-09-23

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.4	98	85 - 115	2009-09-23

Standard (ICV-1)

QC Batch: 63924

Date Analyzed: 2009-09-25

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	2009-09-25

Standard (CCV-1)

QC Batch: 63924

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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	99.4	99	85 - 115	2009-09-25

Standard (ICV-1)

QC Batch: 63925

Date Analyzed: 2009-09-25

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	2009-09-25

Standard (CCV-1)

QC Batch: 63925

Date Analyzed: 2009-09-25

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	2009-09-25

Standard (ICV-1)

QC Batch: 63938

Date Analyzed: 2009-09-25

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	2009-09-25

Standard (CCV-1)

QC Batch: 63938

Date Analyzed: 2009-09-25

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	2009-09-25

Standard (ICV-1)

QC Batch: 63939

Date Analyzed: 2009-09-25

Analyzed By: AR

Report Date: September 28, 2009
114-6400293

Work Order: 9091807
Ondalay/COG-Locohills Line Leak

Page Number: 49 of 49
Eddy Co., NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	103	103	85 - 115	2009-09-25

Standard (CCV-1)

QC Batch: 63939

Date Analyzed: 2009-09-25

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.3	97	85 - 115	2009-09-25

Standard (ICV-1)

QC Batch: 63941

Date Analyzed: 2009-09-25

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.5	98	85 - 115	2009-09-25

Standard (CCV-1)

QC Batch: 63941

Date Analyzed: 2009-09-25

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	103	103	85 - 115	2009-09-25

Analysis Request of Chain of Custody Record



TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-4560**

(432) 682-4559 • Fax (432) 682-3948

CLIENT NAME:						SITE MANAGER:					
PROJECT NO.:						PROJECT NAME:					
LAB I.D.	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION					
20217	9/16		S	X	AH-1	0-1'					
218					AH-1	1'-10'					
219					AH-1	2'-2.5'					
220					AH-2	0-1'					
221					AH-2	1'-1.5'					
222					AH-2	2'-2.5'					
223					AH-2	3'-3.5'					
224					AH-3	0-1'					
225					AH-3	1'-1.5'					
226					AH-3	2'-2.5'					
RELINQUISHED BY: [Signature]							Date:	Time:	RECEIVED BY: [Signature]		
RELINQUISHED BY: [Signature]							Date:	Time:	RECEIVED BY: [Signature]		
RELINQUISHED BY: [Signature]							Date:	Time:	RECEIVED BY: [Signature]		
RECEIVING LABORATORY:							RECEIVED BY: [Signature]				
ADDRESS:							DATE:				
CITY:							STATE:				
CONTACT:							PHONE:				
ZIP:							DATE:				

Analysis Request of Chain of Custody Record



TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
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[illegible]

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Analysis Request of Chain of Custody Record



TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3948**

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:		PRESERVATIVE METHOD		NUMBER OF CONTAINERS		FILTERED (Y/N)		HCL		HMOS		ICE		NONE	
LAB ID.	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION		Eddy Co, NM		endolay - Co6 - 100hills line lake		114-4400293		114-4400293		114-4400293		114-4400293	
210267	9/16	7:05	S	X		AH-9	4'-4.5'												
268						AH-9	5'-5.5'												
269						AH-9	6'-6.5'												
270						AH-9	7'-7.5'												
271						AH-9	8'-8.5'												
272						AH-10	0'-1'												
273						AH-10	1'-1.5'												
274						AH-10	2'-2.5'												
275						AH-10	3'-3.5'												
276						AH-10	4'-4.5'												

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

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RECEIVED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RECEIVED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RECEIVING LABORATORY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT: _____ PHONE: _____

DATE: _____ TIME: _____

REMARKS: _____

LAB ID. NUMBER: 210267

DATE: 9/16

TIME: 7:05

MATRIX: S

COMP: X

GRAB:

SAMPLE IDENTIFICATION: AH-9 4'-4.5'

Eddy Co, NM

endolay - Co6 - 100hills line lake

114-4400293

SITE MANAGER: Eddy Co, NM

PRESERVATIVE METHOD: NONE

NUMBER OF CONTAINERS: 1

FILTERED (Y/N):

HCL:

HMOS:

ICE:

NONE:

CLIENT NAME: 114-4400293

PROJECT NAME: 114-4400293

SITE MANAGER: Eddy Co, NM

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

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RECEIVED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RECEIVED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RECEIVING LABORATORY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT: _____ PHONE: _____

DATE: _____ TIME: _____

REMARKS: _____

LAB ID. NUMBER: 210267

DATE: 9/16

TIME: 7:05

MATRIX: S

COMP: X

GRAB:

SAMPLE IDENTIFICATION: AH-9 4'-4.5'

Eddy Co, NM

endolay - Co6 - 100hills line lake

114-4400293

SITE MANAGER: Eddy Co, NM

PRESERVATIVE METHOD: NONE

NUMBER OF CONTAINERS: 1

FILTERED (Y/N):

HCL:

HMOS:

ICE:

NONE:

CLIENT NAME: 114-4400293

PROJECT NAME: 114-4400293

SITE MANAGER: Eddy Co, NM

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RELINQUISHED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RECEIVED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RECEIVED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

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RECEIVED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RECEIVED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RECEIVED BY: (Signature) _____ Date: 9/16/93 Time: 15:10

RECEIVING LABORATORY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT: _____ PHONE: _____

DATE: _____ TIME: _____

REMARKS: _____

LAB ID. NUMBER: 210267

DATE: 9/16

TIME: 7:05

MATRIX: S

COMP: X

GRAB:

SAMPLE IDENTIFICATION: AH-9 4'-4.5'

Eddy Co, NM

endolay - Co6 - 100hills line lake

114-4400293

SITE MANAGER: Eddy Co, NM

PRESERVATIVE METHOD: NONE

NUMBER OF CONTAINERS: 1

FILTERED (Y/N):

HCL:

HMOS:

ICE:

NONE:

Is the TH reads 300 my/k, run deeper bins

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

Report Date: April 9, 2010

Work Order: 10040616

Page Number: 1 of 2

Summary Report

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

Report Date: April 9, 2010

Work Order: 10040616



Project Location: Eddy Co., NM
Project Name: Ondalay-COG/Locohills Line Leak
Project Number: 114-6400293

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
227629	CS-1 4'	soil	2010-04-05	00:00	2010-04-06
227630	CS-1 6'	soil	2010-04-05	00:00	2010-04-06
227631	CS-1 8'	soil	2010-04-05	00:00	2010-04-06
227632	CS-1 10'	soil	2010-04-05	00:00	2010-04-06
227633	CS-1 12'	soil	2010-04-05	00:00	2010-04-06
227634	CS-1 15'	soil	2010-04-05	00:00	2010-04-06
227635	CS-1 19'	soil	2010-04-05	00:00	2010-04-06

Sample: 227629 - CS-1 4'

Param	Flag	Result	Units	RL
Chloride		9950	mg/Kg	4.00

Sample: 227630 - CS-1 6'

Param	Flag	Result	Units	RL
Chloride		5050	mg/Kg	4.00

Sample: 227631 - CS-1 8'

Param	Flag	Result	Units	RL
Chloride		6380	mg/Kg	4.00

Report Date: April 9, 2010

Work Order: 10040616

Page Number: 2 of 2

Sample: 227632 - CS-1 10'

Param	Flag	Result	Units	RL
Chloride		7850	mg/Kg	4.00

Sample: 227633 - CS-1 12'

Param	Flag	Result	Units	RL
Chloride		6640	mg/Kg	4.00

Sample: 227634 - CS-1 15'

Param	Flag	Result	Units	RL
Chloride		6930	mg/Kg	4.00

Sample: 227635 - CS-1 19'

Param	Flag	Result	Units	RL
Chloride		6060	mg/Kg	4.00



TRACEANALYSIS, INC.

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 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: April 9, 2010

Work Order: 10040616



Project Location: Eddy Co., NM
 Project Name: Ondalay-COG/Locohills Line Leak
 Project Number: 114-6400293

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
227629	CS-1 4'	soil	2010-04-05	00:00	2010-04-06
227630	CS-1 6'	soil	2010-04-05	00:00	2010-04-06
227631	CS-1 8'	soil	2010-04-05	00:00	2010-04-06
227632	CS-1 10'	soil	2010-04-05	00:00	2010-04-06
227633	CS-1 12'	soil	2010-04-05	00:00	2010-04-06
227634	CS-1 15'	soil	2010-04-05	00:00	2010-04-06
227635	CS-1 19'	soil	2010-04-05	00:00	2010-04-06

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 7 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 Ondalay-COG/Locohills Line Leak were received by TraceAnalysis, Inc. on 2010-04-06 and assigned to work order 10040616. Samples for work order 10040616 were received intact at a temperature of 24.9 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	58987	2010-04-08 at 10:16	68925	2010-04-08 at 16:17

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 10040616 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: April 9, 2010
114-6400293

Work Order: 10040616
Ondalay-COG/Locohills Line Leak

Page Number: 4 of 7
Eddy Co., NM

Analytical Report

Sample: 227629 - CS-1 4'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68925
Prep Batch: 58987

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9950	mg/Kg	100	4.00

Sample: 227630 - CS-1 6'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68925
Prep Batch: 58987

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5050	mg/Kg	100	4.00

Sample: 227631 - CS-1 8'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68925
Prep Batch: 58987

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6380	mg/Kg	100	4.00

Sample: 227632 - CS-1 10'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68925
Prep Batch: 58987

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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

continued ...

Report Date: April 9, 2010
114-6400293

Work Order: 10040616
Ondalay-COG/Locohills Line Leak

Page Number: 5 of 7
Eddy Co., NM

sample 227632 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7850	mg/Kg	100	4.00

Sample: 227633 - CS-1 12'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 68925 Date Analyzed: 2010-04-08 Analyzed By: AR
Prep Batch: 58987 Sample Preparation: 2010-04-08 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6640	mg/Kg	100	4.00

Sample: 227634 - CS-1 15'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 68925 Date Analyzed: 2010-04-08 Analyzed By: AR
Prep Batch: 58987 Sample Preparation: 2010-04-08 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6930	mg/Kg	100	4.00

Sample: 227635 - CS-1 19'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 68925 Date Analyzed: 2010-04-08 Analyzed By: AR
Prep Batch: 58987 Sample Preparation: 2010-04-08 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6060	mg/Kg	100	4.00

Report Date: April 9, 2010
114-6400293

Work Order: 10040616
Ondalay-COG/Locohills Line Leak

Page Number: 6 of 7
Eddy Co., NM

Method Blank (1) QC Batch: 68925

QC Batch: 68925
Prep Batch: 58987

Date Analyzed: 2010-04-08
QC Preparation: 2010-04-08

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: 68925
Prep Batch: 58987

Date Analyzed: 2010-04-08
QC Preparation: 2010-04-08

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.0	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	99.7	mg/Kg	1	100	<2.18	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: 227707

QC Batch: 68925
Prep Batch: 58987

Date Analyzed: 2010-04-08
QC Preparation: 2010-04-08

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	15100	mg/Kg	100	10000	4890	102	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	15200	mg/Kg	100	10000	4890	103	85 - 115	1	20

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

Standard (ICV-1)

QC Batch: 68925

Date Analyzed: 2010-04-08

Analyzed By: AR

Report Date: April 9, 2010
114-6400293

Work Order: 10040616
Ondalay-COG/Locohills Line Leak

Page Number: 7 of 7
Eddy Co., NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	103	103	85 - 115	2010-04-08

Standard (CCV-1)

QC Batch: 68925

Date Analyzed: 2010-04-08

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.3	97	85 - 115	2010-04-08

Analysis Request of Chain of Custody Record



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Page 101 of 137

Received by OCD: 4/7/2023 8:43:57 AM

Released to Imaging: 5/3/2023 8:43:14 AM

Summary Report

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

Report Date: April 9, 2010
Work Order: 10040711


Project Location: Eddy Co., NM
Project Name: Ondalay-COG/Locohills Line Leak
Project Number: 114-6400293

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
227707	CS-1 22'	soil	2010-04-06	00:00	2010-04-07
227708	CS-1 25'	soil	2010-04-06	00:00	2010-04-07
227709	CS-1 28'	soil	2010-04-06	00:00	2010-04-07
227710	CS-2 10'	soil	2010-04-06	00:00	2010-04-07
227711	CS-2 12'	soil	2010-04-06	00:00	2010-04-07
227712	CS-3 7'	soil	2010-04-06	00:00	2010-04-07
227713	CS-3 10'	soil	2010-04-06	00:00	2010-04-07
227714	CS-3 13'	soil	2010-04-06	00:00	2010-04-07
227715	CS-3 15'	soil	2010-04-06	00:00	2010-04-07
227716	CS-3 18'	soil	2010-04-06	00:00	2010-04-07

Sample: 227707 - CS-1 22'

Param	Flag	Result	Units	RL
Chloride		4890	mg/Kg	4.00

Sample: 227708 - CS-1 25'

Param	Flag	Result	Units	RL
Chloride		4500	mg/Kg	4.00

Sample: 227709 - CS-1 28'

Report Date: April 9, 2010

Work Order: 10040711

Page Number: 2 of 2

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

Sample: 227710 - CS-2 10'

Param	Flag	Result	Units	RL
Chloride		420	mg/Kg	4.00

Sample: 227711 - CS-2 12'

Param	Flag	Result	Units	RL
Chloride		218	mg/Kg	4.00

Sample: 227712 - CS-3 7'

Param	Flag	Result	Units	RL
Chloride		6370	mg/Kg	4.00

Sample: 227713 - CS-3 10'

Param	Flag	Result	Units	RL
Chloride		11200	mg/Kg	4.00

Sample: 227714 - CS-3 13'

Param	Flag	Result	Units	RL
Chloride		6300	mg/Kg	4.00

Sample: 227715 - CS-3 15'

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

Sample: 227716 - CS-3 18'

Param	Flag	Result	Units	RL
Chloride		218	mg/Kg	4.00



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

Report Date: April 9, 2010

Work Order: 10040711



Project Location: Eddy Co., NM
 Project Name: Ondalay-COG/Lochills Line Leak
 Project Number: 114-6400293

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
227707	CS-1 22'	soil	2010-04-06	00:00	2010-04-07
227708	CS-1 25'	soil	2010-04-06	00:00	2010-04-07
227709	CS-1 28'	soil	2010-04-06	00:00	2010-04-07
227710	CS-2 10'	soil	2010-04-06	00:00	2010-04-07
227711	CS-2 12'	soil	2010-04-06	00:00	2010-04-07
227712	CS-3 7'	soil	2010-04-06	00:00	2010-04-07
227713	CS-3 10'	soil	2010-04-06	00:00	2010-04-07
227714	CS-3 13'	soil	2010-04-06	00:00	2010-04-07
227715	CS-3 15'	soil	2010-04-06	00:00	2010-04-07
227716	CS-3 18'	soil	2010-04-06	00:00	2010-04-07

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 9 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 Ondalay-COG/Locohills Line Leak were received by TraceAnalysis, Inc. on 2010-04-07 and assigned to work order 10040711. Samples for work order 10040711 were received intact at a temperature of 15.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	58987	2010-04-08 at 10:16	68925	2010-04-08 at 16:17
Chloride (Titration)	SM 4500-Cl B	58988	2010-04-08 at 10:17	68926	2010-04-08 at 16:18

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 10040711 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: April 9, 2010
114-6400293

Work Order: 10040711
Ondalay-COG/Locohills Line Leak

Page Number: 4 of 9
Eddy Co., NM

Analytical Report

Sample: 227707 - CS-1 22'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68925
Prep Batch: 58987

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4890	mg/Kg	100	4.00

Sample: 227708 - CS-1 25'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68926
Prep Batch: 58988

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4500	mg/Kg	100	4.00

Sample: 227709 - CS-1 28'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68926
Prep Batch: 58988

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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: 227710 - CS-2 10'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68926
Prep Batch: 58988

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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

continued ...

Report Date: April 9, 2010
114-6400293

Work Order: 10040711
Ondalay-COG/Locohills Line Leak

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Eddy Co., NM

sample 227710 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		420	mg/Kg	50	4.00

Sample: 227711 - CS-2 12'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68926	Date Analyzed:	2010-04-08	Analyzed By:	AR
Prep Batch:	58988	Sample Preparation:	2010-04-08	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		218	mg/Kg	50	4.00

Sample: 227712 - CS-3 7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68926	Date Analyzed:	2010-04-08	Analyzed By:	AR
Prep Batch:	58988	Sample Preparation:	2010-04-08	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6370	mg/Kg	100	4.00

Sample: 227713 - CS-3 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68926	Date Analyzed:	2010-04-08	Analyzed By:	AR
Prep Batch:	58988	Sample Preparation:	2010-04-08	Prepared By:	AR

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

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Sample: 227714 - CS-3 13'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68926
Prep Batch: 58988

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6300	mg/Kg	100	4.00

Sample: 227715 - CS-3 15'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68926
Prep Batch: 58988

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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: 227716 - CS-3 18'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68926
Prep Batch: 58988

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-08
Sample Preparation: 2010-04-08

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		218	mg/Kg	50	4.00

Method Blank (1) QC Batch: 68925

QC Batch: 68925
Prep Batch: 58987

Date Analyzed: 2010-04-08
QC Preparation: 2010-04-08

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: 68926

QC Batch: 68926
Prep Batch: 58988

Date Analyzed: 2010-04-08
QC Preparation: 2010-04-08

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: 68925
Prep Batch: 58987

Date Analyzed: 2010-04-08
QC Preparation: 2010-04-08

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.0	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	99.7	mg/Kg	1	100	<2.18	100	85 - 115	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 68926
Prep Batch: 58988

Date Analyzed: 2010-04-08
QC Preparation: 2010-04-08

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	100	mg/Kg	1	100	<2.18	100	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	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: 227707

QC Batch: 68925
Prep Batch: 58987

Date Analyzed: 2010-04-08
QC Preparation: 2010-04-08

Analyzed By: AR
Prepared By: AR

Report Date: April 9, 2010
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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	15100	mg/Kg	100	10000	4890	102	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	15200	mg/Kg	100	10000	4890	103	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: 227716

QC Batch: 68926
Prep Batch: 58988

Date Analyzed: 2010-04-08
QC Preparation: 2010-04-08

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10200	mg/Kg	100	10000	<218	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	10400	mg/Kg	100	10000	<218	102	85 - 115	2	20

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

Standard (ICV-1)

QC Batch: 68925

Date Analyzed: 2010-04-08

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	103	103	85 - 115	2010-04-08

Standard (CCV-1)

QC Batch: 68925

Date Analyzed: 2010-04-08

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.3	97	85 - 115	2010-04-08

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Ondalay-COG/Locohills Line Leak

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Eddy Co., NM

Standard (ICV-1)

QC Batch: 68926

Date Analyzed: 2010-04-08

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.7	99	85 - 115	2010-04-08

Standard (CCV-1)

QC Batch: 68926

Date Analyzed: 2010-04-08

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	2010-04-08

23 8:43:57 AM # 10045+11

Analysis Request of Chain of Custody Record

PAGE: 2

2

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

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

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:		PRESERVATIVE METHOD	
PROJECT NO.:		DATE		TIME		NUMBER OF CONTAINERS	
LAB I.D. NUMBER		DATE		TIME		FILTERED (Y/N)	
22770	4-6	CS-1	22'				
708		CS-1	25'				
709		CS-1	28'				
710		CS-2	10'				
711		CS-2	12'				
712		CS-3	2'				
713		CS-3	10'				
714		CS-3	13'				
715		CS-3	15'				
716		CS-3	18'				

RELINQUISHED BY: (Signature) _____

RELINQUISHED BY: (Signature) _____

RELINQUISHED BY: (Signature) _____

RECEIVED BY: (Signature) _____

RECEIVED BY: (Signature) _____

RECEIVED BY: (Signature) _____

RECEIVING LABORATORY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT: _____ PHONE: _____

DATE: _____ TIME: _____

DATE: _____ TIME: _____

DATE: _____ TIME: _____

SAMPLE CONDITION WHEN RECEIVED: 15.1°C intact

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

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Received by OCD: 4/7/2023 8:43:57 AM
Released to Imaging: 5/3/2023 8:43:14 AM

Report Date: April 9, 2010

Work Order: 10040817

Page Number: 1 of 2

Summary Report

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

Report Date: April 9, 2010

Work Order: 10040817



Project Location: Eddy Co., NM
Project Name: Ondalay-COG/Locohills Line Leak
Project Number: 114-6400293

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
227885	CS-3 21'	soil	2010-04-06	00:00	2010-04-08
227886	CS-4 8' Bottom Hole	soil	2010-04-07	00:00	2010-04-08
227887	CS-4 11'	soil	2010-04-07	00:00	2010-04-08
227888	CS-4 14'	soil	2010-04-07	00:00	2010-04-08
227889	CS-5 3' Bottom Hole	soil	2010-04-07	00:00	2010-04-08
227890	CS-5 6'	soil	2010-04-07	00:00	2010-04-08
227891	CS-5 9'	soil	2010-04-07	00:00	2010-04-08
227892	CS-5 12'	soil	2010-04-07	00:00	2010-04-08
227893	CS-6 4'	soil	2010-04-07	00:00	2010-04-08
227894	CS-6 7'	soil	2010-04-07	00:00	2010-04-08

Sample: 227885 - CS-3 21'

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

Sample: 227886 - CS-4 8' Bottom Hole

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

Sample: 227887 - CS-4 11'

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296
This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: April 9, 2010

Work Order: 10040817

Page Number: 2 of 2

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

Sample: 227888 - CS-4 14'

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

Sample: 227889 - CS-5 3' Bottom Hole

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

Sample: 227890 - CS-5 6'

Param	Flag	Result	Units	RL
Chloride		518	mg/Kg	4.00

Sample: 227891 - CS-5 9'

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

Sample: 227892 - CS-5 12'

Param	Flag	Result	Units	RL
Chloride		243	mg/Kg	4.00

Sample: 227893 - CS-6 4'

Param	Flag	Result	Units	RL
Chloride		13000	mg/Kg	4.00

Sample: 227894 - CS-6 7'

Param	Flag	Result	Units	RL
Chloride		8780	mg/Kg	4.00

Report Date: April 9, 2010

Work Order: 10040817

Page Number: 1 of 2

Summary Report

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

Report Date: April 9, 2010

Work Order: 10040817



Project Location: Eddy Co., NM
Project Name: Ondalay-COG/Lochills Line Leak
Project Number: 114-6400293

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
227885	CS-3 21'	soil	2010-04-06	00:00	2010-04-08
227886	CS-4 8' Bottom Hole	soil	2010-04-07	00:00	2010-04-08
227887	CS-4 11'	soil	2010-04-07	00:00	2010-04-08
227888	CS-4 14'	soil	2010-04-07	00:00	2010-04-08
227889	CS-5 3' Bottom Hole	soil	2010-04-07	00:00	2010-04-08
227890	CS-5 6'	soil	2010-04-07	00:00	2010-04-08
227891	CS-5 9'	soil	2010-04-07	00:00	2010-04-08
227892	CS-5 12'	soil	2010-04-07	00:00	2010-04-08
227893	CS-6 4'	soil	2010-04-07	00:00	2010-04-08
227894	CS-6 7'	soil	2010-04-07	00:00	2010-04-08

Sample: 227885 - CS-3 21'

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

Sample: 227886 - CS-4 8' Bottom Hole

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

Sample: 227887 - CS-4 11'

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296
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Report Date: April 9, 2010

Work Order: 10040817

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

Sample: 227888 - CS-4 14'

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

Sample: 227889 - CS-5 3' Bottom Hole

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

Sample: 227890 - CS-5 6'

Param	Flag	Result	Units	RL
Chloride		518	mg/Kg	4.00

Sample: 227891 - CS-5 9'

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

Sample: 227892 - CS-5 12'

Param	Flag	Result	Units	RL
Chloride		243	mg/Kg	4.00

Sample: 227893 - CS-6 4'

Param	Flag	Result	Units	RL
Chloride		13000	mg/Kg	4.00

Sample: 227894 - CS-6 7'

Param	Flag	Result	Units	RL
Chloride		8780	mg/Kg	4.00



TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 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 DBE: VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX El Paso: T104704221-08-TX Midland: T104704392-08-TX
LELAP-02003
Kansas E-10317
LELAP-02002

Analytical and Quality Control Report

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

Report Date: April 9, 2010

Work Order: 10040817



Project Location: Eddy Co., NM
Project Name: Ondalay-COG/Lochills Line Leak
Project Number: 114-6400293

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
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227888	CS-4 14'	soil	2010-04-07	00:00	2010-04-08
227889	CS-5 3' Bottom Hole	soil	2010-04-07	00:00	2010-04-08
227890	CS-5 6'	soil	2010-04-07	00:00	2010-04-08
227891	CS-5 9'	soil	2010-04-07	00:00	2010-04-08
227892	CS-5 12'	soil	2010-04-07	00:00	2010-04-08
227893	CS-6 4'	soil	2010-04-07	00:00	2010-04-08
227894	CS-6 7'	soil	2010-04-07	00:00	2010-04-08

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 8 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 Ondalay-COG/Locohills Line Leak were received by TraceAnalysis, Inc. on 2010-04-08 and assigned to work order 10040817. Samples for work order 10040817 were received intact at a temperature of 14.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	59001	2010-04-08 at 13:59	68937	2010-04-09 at 09:00

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10040817 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.

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Received by OCD: 4/7/2023 8:43:57 AM
Released to Imaging: 5/3/2023 8:43:14 AM

Report Date: April 9, 2010
114-6400293

Work Order: 10040817
Ondalay-COG/Locohills Line Leak

Page Number: 4 of 8
Eddy Co., NM

Analytical Report

Sample: 227885 - CS-3 21'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68937
Prep Batch: 59001

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-09
Sample Preparation: 2010-04-08

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: 227886 - CS-4 8' Bottom Hole

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68937
Prep Batch: 59001

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-09
Sample Preparation: 2010-04-08

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: 227887 - CS-4 11'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68937
Prep Batch: 59001

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-09
Sample Preparation: 2010-04-08

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: 227888 - CS-4 14'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 68937
Prep Batch: 59001

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-09
Sample Preparation: 2010-04-08

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

continued ...

Report Date: April 9, 2010
114-6400293

Work Order: 10040817
Ondalay-COG/Locohills Line Leak

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Eddy Co., NM

sample 227888 continued ...

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

Sample: 227889 - CS-5 3' Bottom Hole

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 68937 Date Analyzed: 2010-04-09 Analyzed By: AR
Prep Batch: 59001 Sample Preparation: 2010-04-08 Prepared By: AR

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

Sample: 227890 - CS-5 6'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 68937 Date Analyzed: 2010-04-09 Analyzed By: AR
Prep Batch: 59001 Sample Preparation: 2010-04-08 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		518	mg/Kg	50	4.00

Sample: 227891 - CS-5 9'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 68937 Date Analyzed: 2010-04-09 Analyzed By: AR
Prep Batch: 59001 Sample Preparation: 2010-04-08 Prepared By: AR

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

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Sample: 227892 - CS-5 12'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-09	Analyzed By:	AR
QC Batch:	68937	Sample Preparation:	2010-04-08	Prepared By:	AR
Prep Batch:	59001				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		243	mg/Kg	50	4.00

Sample: 227893 - CS-6 4'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-09	Analyzed By:	AR
QC Batch:	68937	Sample Preparation:	2010-04-08	Prepared By:	AR
Prep Batch:	59001				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		13000	mg/Kg	100	4.00

Sample: 227894 - CS-6 7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-09	Analyzed By:	AR
QC Batch:	68937	Sample Preparation:	2010-04-08	Prepared By:	AR
Prep Batch:	59001				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8780	mg/Kg	100	4.00

Method Blank (1) QC Batch: 68937

QC Batch:	68937	Date Analyzed:	2010-04-09	Analyzed By:	AR
Prep Batch:	59001	QC Preparation:	2010-04-08	Prepared By:	AR

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

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Ondalay-COG/Locohills Line Leak

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Laboratory Control Spike (LCS-1)

QC Batch: 68937
Prep Batch: 59001

Date Analyzed: 2010-04-09
QC Preparation: 2010-04-08

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.9	mg/Kg	1	100	<2.18	99	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	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: 227894

QC Batch: 68937
Prep Batch: 59001

Date Analyzed: 2010-04-09
QC Preparation: 2010-04-08

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	18700	mg/Kg	100	10000	8780	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	19000	mg/Kg	100	10000	8780	102	85 - 115	2	20

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

Standard (ICV-1)

QC Batch: 68937

Date Analyzed: 2010-04-09

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	2010-04-09

Standard (CCV-1)

QC Batch: 68937

Date Analyzed: 2010-04-09

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	99.6	100	85 - 115	2010-04-09

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: <i>Qadiriya - 100</i>		SITE MANAGER: <i>Tavares</i>	
PROJECT NO.:		PROJECT NAME:	
<i>114-60410283</i>		<i>Qadiriya - 100 / 1000 Hills 1 mile</i>	
LAB I.D. NUMBER		SAMPLE IDENTIFICATION	
<i>227885</i>	<i>4-6</i>	<i>5</i>	<i>CS-3 21'</i>
<i>886</i>	<i>4-7</i>	<i>1</i>	<i>CS-4 8' Bottom Hole</i>
<i>887</i>	<i>4-7</i>	<i>1</i>	<i>CS-4 11'</i>
<i>888</i>	<i>4-7</i>	<i>1</i>	<i>CS-4 14'</i>
<i>889</i>	<i>4-7</i>	<i>1</i>	<i>CS-5 3' Bottom Hole</i>
<i>890</i>	<i>4-7</i>	<i>1</i>	<i>CS-5 6'</i>
<i>891</i>	<i>4-7</i>	<i>1</i>	<i>CS-5 9'</i>
<i>892</i>	<i>4-7</i>	<i>1</i>	<i>CS-5 12'</i>
<i>893</i>	<i>4-7</i>	<i>1</i>	<i>CS-6 4'</i>
<i>894</i>	<i>4-7</i>	<i>1</i>	<i>CS-6 7'</i>
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: <i>4-6-10</i>		Date: <i>4-6-10</i>	
Time: <i>15:43</i>		Time: <i>15:43</i>	
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: <i>4-8-10</i>		Date: <i>4-8-10</i>	
Time: <i>10:08</i>		Time: <i>10:08</i>	
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: <i>4-8-10</i>		Date: <i>4-8-10</i>	
Time: <i>10:08</i>		Time: <i>10:08</i>	
RECEIVING LABORATORY:		RECEIVED BY: (Signature)	
ADDRESS:		DATE:	
CITY:		ZIP:	
CONTACT:		PHONE:	
STATE:		DATE:	
SAMPLE CONDITION WHEN RECEIVED:		REMARKS:	
<i>141c intact</i>		<i>X-Hill tests - Midland</i>	

ANALYSIS REQUEST (Circle or Specify Method No.)	
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 8080/608	
Pest. 808/608	
Chlorides	
Gamma Spec.	
Alpha Beta (Air)	
PLM (Asbestos)	
Major Anions/Cations, pH, TDS	

PAGE: *2* of *2*

RELINQUISHED BY: (Signature) *Tavares* Date: *4-6-10* Time: *15:43*

RECEIVED BY: (Signature) *Tavares* Date: *4-6-10* Time: *15:43*

RELINQUISHED BY: (Signature) *Tavares* Date: *4-8-10* Time: *10:08*

RECEIVED BY: (Signature) *Tavares* Date: *4-8-10* Time: *10:08*

RELINQUISHED BY: (Signature) *Tavares* Date: *4-8-10* Time: *10:08*

RECEIVED BY: (Signature) *Tavares* Date: *4-8-10* Time: *10:08*

RECEIVING LABORATORY: *Tetra Tech*

ADDRESS: *1910 N. Big Spring St.*

CITY: *Midland* STATE: *TX* ZIP: *79705*

CONTACT: *Tavares* PHONE: *(432) 682-4559*

STATE: *TX* DATE: *4-6-10*

SAMPLE CONDITION WHEN RECEIVED: *141c intact*

REMARKS: *X-Hill tests - Midland*

RELINQUISHED BY: (Signature) *Tavares* Date: *4-6-10* Time: *15:43*

RECEIVED BY: (Signature) *Tavares* Date: *4-6-10* Time: *15:43*

RELINQUISHED BY: (Signature) *Tavares* Date: *4-8-10* Time: *10:08*

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ADDRESS: *1910 N. Big Spring St.*

CITY: *Midland* STATE: *TX* ZIP: *79705*

CONTACT: *Tavares* PHONE: *(432) 682-4559*

STATE: *TX* DATE: *4-6-10*

SAMPLE CONDITION WHEN RECEIVED: *141c intact*

REMARKS: *X-Hill tests - Midland*

RELINQUISHED BY: (Signature) *Tavares* Date: *4-6-10* Time: *15:43*

RECEIVED BY: (Signature) *Tavares* Date: *4-6-10* Time: *15:43*

RELINQUISHED BY: (Signature) *Tavares* Date: *4-8-10* Time: *10:08*

RECEIVED BY: (Signature) *Tavares* Date: *4-8-10* Time: *10:08*

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RECEIVED BY: (Signature) *Tavares* Date: *4-8-10* Time: *10:08*

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ADDRESS: *1910 N. Big Spring St.*

CITY: *Midland* STATE: *TX* ZIP: *79705*

CONTACT: *Tavares* PHONE: *(432) 682-4559*

STATE: *TX* DATE: *4-6-10*

SAMPLE CONDITION WHEN RECEIVED: *141c intact*

REMARKS: *X-Hill tests - Midland*

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Summary Report

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

Report Date: April 13, 2010

Work Order: 10041230



Project Location: Eddy Co., NM
Project Name: Ondalay-COG/Locohills Line Leak
Project Number: 114-6400293

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
228302	CS-6 10' Bottom Hole	soil	2010-04-07	00:00	2010-04-12
228303	CS-6 13'	soil	2010-04-07	00:00	2010-04-12
228304	CS-7 5' Bottom Hole	soil	2010-04-07	00:00	2010-04-12
228305	CS-7 8'	soil	2010-04-07	00:00	2010-04-12
228306	CS-7 11'	soil	2010-04-07	00:00	2010-04-12
228307	CS-8 9' Bottom Hole	soil	2010-04-08	00:00	2010-04-12
228308	CS-8 12'	soil	2010-04-08	00:00	2010-04-12
228309	CS-8 15'	soil	2010-04-08	00:00	2010-04-12
228310	CS-9 9' Bottom Hole	soil	2010-04-08	00:00	2010-04-12
228311	CS-9 12'	soil	2010-04-08	00:00	2010-04-12

Sample: 228302 - CS-6 10' Bottom Hole

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

Sample: 228303 - CS-6 13'

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

Sample: 228304 - CS-7 5' Bottom Hole

Param	Flag	Result	Units	RL
Chloride		217	mg/Kg	4.00

Sample: 228305 - CS-7 8'

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

Sample: 228306 - CS-7 11'

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

Sample: 228307 - CS-8 9' Bottom Hole

Param	Flag	Result	Units	RL
Chloride		212	mg/Kg	4.00

Sample: 228308 - CS-8 12'

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

Sample: 228309 - CS-8 15'

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

Sample: 228310 - CS-9 9' Bottom Hole

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

Sample: 228311 - CS-9 12'

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

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
 200 East Sunset Road, Suite E El Paso, Texas 79922 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 Tavaréz
 Tetra Tech
 1910 N. Big Spring Street
 Midland, TX, 79705

Report Date: April 13, 2010

Work Order: 10041230



Project Location: Eddy Co., NM
 Project Name: Ondalay-COG/Lochills Line Leak
 Project Number: 114-6400293

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
228302	CS-6 10' Bottom Hole	soil	2010-04-07	00:00	2010-04-12
228303	CS-6 13'	soil	2010-04-07	00:00	2010-04-12
228304	CS-7 5' Bottom Hole	soil	2010-04-07	00:00	2010-04-12
228305	CS-7 8'	soil	2010-04-07	00:00	2010-04-12
228306	CS-7 11'	soil	2010-04-07	00:00	2010-04-12
228307	CS-8 9' Bottom Hole	soil	2010-04-08	00:00	2010-04-12
228308	CS-8 12'	soil	2010-04-08	00:00	2010-04-12
228309	CS-8 15'	soil	2010-04-08	00:00	2010-04-12
228310	CS-9 9' Bottom Hole	soil	2010-04-08	00:00	2010-04-12
228311	CS-9 12'	soil	2010-04-08	00:00	2010-04-12

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

This report consists of a total of 8 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 Ondalay-COG/Locohills Line Leak were received by TraceAnalysis, Inc. on 2010-04-12 and assigned to work order 10041230. Samples for work order 10041230 were received intact at a temperature of 23.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	59100	2010-04-13 at 09:49	69043	2010-04-13 at 12:33

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 10041230 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.

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Work Order: 10041230
Ondalay-COG/Locohills Line Leak

Page Number: 4 of 8
Eddy Co., NM

Analytical Report

Sample: 228302 - CS-6 10' Bottom Hole

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-13	Analyzed By:	AR
QC Batch:	69043	Sample Preparation:	2010-04-13	Prepared By:	AR
Prep Batch:	59100				

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

Sample: 228303 - CS-6 13'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-13	Analyzed By:	AR
QC Batch:	69043	Sample Preparation:	2010-04-13	Prepared By:	AR
Prep Batch:	59100				

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

Sample: 228304 - CS-7 5' Bottom Hole

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-13	Analyzed By:	AR
QC Batch:	69043	Sample Preparation:	2010-04-13	Prepared By:	AR
Prep Batch:	59100				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		217	mg/Kg	50	4.00

Sample: 228305 - CS-7 8'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-13	Analyzed By:	AR
QC Batch:	69043	Sample Preparation:	2010-04-13	Prepared By:	AR
Prep Batch:	59100				

continued ...

Report Date: April 13, 2010
114-6400293

Work Order: 10041230
Ondalay-COG/Locohills Line Leak

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Eddy Co., NM

sample 228305 continued ...

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

Sample: 228306 - CS-7 11'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 69043
Prep Batch: 59100

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-13
Sample Preparation: 2010-04-13

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: 228307 - CS-8 9' Bottom Hole

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 69043
Prep Batch: 59100

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-13
Sample Preparation: 2010-04-13

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		212	mg/Kg	50	4.00

Sample: 228308 - CS-8 12'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 69043
Prep Batch: 59100

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-04-13
Sample Preparation: 2010-04-13

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: April 13, 2010
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Work Order: 10041230
Ondalay-COG/Locohills Line Leak

Page Number: 6 of 8
Eddy Co., NM

Sample: 228309 - CS-8 15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-13	Analyzed By:	AR
QC Batch:	69043	Sample Preparation:	2010-04-13	Prepared By:	AR
Prep Batch:	59100				

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

Sample: 228310 - CS-9 9' Bottom Hole

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-13	Analyzed By:	AR
QC Batch:	69043	Sample Preparation:	2010-04-13	Prepared By:	AR
Prep Batch:	59100				

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

Sample: 228311 - CS-9 12'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-04-13	Analyzed By:	AR
QC Batch:	69043	Sample Preparation:	2010-04-13	Prepared By:	AR
Prep Batch:	59100				

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

Method Blank (1) QC Batch: 69043

QC Batch:	69043	Date Analyzed:	2010-04-13	Analyzed By:	AR
Prep Batch:	59100	QC Preparation:	2010-04-13	Prepared By:	AR

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

Report Date: April 13, 2010
114-6400293

Work Order: 10041230
Ondalay-COG/Locohills Line Leak

Page Number: 7 of 8
Eddy Co., NM

Laboratory Control Spike (LCS-1)

QC Batch: 69043
Prep Batch: 59100

Date Analyzed: 2010-04-13
QC Preparation: 2010-04-13

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	99.5	mg/Kg	1	100	<2.18	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: 228311

QC Batch: 69043
Prep Batch: 59100

Date Analyzed: 2010-04-13
QC Preparation: 2010-04-13

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10200	mg/Kg	100	10000	<218	102	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	10400	mg/Kg	100	10000	<218	104	85 - 115	2	20

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

Standard (ICV-1)

QC Batch: 69043

Date Analyzed: 2010-04-13

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	2010-04-13

Standard (CCV-1)

QC Batch: 69043

Date Analyzed: 2010-04-13

Analyzed By: AR

Report Date: April 13, 2010
114-6400293

Work Order: 10041230
Ondalay-COG/Locohills Line Leak

Page Number: 8 of 8
Eddy Co., NM

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	2010-04-13

PAGE: 1 of 31

ANALYSIS REQUEST
(Circle or Specify Method No.)

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

CLIENT NAME:		SITE MANAGER:		PROJECT NAME:		PRESERVATIVE METHOD		NUMBER OF CONTAINERS		FILTERED (Y/N)		HCL		HNO3		ICE		NONE	
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION													
228302	4/7	2010	S	X	X	CS-6	10' Bottom Hole	1											
303						CS-6	13'												
304						CS-7	5' Bottom Hole												
305						CS-7	8'												
306						CS-7	11'												
307	4/8					CS-8	9' Bottom Hole												
308						CS-8	12'												
309						CS-8	15'												
310						CS-9	9' Bottom Hole												
311						CS-9	12'												

RELINQUISHED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RELINQUISHED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RELINQUISHED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RECEIVED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RECEIVED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RECEIVED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RECEIVING LABORATORY: [Signature]

ADDRESS: Midwest STATE: IL ZIP: 60611

CITY: Chicago PHONE: [Number]

CONTACT: [Name]

REMARKS: 23.0°C intact

CLIENT NAME: Oradale - C06

PROJECT NO.: 114-64100253

LAB I.D. NUMBER: 228302

DATE: 4/7

TIME: 2010

MATRIX: S

COMP: X

GRAB: X

SITE MANAGER: Take Turner

PROJECT NAME: Oradale - C06 / Long Hills Lake

SAMPLE IDENTIFICATION: 204 Co, NH

RELINQUISHED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RELINQUISHED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RELINQUISHED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RECEIVED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RECEIVED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RECEIVED BY: (Signature) [Signature] Date: 4-8-10 Time: 16:27

RECEIVING LABORATORY: [Signature]

ADDRESS: Midwest STATE: IL ZIP: 60611

CITY: Chicago PHONE: [Number]

CONTACT: [Name]

REMARKS: 23.0°C intact

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

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

CONDITIONS

Action 205100

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 205100
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	5/3/2023