SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	**State 2 Well #2**					
Company:	**OXY USA, Inc.**					
Section, Township and Range	**Unit P**	**Sec 2**	**T22S**	**R31E**		
Lease Number:						
County:	**Eddy County**					
GPS:	**32. 24 59.4° N**			**103 44 30.6° W**		
Surface Owner:	State					
Mineral Owner:						
Directions:	From intersection of HWY 62 and E38/Louis Wittlock Rd, go south of Louis Wittlock Rd for approximately 7.7 miles. Turn east onto lease road and continue for 1.5 miles, turn south onto lease road and continue for .8 miles, location is on west side of road in pasture area.					

Release Data:

Date Released:	11/11/2005
Type Release:	Produced water and oil
Source of Contamination:	Flowline failure
Fluid Released:	30 bbls
Fluids Recovered:	0 bbls

Official Communication:

Name:	Dusty Wilson		Ike Tavarez
Company:	Oxy USA, Inc.		Tetra Tech
Address:	6 Desta Drive		4000 N. Big Spring, St.
	Suite 600		Ste 401
City:	Midland, TX 79705		Midland, Texas
Phone number:	(432)685-5771		(432)687-8110
Fax:			
Email:	dusty_wilson@oxy.com		Ike.Tavarez@tetratech.com

Ranking Criteria

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

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

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 06 2014
RECEIVED

TETRA TECH

December 3, 2013

Mr. Mike Bratcher
Environmental Bureau
Oil Conservation Division- District 2
1301 W. Grand Avenue
Artesia, New Mexico 88210

RE: Closure Report for the Flow Line Spill at the OXY USA INC., State 2, Well #2, Located in Unit Letter P, Section 2, Township 22 South, Range 31 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. was contacted by Pogo Producing Company (Now operated by OXY USA, Inc.) to assess and remediate a spill on the State 2 Well # 2 (flow-line), located in Unit Letter P, Section 2, Township 22 South, Range 31 East, Eddy County, New Mexico (Site). The spill occurred under Pogo Producing Company, which Oxy acquired the lease. The spill location coordinates are N 32° 24' 59.4", W 103° 44' 30.6". The Site is shown on Figure 1.

Background

According to the State of New Mexico C-141 report, Pogo Producing had a spill that occurred on November 11, 2005, from a hole in a poly-line (flow-line). A total of 10 barrels of oil and 20 barrels of produced water were released and no fluids were recovered. The oil and water were released in a sandy pasture. The initial C-141 is shown in Appendix A.

Groundwater and Regulatory

The New Mexico State Engineer's Office database did not show any wells in Section 2, however, wells in the vicinity to the north and south of the section had reported depths to water ranging from 400' to 600' below ground surface. The USGS reports did not show any wells in the vicinity of this site. Referring to the ChevronTexaco Depth to Water Map for Eddy County, there is a well shown

Tetra Tech
4000 North Big Spring, Ste 401, Midland, TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

in Section 15 with a reported depth to water of 124'. Reviewing the topographic extract there is a windmill shown in this area. This windmill is located approximately halfway between the Site and the Waste Isolation Pilot Plant (WIPP) site to the southwest. The elevation of the surface at this windmill is approximately 90'-100' lower than the elevation of the site State 2 #2 site. Projecting the elevation to this site would indicate the depth to water to exceed 200' at the State 2 #2 site. The topographic extract is shown as Figure 1. A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Initial Assessment and Results

On December 29, 2005, Tetra Tech, Inc. personnel inspected and sampled the spill area. The spill area was located approximately 1,800 feet northeast from the well in a sandy pasture. During the inspection, an area approximately 120' x 160' had been excavated and worked. This area may have been from some of the overspray from the spill. At the release (flow-line), there was no apparent staining on the east side of the flow-line. A total of four (4) auger holes (AH-1 through AH-4) were installed using a stainless steel hand auger to assess the impacted soils. Soil samples were collected at 1.0 foot intervals and submitted for analysis of TPH by EPA method 8015 modified, BTEX by EPA method 8021B and chloride by EPA method 300.0.

Referring to Table 1, laboratory results indicated AH-1 and AH-3 exceeded the RRAL for TPH and BTEX at depths of 2.5' and 3.5', respectively. The remaining auger holes, AH-2 and AH-4, did not exhibit TPH and BTEX concentrations above RRAL. Chloride concentrations were elevated in AH-1 throughout the depth of the auger hole. AH-3 showed an increasing chloride concentration at 4-4.5' (7,080 mg/kg) and 5-5.5' (22,200 mg/kg). Deeper samples were not collected due to auger refusal. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix C. The auger hole locations are shown on Figure 2. The laboratory results of the sampling are summarized in Table 1.

In order to complete delineation of the site, Highlander personnel were onsite May 25, 2006, to place backhoe trenches in the vicinity of the auger holes. Highlander supervised the placement of seven (7) trench locations (T-1 to T-7). Soil samples were collected at 2.0 foot intervals and submitted for analysis of chlorides. The analysis indicates that the chloride impacts have been delineated vertically and do not exceed a depth of 14 feet bgs. Horizontally, the site has been delineated east, west, and south but has not been completely delineated to the north. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix C. The trench locations are shown on Figure 3 while concentrations in depths are shown on Figures 4 and 5. The laboratory results of the sampling are summarized in Table 2.

A work plan for this site was submitted to the NMOCD dated October 18, 2006, but was not reviewed. In a meeting in Artesia in December, 2008, it was decided that since the original work plan had not been reviewed, the site needed to be re-sampled in order to confirm the chloride concentrations had not changed.

Re-Evaluation and Results

Based upon the previously impacted areas, T-1, T-2 and T-6, on December 14, 2009, Tetra Tech personnel re-evaluated and sampled the spill area. A total of three (3) trenches were excavated (T-1, T-2 and T-6) to assess total chloride concentration. Soil samples were collected at two (2) foot intervals and submitted for analysis. The analysis indicates that the chloride concentrations were very similar in depth and concentration to the original testing performed at this site. The trench locations are shown on Figure 6 while concentrations and depths are shown on Table 3.

Remediation

In April of 2013, Tetra Tech personnel supervised the excavation of the impacted soils as discussed in the submitted work plan. The areas of T-1, T-2, T-4, and T-6 were excavated to a depth of 4.0' as highlighted (green) on Table 2 and Table 3 and shown on Figure 6. The area was capped with a 40 mil liner to prevent any further migration of contaminates. The impacted soil was transported to proper disposal and the excavation area was backfilled with clean soil to grade. The remediation was completed on April 26, 2013.

Due to the remedial actions taken, OXY USA, Inc. requests closure of this site. The final C-141 is included in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez,
Project Manager, P.G.

Figures

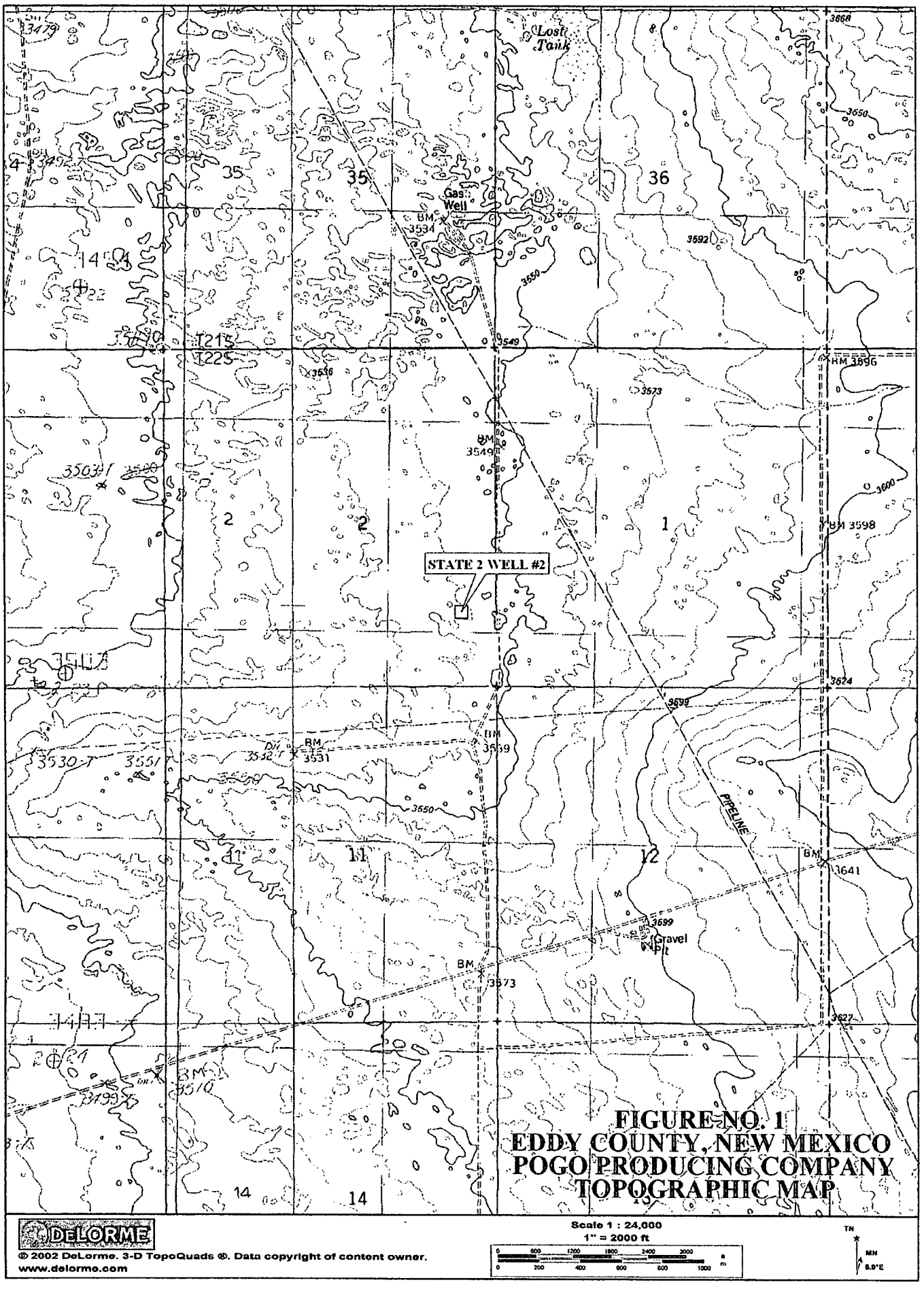
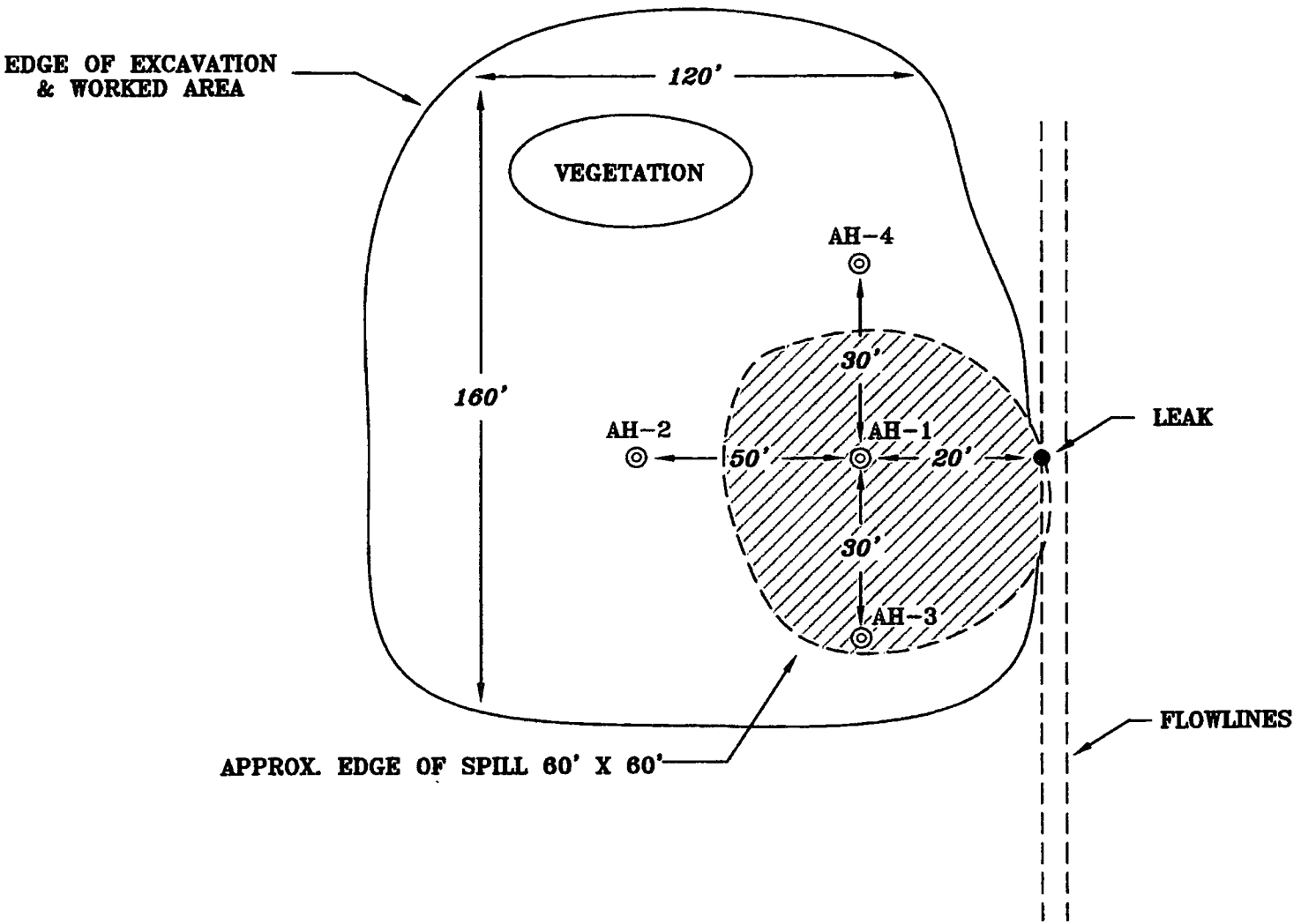


FIGURE NO. 1
EDDY COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
TOPOGRAPHIC MAP



AUGERHOLE LOCATIONS

SPILL AREA

NOT TO SCALE

FIGURE NO. 2

EDDY COUNTY, NEW MEXICO

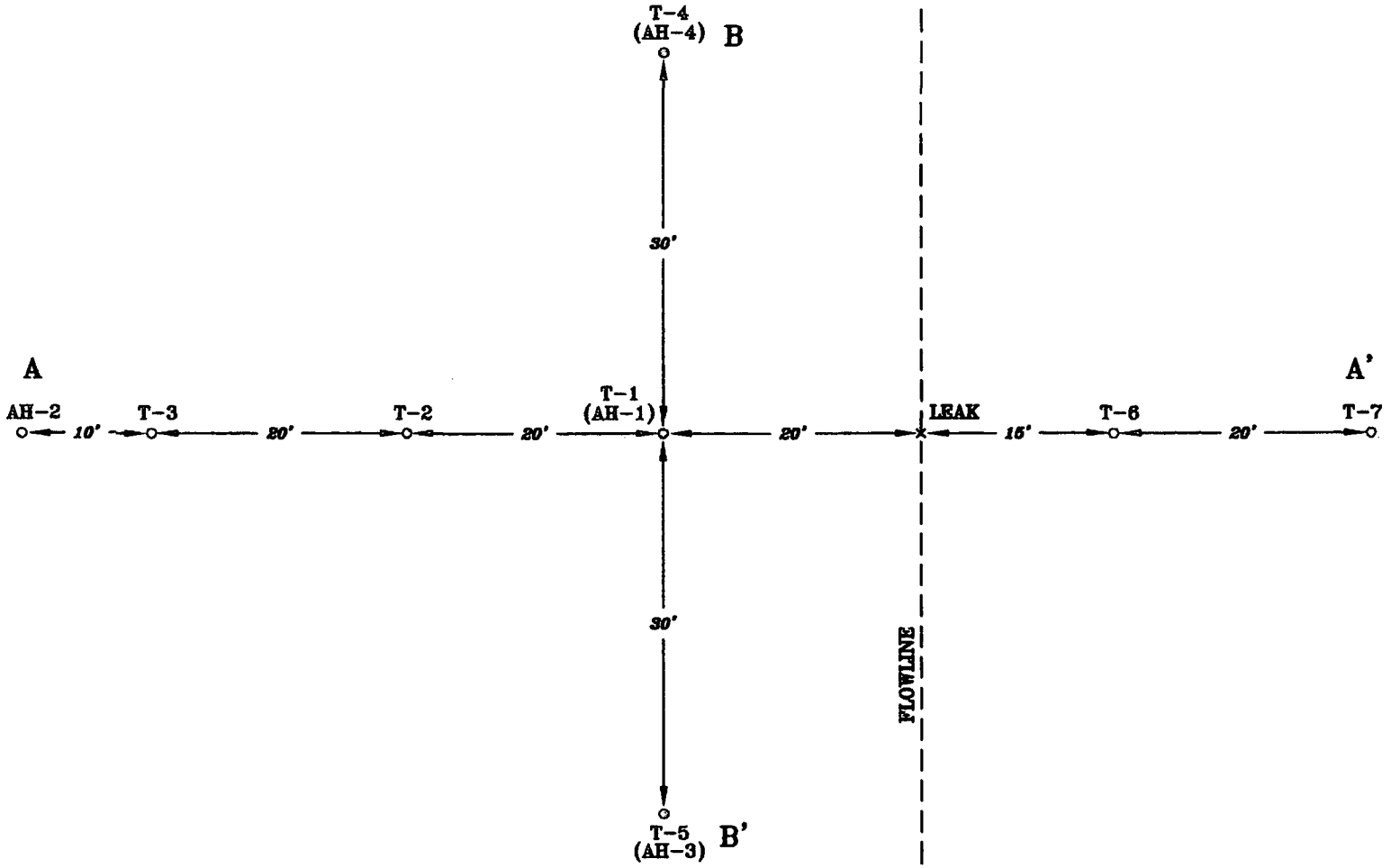
OXY USA INC.
STATE 2 WELL #2

DATE: 2/27/06

DWN. BY: JJ

FILE:

TETRA TECH INC.
MIDLAND, TEXAS



○ TEST TRENCH LOCATIONS

0 10'

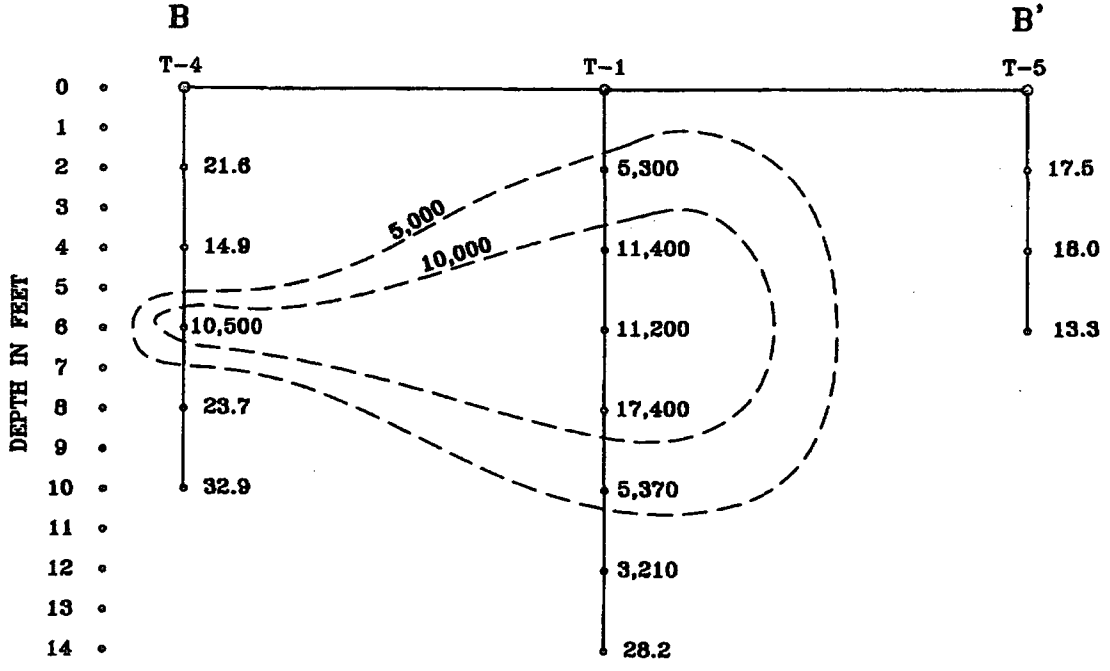
FIGURE NO. 3

EDDY COUNTY, NEW MEXICO

OXY USA INC.
STATE 2 WELL #2

DATE: 5/31/06
DWN. BY: JJ
FILE:

TETRA TECH INC.
MIDLAND, TEXAS



○ TEST TRENCH LOCATIONS

0 10'

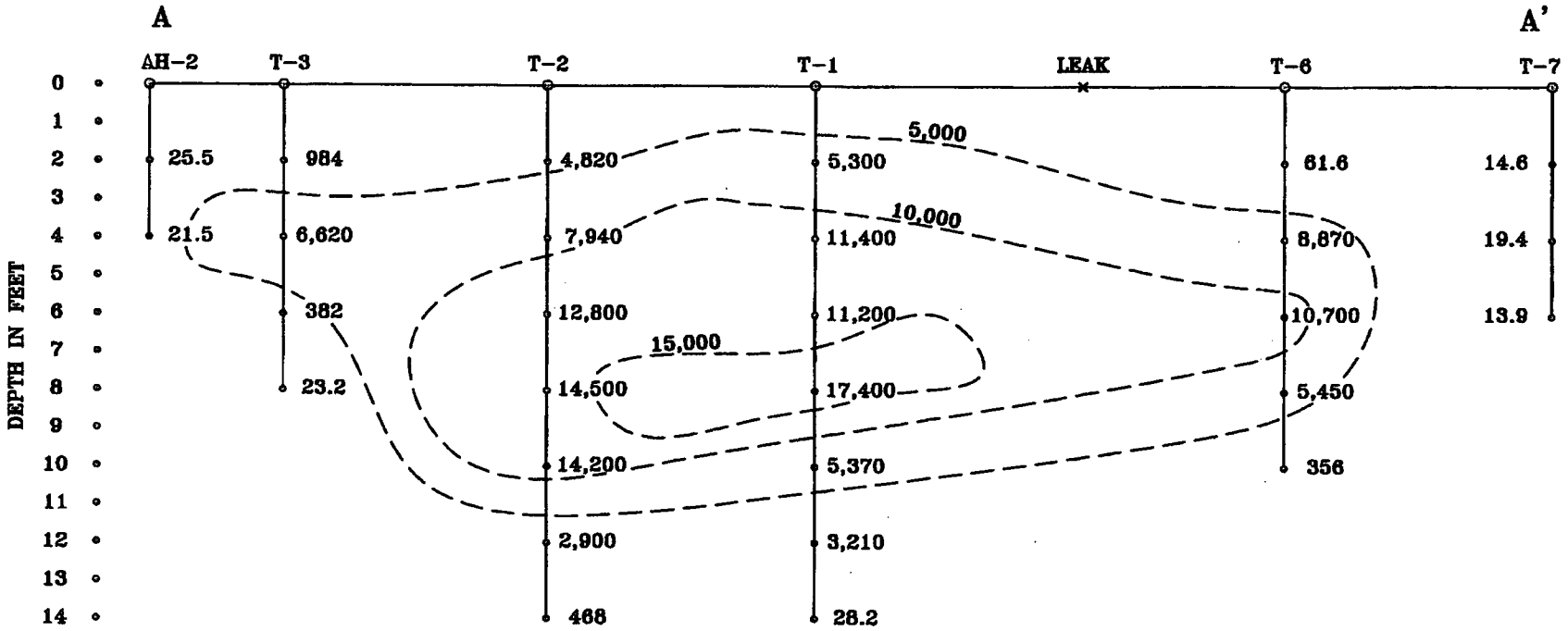
FIGURE NO. 4

EDDY COUNTY, NEW MEXICO

OXY USA INC.
STATE 2 WELL #2

DATE: 5/31/06
DWN. BY: JJ
FILE:

TETRA TECH INC.
MIDLAND, TEXAS



○ TEST TRENCH LOCATIONS

0 10'

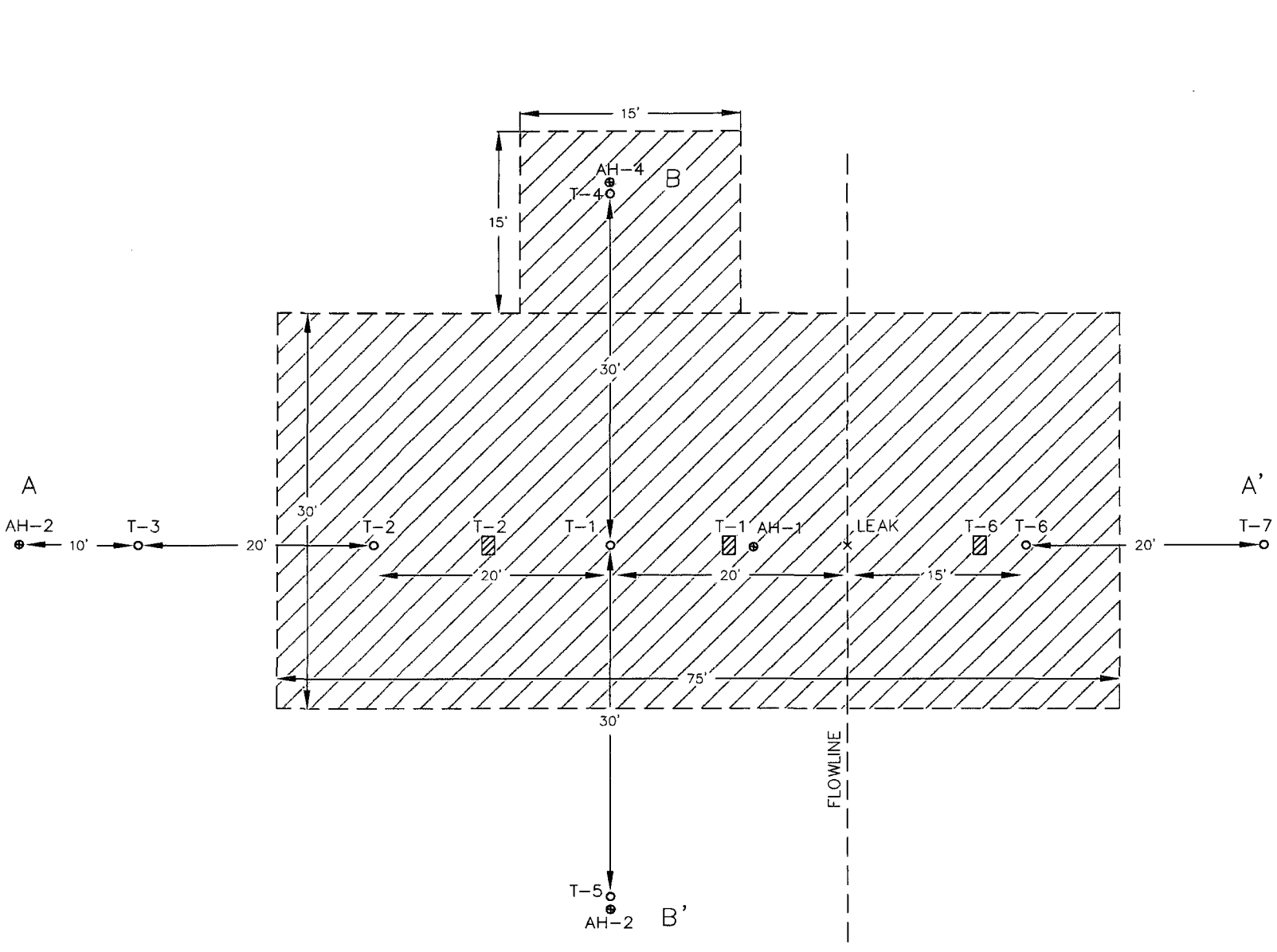
FIGURE NO. 5

EDDY COUNTY, NEW MEXICO

OXY USA INC.
STATE 2 WELL #2

DATE: 5/31/06
DWN. BY: JJ
FILE:

TETRA TECH INC.
MIDLAND, TEXAS



- PROPOSED EXCAVATION AREA (4' DEEP)
- EXTENT OF LINER
- TEST TRENCH (12-14-09 REEVALUATION)
- TEST TRENCH LOCATIONS
- AUGER HOLE SAMPLE LOCATIONS

0 10'

FIGURE NO. 6

EDDY COUNTY, NEW MEXICO

OXY USA INC.
STATE 2 WELL #2

TETRA TECH INC.
MIDLAND, TEXAS

DATE: 12/11/2013
DWN. BY: IM
FILE: C:\POGO\252B\STATE 2 #2

Tables

Table 1
OXY USA INC.
State 2 Well #2 (flow-line Spill)
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
AH-1	12/29/05	0-1	7,570	32,200	**39,800**	**5.18**	**22.1**	**19.1**	**62.8**	4950
	"	1-1.5	5,760	22,500	**28,300.0**	**10.8**	**29.2**	**17.8**	**55.9**	4,690
	"	2-2.5	31.7	279	311	<0.025	<0.025	<0.025	<0.025	4,750
	"	3-3.5	-	-	-	-	-	-	-	6,260
	"	4-4.5	-	-	-	-	-	-	-	15,000
	"	5-5.5	-	-	-	-	-	-	-	15,400
	"	6-6.5	-	-	-	-	-	-	-	18,000
	"	7-7.5	-	-	-	-	-	-	-	17,400
AH-2	12/29/05	0-1	<10.0	25.4	25.4	<0.025	<0.025	<0.025	<0.025	33.9
	"	1-1.5	<10.0	<10.0	<10.0	-	-	-	-	26.6
	"	2-2.5	-	-	-	-	-	-	-	25.5
	"	3-3.5	-	-	-	-	-	-	-	20.8
	"	4-4.5	-	-	-	-	-	-	-	21.4
AH-3	12/29/05	0-1	245	1,690	1,940	<0.025	0.0352	0.0995	0.462	415
	"	1-1.5	6,880	19,100	**26,000**	**6.26**	**38.2**	**35.0**	**111.6**	331
	"	2-2.5	4,700	14,000	**18,700**	-	-	-	-	30
	"	3-3.5	176	728	904	<0.025	<0.025	0.0956	0.573	111
	"	4-4.5	-	-	-	-	-	-	-	7,080
	"	5-5.5	-	-	-	-	-	-	-	22,200
AH-4	12/29/05	0-1	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	39.7
	"	1-1.5	<10.0	<10.0	<10.0	-	-	-	-	26.4
	"	2-2.5	-	-	-	-	-	-	-	20.7
	"	3-3.5	-	-	-	-	-	-	-	22.4
	"	4-4.5	-	-	-	-	-	-	-	34.0

(-) Not Analyzed

Excavation Depth

Liner

Table 2
OXY USA INC.
State 2 Well #2 (flow-line Spill)
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	Chloride (mg/kg)
T-1	05/25/06	2.0	5,300
	"	4.0	11,400
	"	6.0	11,200
	"	8.0	17,400
	"	10.0	5,370
	"	12.0	3,210
	"	14.0	28.2
T-2	05/25/06	2.0	4,820
	"	4.0	7,940
	"	6.0	12,800
	"	8.0	14,500
	"	10.0	14,200
	"	12.0	2,900
	"	14.0	268
T-3	05/25/06	2.0	984
	"	4.0	6,620
	"	6.0	382
	"	8.0	23.2
T-4	05/25/06	2.0	21.6
	"	4.0	14.9
	"	6.0	10,500
	"	8.0	23.7
	"	10.0	32.9
T-5	05/25/06	2.0	17.5
	"	4.0	18.0
	"	6.0	13.3
T-6	05/25/06	2.0	61.6
	"	4.0	8,870
	"	6.0	10,700
	"	8.0	5,450
	"	10.0	356
T-7	05/25/06	2.0	14.6
	"	4.0	19.4
	"	6.0	14

Excavated Depths

Liner

Table 3
OXY USA INC.
PXP State 2 Well #2 Flow Line Release
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					
T-1	12/14/09	2'	X		-	-	-	-	-	-	-	91
	12/14/09	4'	X		-	-	-	-	-	-	-	320
	12/14/09	6'	X		-	-	-	-	-	-	-	2,050
	12/14/09	8'	X		-	-	-	-	-	-	-	12,200
	12/14/09	10'	X		-	-	-	-	-	-	-	6,810
T-2	12/14/09	2'	X		-	-	-	-	-	-	-	2,890
	12/14/09	4'	X		-	-	-	-	-	-	-	7,770
	12/14/09	6'	X		-	-	-	-	-	-	-	13,600
	12/14/09	8'	X		-	-	-	-	-	-	-	20,800
	12/14/09	10'	X		-	-	-	-	-	-	-	10,500
T-6	12/14/09	2'	X		-	-	-	-	-	-	-	28
	12/14/09	4'	X		-	-	-	-	-	-	-	107
	12/14/09	6'	X		-	-	-	-	-	-	-	4,040
	12/14/09	8'	X		-	-	-	-	-	-	-	12,900
	12/14/09	10'	X		-	-	-	-	-	-	-	1,460

(-) 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 Resources

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

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 06 2014
RECEIVED

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **Oxy USA, Inc**	Contact **Dusty Wilson**
Address **6 Desta Drive Suite 600, Midland, TX 79705**	Telephone No. **(432) 685-5771**
Facility Name State 2 Well #2	Facility Type **Flowline**

Surface Owner:State	Mineral Owner	Lease No. NM4

30-015-28416

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	2	22S	31E	660	South Line			Eddy

Latitude N ° **Longitude** W °

NATURE OF RELEASE

Type of Release: Produced Water & Oil	Volume of Release 10 bbls oil 20 bbls water	Volume Recovered 0 bbls
Source of Release **Flowline**	Date and Hour of Occurrence 11/14/05 11:00a.m.	Date and Hour of Discovery 11-14-05 12:30 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Mike Bratcher**	
By Whom?	Date and Hour 11-14-05 1:30 p.m.	
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.*

Flowline blew a hole in the middle of the pasture

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal. Site was then brought up to surface grade with clean backfill material. Tetra Tech prepared closure report and submitted to NMOCD for review.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: 12/16/2013 Phone: (432) 687-8110		

* Attach Additional Sheets If Necessary

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-141
Originated 2/13/97

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	Contact
POGO Producing Co.	PAT Ellis
Address	**Telephone No.**
P.O Box 10340 Midland Tx 79702	432-685-8100
Facility Name	**Facility Type**
STATE 2 Well #2	Flowline

Surface Owner	Mineral Owner	Lease No.
?	New Mexico	NM 4

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	2	22S	31E	660	S L	2310	FEL	Eddy

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Oil & H2O	10 oil & 20 Bwl	0
Source of Release	**Date and Hour of Occurrence**	**Date and Hour of Discovery**
Poly Pipe Flowline Developed hole	11AM 11-14-05	12:30p 11-14-05
Was Immediate Notice Given? ☑ Yes ☐ No ☐ Not Required	**If YES, To Whom?**	
	Mike Bratcher	
By Whom?	**Date and Hour**	
Dan Talley	1:30p 11-14-05	
Was a Watercourse Reached? ☐ Yes ☑ No	**If YES, Volume Impacting the Watercourse.**	

If a Watercourse was Impacted, Describe Fully (Attach Additional Sheets If Necessary)

—

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary)

Flowline blew a hole in the middle of sandy pasture

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary)

Contaminated soil will be removed and sent to Sundance Land Farm

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: Dan Talley	**OIL CONSERVATION DIVISION**
Printed Name: Dan Talley	Approved by District Supervisor:
Title: Consultant	Approval Date: / Expiration Date:
Date: 11-25-05 Phone: 505 748 5460	Conditions of Approval: / Attached ☐

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
OXY USA, Inc. - State 2 #2
Eddy County, New Mexico

---

21 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

21 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16 **630**	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

21 South 32 East

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

22 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 **256**	23	24
30	29	28	27	26	25
31	32	33 **155**	34	35	36

22 South 31 East

6	5	4	3	2 SITE	1
7	8	9	10	11	12
18	17	16 **448**	15	14	13
19	20 **47**	21	22	23	24
30	29 **413**	28 **444**	27	26	25
31	32	33	34	35	36

22 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14 **382** **350**	13
19 (S) **280**	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

23 South 30 East

6 **110**	5	4	3	2 **250**	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 **440**	35	36

23 South 31 East

6 **85**	5 **354**	4 **168**	3	2	1
7 **140**	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

23 South 32 East

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

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- New Mexico Water and Infrastructure Data System

Appendix C

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ State 2 Well #2 (Flowline)

Project Number: 2526

Location: Eddy Co., NM

Lab Order Number: 5L30010

Report Date: 01/10/06

Highlander Environmental Corp.	Project: Pogo/ State 2 Well #2 (Flowline)	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2526	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	01/10/06 12:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-1 0-1'	5L30010-01	Soil	12/29/05 00:00	12/30/05 16:25
AH-1 1-1.5'	5L30010-02	Soil	12/29/05 00:00	12/30/05 16:25
AH-1 2-2.5'	5L30010-03	Soil	12/29/05 00:00	12/30/05 16:25
AH-1 3-3.5'	5L30010-04	Soil	12/29/05 00:00	12/30/05 16:25
AH-1 4-4.5'	5L30010-05	Soil	12/29/05 00:00	12/30/05 16:25
AH-1 5-5.5'	5L30010-06	Soil	12/29/05 00:00	12/30/05 16:25
AH-1 6-6.5'	5L30010-07	Soil	12/29/05 00:00	12/30/05 16:25
AH-1 7-7.5'	5L30010-08	Soil	12/29/05 00:00	12/30/05 16:25
AH-2 0-1'	5L30010-09	Soil	12/29/05 00:00	12/30/05 16:25
AH-2 1-1.5'	5L30010-10	Soil	12/29/05 00:00	12/30/05 16:25
AH-2 2-2.5'	5L30010-11	Soil	12/29/05 00:00	12/30/05 16:25
AH-2 3-3.5'	5L30010-12	Soil	12/29/05 00:00	12/30/05 16:25
AH-2 4-4.5'	5L30010-13	Soil	12/29/05 00:00	12/30/05 16:25
AH-3 0-1'	5L30010-14	Soil	12/29/05 00:00	12/30/05 16:25
AH-3 1-1.5'	5L30010-15	Soil	12/29/05 00:00	12/30/05 16:25
AH-3 2-2.5'	5L30010-16	Soil	12/29/05 00:00	12/30/05 16:25
AH-3 3-3.5'	5L30010-17	Soil	12/29/05 00:00	12/30/05 16:25
AH-3 4-4.5'	5L30010-18	Soil	12/29/05 00:00	12/30/05 16:25
AH-3 5-5.5'	5L30010-19	Soil	12/29/05 00:00	12/30/05 16:25
AH-4 0-1'	5L30010-20	Soil	12/29/05 00:00	12/30/05 16:25
AH-4 1-1.5'	5L30010-21	Soil	12/29/05 00:00	12/30/05 16:25
AH-4 2-2.5'	5L30010-22	Soil	12/29/05 00:00	12/30/05 16:25
AH-4 3-3.5'	5L30010-23	Soil	12/29/05 00:00	12/30/05 16:25
AH-4 4-4.5'	5L30010-24	Soil	12/29/05 00:00	12/30/05 16:25

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 0-1' (5L30010-01) Soil									
Benzene	**5.18**	0.200	mg/kg dry	200	EA60314	01/03/06	01/04/06	EPA 8021B	
Toluene	**22.1**	0.200	"	"	"	"	"	"	
Ethylbenzene	**19.1**	0.200	"	"	"	"	"	"	
Xylene (p/m)	**41.6**	0.200	"	"	"	"	"	"	
Xylene (o)	**21.2**	0.200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*498 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*188 %*	*80-120*		"	"	"	"	*S-04*
Gasoline Range Organics C6-C12	**7570**	100	mg/kg dry	10	EA60315	01/03/06	01/04/06	EPA 8015M	
Diesel Range Organics >C12-C35	**32200**	100	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**39800**	100	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*25.2 %*	*70-130*		"	"	"	"	*S-06*
Surrogate: 1-Chlorooctadecane		*36.4 %*	*70-130*		"	"	"	"	*S-06*
AH-1 1-1.5' (5L30010-02) Soil									
Benzene	**10.8**	0.250	mg/kg dry	250	EA60314	01/03/06	01/04/06	EPA 8021B	
Toluene	**29.2**	0.250	"	"	"	"	"	"	
Ethylbenzene	**17.8**	0.250	"	"	"	"	"	"	
Xylene (p/m)	**37.6**	0.250	"	"	"	"	"	"	
Xylene (o)	**18.3**	0.250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*610 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*170 %*	*80-120*		"	"	"	"	*S-04*
Gasoline Range Organics C6-C12	**5760**	20.0	mg/kg dry	2	EA60315	01/03/06	01/03/06	EPA 8015M	
Diesel Range Organics >C12-C35	**22500**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**28300**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*119 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*89.8 %*	*70-130*		"	"	"	"	
AH-1 2-2.5' (5L30010-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA60912	01/09/06	01/09/06	EPA 8021B	
Toluene	**ND**	0.0250	"	"	"	"	"	"	
Ethylbenzene	**ND**	0.0250	"	"	"	"	"	"	
Xylene (p/m)	**J [0.0239]**	0.0250	"	"	"	"	"	"	J
Xylene (o)	**ND**	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*84.5 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.5 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	**31.7**	10.0	mg/kg dry	1	EA60315	01/03/06	01/04/06	EPA 8015M	
Diesel Range Organics >C12-C35	**279**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**311**	10.0	"	"	"	"	"	"	

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 2-2.5' (5L30010-03) Soil									
Surrogate: 1-Chlorooctane		*116 %*	*70-130*		*EA60315*	*01/03/06*	*01/04/06*	*EPA 8015M*	
Surrogate: 1-Chlorooctadecane		*122 %*	*70-130*		"	"	"	"	
AH-2 0-1' (5L30010-09) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA60314	01/03/06	01/05/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*118 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA60315	01/03/06	01/03/06	EPA 8015M	
Diesel Range Organics >C12-C35	**25.4**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**25.4**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*105 %*	*70-130*		"	"	"	"	
AH-2 1-1.5' (5L30010-10) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA60315	01/03/06	01/03/06	EPA 8015M	
Diesel Range Organics >C12-C35	**J [9.80]**	10.0	"	"	"	"	"	"	J
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*109 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*111 %*	*70-130*		"	"	"	"	
AH-3 0-1' (5L30010-14) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA60314	01/03/06	01/03/06	EPA 8021B	
Toluene	**0.0352**	0.0250	"	"	"	"	"	"	
Ethylbenzene	**0.0995**	0.0250	"	"	"	"	"	"	
Xylene (p/m)	**0.323**	0.0250	"	"	"	"	"	"	
Xylene (o)	**0.139**	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*165 %*	*80-120*		"	"	"	"	*S-04*
Gasoline Range Organics C6-C12	**245**	10.0	mg/kg dry	1	EA60315	01/03/06	01/03/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1690**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1940**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*119 %*	*70-130*		"	"	"	"	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-3 1-1.5' (5L30010-15) Soil									
Benzene	**6.26**	0.500	mg/kg dry	500	EA60314	01/03/06	01/04/06	EPA 8021B	
Toluene	**38.2**	0.500	"	"	"	"	"	"	
Ethylbenzene	**35.0**	0.500	"	"	"	"	"	"	
Xylene (p/m)	**76.7**	0.500	"	"	"	"	"	"	
Xylene (o)	**34.9**	0.500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*345 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*166 %*	*80-120*		"	"	"	"	*S-04*
Gasoline Range Organics C6-C12	**6880**	20.0	mg/kg dry	2	EA60315	01/03/06	01/03/06	EPA 8015M	
Diesel Range Organics >C12-C35	**19100**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**26000**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*123 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*106 %*	*70-130*		"	"	"	"	
AH-3 2-2.5' (5L30010-16) Soil									
Gasoline Range Organics C6-C12	**4700**	20.0	mg/kg dry	2	EA60315	01/03/06	01/03/06	EPA 8015M	
Diesel Range Organics >C12-C35	**14000**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**18700**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*92.8 %*	*70-130*		"	"	"	"	
AH-3 3-3.5' (5L30010-17) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA60912	01/09/06	01/09/06	EPA 8021B	
Toluene	**ND**	0.0250	"	"	"	"	"	"	
Ethylbenzene	**0.0956**	0.0250	"	"	"	"	"	"	
Xylene (p/m)	**0.388**	0.0250	"	"	"	"	"	"	
Xylene (o)	**0.185**	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*88.8 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.2 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	**176**	10.0	mg/kg dry	1	EA60907	01/09/06	01/10/06	EPA 8015M	
Diesel Range Organics >C12-C35	**728**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**904**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*92.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*384 %*	*70-130*		"	"	"	"	*S-04*

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-4 0-1' (5L30010-20) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA60314	01/03/06	01/05/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.8 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*113 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA60315	01/03/06	01/04/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*96.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*98.8 %*	*70-130*		"	"	"	"	
AH-4 1-1.5' (5L30010-21) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA60315	01/03/06	01/04/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*105 %*	*70-130*		"	"	"	"	

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 0-1' (5L30010-01) Soil									
Chloride	**4950**	100	mg/kg	200	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**3.3**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	
AH-1 1-1.5' (5L30010-02) Soil									
Chloride	**4690**	100	mg/kg	200	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**3.4**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	
AH-1 2-2.5' (5L30010-03) Soil									
Chloride	**4750**	100	mg/kg	200	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**1.6**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	
AH-1 3-3.5' (5L30010-04) Soil									
Chloride	**6260**	100	mg/kg	200	EA60504	01/03/06	01/05/06	EPA 300.0	
AH-1 4-4.5' (5L30010-05) Soil									
Chloride	**15000**	200	mg/kg	400	EA60504	01/03/06	01/05/06	EPA 300.0	
AH-1 5-5.5' (5L30010-06) Soil									
Chloride	**15400**	200	mg/kg	400	EA60504	01/03/06	01/05/06	EPA 300.0	
AH-1 6-6.5' (5L30010-07) Soil									
Chloride	**18000**	200	mg/kg	400	EA60504	01/03/06	01/05/06	EPA 300.0	
AH-1 7-7.5' (5L30010-08) Soil									
Chloride	**17400**	200	mg/kg	400	EA60504	01/03/06	01/05/06	EPA 300.0	
AH-2 0-1' (5L30010-09) Soil									
Chloride	**33.9**	5.00	mg/kg	10	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**1.1**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-2 1-1.5' (5L30010-10) Soil									
Chloride	**26.6**	5.00	mg/kg	10	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	
AH-2 2-2.5' (5L30010-11) Soil									
Chloride	**25.5**	5.00	mg/kg	10	EA60504	01/03/06	01/05/06	EPA 300.0	
AH-2 3-3.5' (5L30010-12) Soil									
Chloride	**20.8**	5.00	mg/kg	10	EA60504	01/03/06	01/05/06	EPA 300.0	
AH-2 4-4.5' (5L30010-13) Soil									
Chloride	**21.4**	5.00	mg/kg	10	EA60504	01/03/06	01/05/06	EPA 300.0	
AH-3 0-1' (5L30010-14) Soil									
Chloride	**415**	10.0	mg/kg	20	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**1.5**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	
AH-3 1-1.5' (5L30010-15) Soil									
Chloride	**331**	10.0	mg/kg	20	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	
AH-3 2-2.5' (5L30010-16) Soil									
Chloride	**30.0**	5.00	mg/kg	10	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**2.3**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	
AH-3 3-3.5' (5L30010-17) Soil									
Chloride	**111**	5.00	mg/kg	10	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**1.5**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
AH-3 4-4.5' (5L30010-18) Soil									
Chloride	**7080**	100	mg/kg	200	EA60504	01/03/06	01/05/06	EPA 300.0	

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-3 5-5.5' (5L30010-19) Soil									
Chloride	**22200**	200	mg/kg	400	EA60504	01/03/06	01/05/06	EPA 300.0	
AH-4 0-1' (5L30010-20) Soil									
Chloride	**39.7**	5.00	mg/kg	10	EA60504	01/03/06	01/05/06	EPA 300.0	
% Moisture	**1.3**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	
AH-4 1-1.5' (5L30010-21) Soil									
Chloride	**26.4**	5.00	mg/kg	10	EA60506	01/05/06	01/05/06	EPA 300.0	
% Moisture	**2.3**	0.1	%	1	EA60401	01/03/06	01/04/06	% calculation	
AH-4 2-2.5' (5L30010-22) Soil									
Chloride	**20.7**	5.00	mg/kg	10	EA60506	01/05/06	01/05/06	EPA 300.0	
AH-4 3-3.5' (5L30010-23) Soil									
Chloride	**22.4**	5.00	mg/kg	10	EA60506	01/05/06	01/05/06	EPA 300.0	
AH-4 4-4.5' (5L30010-24) Soil									
Chloride	**34.0**	5.00	mg/kg	10	EA60506	01/05/06	01/05/06	EPA 300.0	

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA60314 - EPA 5030C (GC)										
Blank (EA60314-BLK1)				Prepared & Analyzed: 01/03/06						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*34.3*		*ug/kg*	*40.0*		*85.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*46.5*		*"*	*40.0*		*116*	*80-120*			
LCS (EA60314-BS1)				Prepared: 01/03/06 Analyzed: 01/04/06						
Benzene	0.0535	0.00100	mg/kg wet	0.0500		107	80-120			
Toluene	0.0507	0.00100	"	0.0500		101	80-120			
Ethylbenzene	0.0516	0.00100	"	0.0500		103	80-120			
Xylene (p/m)	0.0987	0.00100	"	0.100		98.7	80-120			
Xylene (o)	0.0496	0.00100	"	0.0500		99.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	*37.7*		*ug/kg*	*40.0*		*94.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*35.2*		*"*	*40.0*		*88.0*	*80-120*			
LCS Dup (EA60314-BSD1)				Prepared & Analyzed: 01/03/06						
Benzene	0.0568	0.00100	mg/kg wet	0.0500		114	80-120	6.33	20	
Toluene	0.0549	0.00100	"	0.0500		110	80-120	8.53	20	
Ethylbenzene	0.0566	0.00100	"	0.0500		113	80-120	9.26	20	
Xylene (p/m)	0.111	0.00100	"	0.100		111	80-120	11.7	20	
Xylene (o)	0.0554	0.00100	"	0.0500		111	80-120	11.2	20	
Surrogate: a,a,a-Trifluorotoluene	*39.5*		*ug/kg*	*40.0*		*98.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*40.0*		*"*	*40.0*		*100*	*80-120*			
Calibration Check (EA60314-CCV1)				Prepared: 01/03/06 Analyzed: 01/05/06						
Benzene	51.5		ug/kg	50.0		103	80-120			
Toluene	50.9		"	50.0		102	80-120			
Ethylbenzene	54.3		"	50.0		109	80-120			
Xylene (p/m)	104		"	100		104	80-120			
Xylene (o)	54.8		"	50.0		110	80-120			
Surrogate: a,a,a-Trifluorotoluene	*38.0*		*"*	*40.0*		*95.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.5*		*"*	*40.0*		*111*	*80-120*			

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA60314 - EPA 5030C (GC)										
Matrix Spike (EA60314-MS1)	**Source: 6A04003-02**			Prepared: 01/03/06 Analyzed: 01/06/06						
Benzene	0.0535	0.00100	mg/kg dry	0.0536	ND	99.8	80-120			
Toluene	0.0549	0.00100	"	0.0536	ND	102	80-120			
Ethylbenzene	0.0642	0.00100	"	0.0536	ND	120	80-120			
Xylene (p/m)	0.128	0.00100	"	0.107	ND	120	80-120			
Xylene (o)	0.0630	0.00100	"	0.0536	ND	118	80-120			
Surrogate: a,a,a-Trifluorotoluene	*39.2*		*ug/kg*	*40.0*		*98.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*46.3*		*"*	*40.0*		*116*	*80-120*			
Batch EA60315 - Solvent Extraction (GC)										
Blank (EA60315-BLK1)				Prepared & Analyzed: 01/03/06						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*47.7*		*mg/kg*	*50.0*		*95.4*	*70-130*			
Surrogate: 1-Chlorooctadecane	*47.8*		*"*	*50.0*		*95.6*	*70-130*			
LCS (EA60315-BS1)				Prepared & Analyzed: 01/03/06						
Gasoline Range Organics C6-C12	474	10.0	mg/kg wet	500		94.8	75-125			
Diesel Range Organics >C12-C35	456	10.0	"	500		91.2	75-125			
Total Hydrocarbon C6-C35	930	10.0	"	1000		93.0	75-125			
Surrogate: 1-Chlorooctane	*52.3*		*mg/kg*	*50.0*		*105*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.6*		*"*	*50.0*		*101*	*70-130*			
Calibration Check (EA60315-CCV1)				Prepared: 01/03/06 Analyzed: 01/04/06						
Gasoline Range Organics C6-C12	467		mg/kg	500		93.4	80-120			
Diesel Range Organics >C12-C35	461		"	500		92.2	80-120			
Total Hydrocarbon C6-C35	928		"	1000		92.8	80-120			
Surrogate: 1-Chlorooctane	*51.5*		*"*	*50.0*		*103*	*70-130*			
Surrogate: 1-Chlorooctadecane	*49.8*		*"*	*50.0*		*99.6*	*70-130*			

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA60315 - Solvent Extraction (GC)										
Matrix Spike (EA60315-MS1)	**Source: 5L30010-03**			Prepared & Analyzed: 01/03/06						
Gasoline Range Organics C6-C12	502	10.0	mg/kg dry	508	31.7	92.6	75-125			
Diesel Range Organics >C12-C35	708	10.0	"	508	279	84.4	75-125			
Total Hydrocarbon C6-C35	1210	10.0	"	1020	311	88.1	75-125			
Surrogate: 1-Chlorooctane	*49.2*		*mg/kg*	*50.0*		*98.4*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.0*		"	*50.0*		*100*	*70-130*			
Matrix Spike Dup (EA60315-MSD1)	**Source: 5L30010-03**			Prepared & Analyzed: 01/03/06						
Gasoline Range Organics C6-C12	461	10.0	mg/kg dry	508	31.7	84.5	75-125	8.52	20	
Diesel Range Organics >C12-C35	725	10.0	"	508	279	87.8	75-125	2.37	20	
Total Hydrocarbon C6-C35	1190	10.0	"	1020	311	86.2	75-125	1.67	20	
Surrogate: 1-Chlorooctane	*52.9*		*mg/kg*	*50.0*		*106*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.3*		"	*50.0*		*101*	*70-130*			
Batch EA60907 - Solvent Extraction (GC)										
Blank (EA60907-BLK1)				Prepared: 01/09/06 Analyzed: 01/10/06						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*38.6*		*mg/kg*	*50.0*		*77.2*	*70-130*			
Surrogate: 1-Chlorooctadecane	*36.2*		"	*50.0*		*72.4*	*70-130*			
LCS (EA60907-BS1)				Prepared & Analyzed: 01/09/06						
Gasoline Range Organics C6-C12	426	10.0	mg/kg wet	500		85.2	75-125			
Diesel Range Organics >C12-C35	395	10.0	"	500		79.0	75-125			
Total Hydrocarbon C6-C35	821	10.0	"	1000		82.1	75-125			
Surrogate: 1-Chlorooctane	*42.5*		*mg/kg*	*50.0*		*85.0*	*70-130*			
Surrogate: 1-Chlorooctadecane	*45.9*		"	*50.0*		*91.8*	*70-130*			

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA60907 - Solvent Extraction (GC)										
Calibration Check (EA60907-CCV1)				Prepared: 01/09/06 Analyzed: 01/10/06						
Gasoline Range Organics C6-C12	416		mg/kg	500		83.2	80-120			
Diesel Range Organics >C12-C35	400		"	500		80.0	80-120			
Total Hydrocarbon C6-C35	816		"	1000		81.6	80-120			
Surrogate: 1-Chlorooctane	*51.8*		*"*	*50.0*		*104*	*70-130*			
Surrogate: 1-Chlorooctadecane	*43.9*		*"*	*50.0*		*87.8*	*70-130*			
Matrix Spike (EA60907-MS1)		**Source: 6A07001-01**		Prepared & Analyzed: 01/09/06						
Gasoline Range Organics C6-C12	455	10.0	mg/kg dry	549	ND	82.9	75-125			
Diesel Range Organics >C12-C35	518	10.0	"	549	ND	94.4	75-125			
Total Hydrocarbon C6-C35	973	10.0	"	1100	ND	88.5	75-125			
Surrogate: 1-Chlorooctane	*52.3*		*mg/kg*	*50.0*		*105*	*70-130*			
Surrogate: 1-Chlorooctadecane	*45.3*		*"*	*50.0*		*90.6*	*70-130*			
Matrix Spike Dup (EA60907-MSD1)		**Source: 6A07001-01**		Prepared & Analyzed: 01/09/06						
Gasoline Range Organics C6-C12	450	10.0	mg/kg dry	549	ND	82.0	75-125	1.10	20	
Diesel Range Organics >C12-C35	506	10.0	"	549	ND	92.2	75-125	2.34	20	
Total Hydrocarbon C6-C35	956	10.0	"	1100	ND	86.9	75-125	1.76	20	
Surrogate: 1-Chlorooctane	*51.6*		*mg/kg*	*50.0*		*103*	*70-130*			
Surrogate: 1-Chlorooctadecane	*47.9*		*"*	*50.0*		*95.8*	*70-130*			
Batch EA60912 - EPA 5030C (GC)										
Blank (EA60912-BLK1)				Prepared & Analyzed: 01/09/06						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*36.8*		*ug/kg*	*40.0*		*92.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.2*		*"*	*40.0*		*110*	*80-120*			

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA60912 - EPA 5030C (GC)										
LCS (EA60912-BS1)				Prepared: 01/09/06 Analyzed: 01/10/06						
Benzene	1.45	0.0250	mg/kg wet	1.25		116	80-120			
Toluene	1.41	0.0250	"	1.25		113	80-120			
Ethylbenzene	1.42	0.0250	"	1.25		114	80-120			
Xylene (p/m)	2.99	0.0250	"	2.50		120	80-120			
Xylene (o)	1.45	0.0250	"	1.25		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	*39.6*		*ug/kg*	*40.0*		*99.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.5*		"	*40.0*		*111*	*80-120*			
Calibration Check (EA60912-CCV1)				Prepared: 01/09/06 Analyzed: 01/10/06						
Benzene	55.6		ug/kg	50.0		111	80-120			
Toluene	55.0		"	50.0		110	80-120			
Ethylbenzene	52.4		"	50.0		105	80-120			
Xylene (p/m)	109		"	100		109	80-120			
Xylene (o)	53.8		"	50.0		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	*36.8*		"	*40.0*		*92.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*36.5*		"	*40.0*		*91.2*	*80-120*			
Matrix Spike (EA60912-MS1)	**Source: 6A09004-03**			Prepared: 01/09/06 Analyzed: 01/10/06						
Benzene	1.56	0.0250	mg/kg dry	1.34	ND	116	80-120			
Toluene	1.55	0.0250	"	1.34	ND	116	80-120			
Ethylbenzene	1.54	0.0250	"	1.34	ND	115	80-120			
Xylene (p/m)	3.18	0.0250	"	2.69	ND	118	80-120			
Xylene (o)	1.58	0.0250	"	1.34	ND	118	80-120			
Surrogate: a,a,a-Trifluorotoluene	*38.5*		*ug/kg*	*40.0*		*96.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*46.3*		"	*40.0*		*116*	*80-120*			
Matrix Spike Dup (EA60912-MSD1)	**Source: 6A09004-03**			Prepared: 01/09/06 Analyzed: 01/10/06						
Benzene	1.54	0.0250	mg/kg dry	1.34	ND	115	80-120	0.866	20	
Toluene	1.53	0.0250	"	1.34	ND	114	80-120	1.74	20	
Ethylbenzene	1.52	0.0250	"	1.34	ND	113	80-120	1.75	20	
Xylene (p/m)	3.20	0.0250	"	2.69	ND	119	80-120	0.844	20	
Xylene (o)	1.57	0.0250	"	1.34	ND	117	80-120	0.851	20	
Surrogate: a,a,a-Trifluorotoluene	*38.9*		*ug/kg*	*40.0*		*97.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*45.5*		"	*40.0*		*114*	*80-120*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA60401 - General Preparation (Prep)										
Blank (EA60401-BLK1)				Prepared: 01/03/06 Analyzed: 01/04/06						
% Solids	100		%							
Duplicate (EA60401-DUP1)		Source: 5L30010-01		Prepared: 01/03/06 Analyzed: 01/04/06						
% Solids	95.7		%		96.7			1.04	20	
Batch EA60504 - Water Extraction										
Blank (EA60504-BLK1)				Prepared: 01/03/06 Analyzed: 01/05/06						
Chloride	ND	0.500	mg/kg							
LCS (EA60504-BS1)				Prepared: 01/03/06 Analyzed: 01/05/06						
Chloride	9.58		mg/L	10.0		95.8	80-120			
Calibration Check (EA60504-CCV1)				Prepared: 01/03/06 Analyzed: 01/05/06						
Chloride	8.27		mg/L	10.0		82.7	80-120			
Duplicate (EA60504-DUP1)		Source: 5L30010-01		Prepared: 01/03/06 Analyzed: 01/05/06						
Chloride	5100	100	mg/kg		4950			2.99	20	
Batch EA60506 - Water Extraction										
Blank (EA60506-BLK1)				Prepared & Analyzed: 01/05/06						
Chloride	ND	0.500	mg/kg							
LCS (EA60506-BS1)				Prepared & Analyzed: 01/05/06						
Chloride	8.22		mg/L	10.0		82.2	80-120			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA60506 - Water Extraction										
Calibration Check (EA60506-CCV1)				Prepared & Analyzed: 01/05/06						
Chloride	8.74		mg/L	10.0		87.4	80-120			
Duplicate (EA60506-DUP1)		**Source: 5L30010-21**		Prepared & Analyzed: 01/05/06						
Chloride	31.4	5.00	mg/kg		26.4			17.3	20	
Batch EA61001 - General Preparation (Prep)										
Blank (EA61001-BLK1)				Prepared: 01/09/06 Analyzed: 01/10/06						
% Solids	100		%							
Duplicate (EA61001-DUP1)		**Source: 6A07001-01**		Prepared: 01/09/06 Analyzed: 01/10/06						
% Solids	90.1		%		91.0			0.994	20	
Duplicate (EA61001-DUP2)		**Source: 6A09001-13**		Prepared: 01/09/06 Analyzed: 01/10/06						
% Solids	78.8		%		81.3			3.12	20	

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 1-10-06

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Highlander

Date/Time: 12/30/05 4:25

Order #: 5L30010

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	3.6 C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	~~Not present~~
Custody Seals intact on sample bottles?	(Yes)	No	Not present
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

_____

Jeanne McMurrey

From: "Ike T" <itavarez@hec-enviro.com>
To: "Jeanne - Enviro Lab" <jeanne@elabtexas.com>
Sent: Monday, January 09, 2006 9:12 AM
Subject: Request additional analyses

Jeanne,

Pogo Producing Company – State 2 Well #2 (flow line)
Eddy County, New Mexico

Lab Order: 5L30010 – Report Date 1/6/06

Please run additional analyses on:

AH-1 (2-2.5') - BTEX
AH-3 (3-3.5') – TPH and BTEX (if TPH exceeds 5,000 mg/kg, run deeper sample (4-4.5') for TPH and BTEX)

--

Analysis Request and Chain of Custody Record

1/9/06
Adron

PAGE: 1 OF: 3

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

CLIENT NAME: Pogo Producing | SITE MANAGER: IKE Tavarez

PROJECT NO.: 2526 | PROJECT NAME: POGO/State 2 well #2 (Flowline) Eddy Co. NM.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1	TPH 8015 MOD.	TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
01	12/29/05		S		1	AH-1 0-1	1				✓		X		X													X			
02			S		1	AH-1 1-1.5	1				✓		X		X													X			
03			S		1	AH-1 2-2.5	1				✓		X		X													X			
04			S		1	AH 1 3-3.5	1				✓																	X			
05			S		1	AH-1 4-4.5	1				✓																	X			
06			S		1	AH-1 5-5.5	1				✓																	X			
07			S		1	AH-1 6-6.5	1				✓																	X			
08			S		1	AH-1 7-7.5'	1				✓																	X			
09			S		1	AH-2 0-1	1				✓		X		X													X			
10			S		1	AH-2 1-1.5	1				✓				X													X			

L300102

RELINQUISHED BY: (Signature) — Date: 12/30/05 Time: 4:25 — RECEIVED BY: (Signature) — Date: — Time:

SAMPLED BY: (Print & Sign) IKE Tavarez/Mir Rad. — Date: — Time:

RELINQUISHED BY: (Signature) — Date: — Time: — RECEIVED BY: (Signature) — Date: — Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS AIRBILL #
HAND DELIVERED UPS OTHER:

RELINQUISHED BY: (Signature) — Date: — Time: — RECEIVED BY: (Signature) — Date: — Time:

RECEIVING LABORATORY: ELT — RECEIVED BY: (Signature) Carrie Kelley

ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE: DATE: 12/30/05 TIME: 4:25

HIGHLANDER CONTACT PERSON: IKE Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: 3.5 Labels 40z glass

Please Fill out all copies – Laboratory retains yellow copy – Return original copy to Highlander Enviromental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

PAGE: 2 OF: 3

CLIENT NAME: Pogo Producing Co. SITE MANAGER: Ike Tavarez

PROJECT NO.: 2526 PROJECT NAME: Pogo / State 2 well #2 (Flowline) Eddy Co. NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 8015 MOD. TX1005	TPH 418.1	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
30010-11	12/29/05		S		G	AH-2 2-2.5	1				✓																X			
-12	12/29/05		S		G	AH-2 3-3.5	1				✓																X			
-13	12/29/05		S		G	AH-2 4-4.5	1				✓																X			
-14	12/29/05		S		G	AH-3 0-1	1				✓		X		X												X			
-15	12/29/05		S		G	AH-3 1-1.5	1				✓		X		X												X			
-16	12/29/05		S		G	AH-3 2-2.5	1				✓				X												X			
-17	12/29/05		S		G	AH-3 3-3.5	1				✓		X		(X)	*											X			
-18	12/29/05		S		G	AH-3 4-4.5	1				✓																X			
-19	12/29/05		S		G	AH-3 5-5.5'	1				✓																X			
																											M			

RELINQUISHED BY: (Signature) Date: 12/30/05 Time: 4:20 RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) Ike Tavarez / Tim Reed Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: HAND DELIVERED UPS OTHER:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: ECI ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:

RECEIVED BY: (Signature) DATE: 12/30/05 TIME: 4:25

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: 3,5 labels

* if TPH exceeds 5000 mg/kg run deeper sample (4-4.5') for TPH + BTEX

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Analysis Request and Chain of Custody Record

PAGE: 3 OF: 3

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

CLIENT NAME: Pogo Producing
SITE MANAGER: Ike Tavarez
PROJECT NO.: 2526
PROJECT NAME: Pogo/State 26 Well #2 (Flowline) Eddy Co. NM.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 / 8015 Mod. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
30010																													
-20	12/29/05		S		X	AH-4 0-1	1				X		X		X												X			
-21	12/29/05		S		X	AH-4 1-1.5	1				X				X												X			
-22	12/29/05		S		X	AH-4 2-2.5	1				X																X			
-23	12/29/05		S		X	AH-4 3-3.5	1				X																X			
-24	12/29/05		S		X	AH-4 4-4.5	1				X																X			

RELINQUISHED BY: (Signature) Date: 12/30/05 Time: 4:22
RECEIVED BY: (Signature) Date: Time:
SAMPLED BY: (Print & Sign) Ike Tavarez Tim Lad. Date: Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL # OTHER:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: ECT
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Kelly
DATE: 12/30/05 TIME: 9:25

HIGHLANDER CONTACT PERSON: Ike Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: 3.5 labels

PI Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Enviromental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

Analytical Report
5/30/2006

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ State 2 Well #2 (Flowline)

Project Number: 2526

Location: Eddy County, NM

Lab Order Number: 6E22004

Report Date: 05/30/06

Highlander Environmental Corp.	Project: Pogo/ State 2 Well #2 (Flowline)	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2526	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/30/06 15:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T-1 2.0'	6E22004-01	Soil	05/18/06 00:00	05/19/06 16:55
T-1 4.0'	6E22004-02	Soil	05/18/06 00:00	05/19/06 16:55
T-1 6.0'	6E22004-03	Soil	05/18/06 00:00	05/19/06 16:55
T-1 8.0'	6E22004-04	Soil	05/18/06 00:00	05/19/06 16:55
T-1 10.0'	6E22004-05	Soil	05/18/06 00:00	05/19/06 16:55
T-1 12.0'	6E22004-06	Soil	05/18/06 00:00	05/19/06 16:55
T-1 14.0'	6E22004-07	Soil	05/18/06 00:00	05/19/06 16:55
T-2 2.0'	6E22004-08	Soil	05/18/06 00:00	05/19/06 16:55
T-2 4.0'	6E22004-09	Soil	05/18/06 00:00	05/19/06 16:55
T-2 6.0'	6E22004-10	Soil	05/18/06 00:00	05/19/06 16:55
T-2 8.0'	6E22004-11	Soil	05/18/06 00:00	05/19/06 16:55
T-2 10.0'	6E22004-12	Soil	05/18/06 00:00	05/19/06 16:55
T-2 12.0'	6E22004-13	Soil	05/18/06 00:00	05/19/06 16:55
T-2 14.0'	6E22004-14	Soil	05/18/06 00:00	05/19/06 16:55
T-3 2.0'	6E22004-15	Soil	05/18/06 00:00	05/19/06 16:55
T-3 4.0'	6E22004-16	Soil	05/18/06 00:00	05/19/06 16:55
T-3 6.0'	6E22004-17	Soil	05/18/06 00:00	05/19/06 16:55
T-3 8.0'	6E22004-18	Soil	05/18/06 00:00	05/19/06 16:55
T-4 2.0'	6E22004-19	Soil	05/18/06 00:00	05/19/06 16:55
T-4 4.0'	6E22004-20	Soil	05/18/06 00:00	05/19/06 16:55
T-4 6.0'	6E22004-21	Soil	05/18/06 00:00	05/19/06 16:55
T-4 8.0'	6E22004-22	Soil	05/18/06 00:00	05/19/06 16:55
T-4 10.0'	6E22004-23	Soil	05/18/06 00:00	05/19/06 16:55
T-5 2.0'	6E22004-24	Soil	05/18/06 00:00	05/19/06 16:55
T-5 4.0'	6E22004-25	Soil	05/18/06 00:00	05/19/06 16:55
T-5 6.0'	6E22004-26	Soil	05/18/06 00:00	05/19/06 16:55
T-6 2.0'	6E22004-27	Soil	05/18/06 00:00	05/19/06 16:55
T-6 4.0'	6E22004-28	Soil	05/18/06 00:00	05/19/06 16:55
T-6 6.0'	6E22004-29	Soil	05/18/06 00:00	05/19/06 16:55
T-6 8.0'	6E22004-30	Soil	05/18/06 00:00	05/19/06 16:55
T-6 10.0'	6E22004-31	Soil	05/18/06 00:00	05/19/06 16:55
T-7 2.0'	6E22004-32	Soil	05/18/06 00:00	05/19/06 16:55
T-7 4.0'	6E22004-33	Soil	05/18/06 00:00	05/19/06 16:55
T-7 6.0'	6E22004-34	Soil	05/18/06 00:00	05/19/06 16:55

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ State 2 Well #2 (Flowline)	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2526	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/30/06 15:37

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ State 2 Well #2 (Flowline)	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2526	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/30/06 15:37

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-1 2.0' (6E22004-01) Soil									
Chloride	**5300**	100	mg/kg	200	EE62503	05/25/06	05/25/06	EPA 300.0	
T-1 4.0' (6E22004-02) Soil									
Chloride	**11400**	500	mg/kg	1000	EE62503	05/25/06	05/25/06	EPA 300.0	
T-1 6.0' (6E22004-03) Soil									
Chloride	**11200**	200	mg/kg	400	EE62503	05/25/06	05/25/06	EPA 300.0	
T-1 8.0' (6E22004-04) Soil									
Chloride	**17400**	250	mg/kg	500	EE62503	05/25/06	05/25/06	EPA 300.0	
T-1 10.0' (6E22004-05) Soil									
Chloride	**5370**	100	mg/kg	200	EE62503	05/25/06	05/25/06	EPA 300.0	
T-1 12.0' (6E22004-06) Soil									
Chloride	**3210**	50.0	mg/kg	100	EE62503	05/25/06	05/25/06	EPA 300.0	
T-1 14.0' (6E22004-07) Soil									
Chloride	**28.2**	5.00	mg/kg	10	EE62503	05/25/06	05/25/06	EPA 300.0	
T-2 2.0' (6E22004-08) Soil									
Chloride	**4820**	100	mg/kg	200	EE62503	05/25/06	05/25/06	EPA 300.0	
T-2 4.0' (6E22004-09) Soil									
Chloride	**7940**	200	mg/kg	400	EE62503	05/25/06	05/25/06	EPA 300.0	
T-2 6.0' (6E22004-10) Soil									
Chloride	**12800**	200	mg/kg	400	EE62503	05/25/06	05/25/06	EPA 300.0	
T-2 8.0' (6E22004-11) Soil									
Chloride	**14500**	200	mg/kg	400	EE62503	05/25/06	05/25/06	EPA 300.0	

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Highlander Environmental Corp.	Project: Pogo/ State 2 Well #2 (Flowline)	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2526	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/30/06 15:37

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-2 10.0' (6E22004-12) Soil									
Chloride	**14200**	200	mg/kg	400	EE62504	05/25/06	05/25/06	EPA 300.0	
T-2 12.0' (6E22004-13) Soil									
Chloride	**2900**	50.0	mg/kg	100	EE62504	05/25/06	05/25/06	EPA 300.0	
T-2 14.0' (6E22004-14) Soil									
Chloride	**268**	10.0	mg/kg	20	EE62504	05/25/06	05/25/06	EPA 300.0	
T-3 2.0' (6E22004-15) Soil									
Chloride	**984**	20.0	mg/kg	40	EE62504	05/25/06	05/25/06	EPA 300.0	
T-3 4.0' (6E22004-16) Soil									
Chloride	**6620**	100	mg/kg	200	EE62504	05/25/06	05/25/06	EPA 300.0	
T-3 6.0' (6E22004-17) Soil									
Chloride	**382**	10.0	mg/kg	20	EE62504	05/25/06	05/25/06	EPA 300.0	
T-3 8.0' (6E22004-18) Soil									
Chloride	**23.2**	5.00	mg/kg	10	EE62504	05/25/06	05/25/06	EPA 300.0	
T-4 2.0' (6E22004-19) Soil									
Chloride	**21.6**	5.00	mg/kg	10	EE62504	05/25/06	05/25/06	EPA 300.0	
T-4 4.0' (6E22004-20) Soil									
Chloride	**14.9**	5.00	mg/kg	10	EE62504	05/25/06	05/25/06	EPA 300.0	
T-4 6.0' (6E22004-21) Soil									
Chloride	**10500**	200	mg/kg	400	EE62504	05/25/06	05/25/06	EPA 300.0	
T-4 8.0' (6E22004-22) Soil									
Chloride	**23.7**	5.00	mg/kg	10	EE62504	05/25/06	05/25/06	EPA 300.0	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-4 10.0' (6E22004-23) Soil									
Chloride	**32.9**	5.00	mg/kg	10	EE62504	05/25/06	05/25/06	EPA 300.0	
T-5 2.0' (6E22004-24) Soil									
Chloride	**17.5**	5.00	mg/kg	10	EE62504	05/25/06	05/25/06	EPA 300.0	
T-5 4.0' (6E22004-25) Soil									
Chloride	**18.0**	5.00	mg/kg	10	EE62504	05/25/06	05/25/06	EPA 300.0	
T-5 6.0' (6E22004-26) Soil									
Chloride	**13.3**	5.00	mg/kg	10	EE62504	05/25/06	05/25/06	EPA 300.0	
T-6 2.0' (6E22004-27) Soil									
Chloride	**61.6**	5.00	mg/kg	10	EE62504	05/25/06	05/25/06	EPA 300.0	
T-6 4.0' (6E22004-28) Soil									
Chloride	**8870**	200	mg/kg	400	EE62504	05/25/06	05/25/06	EPA 300.0	
T-6 6.0' (6E22004-29) Soil									
Chloride	**10700**	200	mg/kg	400	EE62504	05/25/06	05/25/06	EPA 300.0	
T-6 8.0' (6E22004-30) Soil									
Chloride	**5450**	50.0	mg/kg	100	EE62504	05/25/06	05/25/06	EPA 300.0	
T-6 10.0' (6E22004-31) Soil									
Chloride	**356**	10.0	mg/kg	20	EE62504	05/25/06	05/25/06	EPA 300.0	
T-7 2.0' (6E22004-32) Soil									
Chloride	**14.6**	5.00	mg/kg	10	EE62605	05/26/06	05/26/06	EPA 300.0	
T-7 4.0' (6E22004-33) Soil									
Chloride	**19.4**	5.00	mg/kg	10	EE62605	05/26/06	05/26/06	EPA 300.0	

Highlander Environmental Corp.	Project: Pogo/ State 2 Well #2 (Flowline)	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2526	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/30/06 15:37

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-7 6.0' (6E22004-34) Soil									
Chloride	**13.9**	5.00	mg/kg	10	EE62605	05/26/06	05/26/06	EPA 300.0	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE62503 - Water Extraction										
Blank (EE62503-BLK1)				Prepared & Analyzed: 05/25/06						
Chloride	ND	0.500	mg/kg							
LCS (EE62503-BS1)				Prepared & Analyzed: 05/25/06						
Chloride	10.7	0.500	mg/kg	10.0		107	80-120			
Calibration Check (EE62503-CCV1)				Prepared & Analyzed: 05/25/06						
Chloride	9.84		mg/L	10.0		98.4	80-120			
Duplicate (EE62503-DUP1)		**Source: 6E19010-07**		Prepared & Analyzed: 05/25/06						
Chloride	87.0	5.00	mg/kg		87.6			0.687	20	
Duplicate (EE62503-DUP2)		**Source: 6E22004-02**		Prepared & Analyzed: 05/25/06						
Chloride	11300	500	mg/kg		11400			0.881	20	
Matrix Spike (EE62503-MS1)		**Source: 6E19010-07**		Prepared & Analyzed: 05/25/06						
Chloride	188	5.00	mg/kg	100	87.6	100	80-120			
Matrix Spike (EE62503-MS2)		**Source: 6E22004-02**		Prepared & Analyzed: 05/25/06						
Chloride	22100	500	mg/kg	10000	11400	107	80-120			
Batch EE62504 - Water Extraction										
Blank (EE62504-BLK1)				Prepared & Analyzed: 05/25/06						
Chloride	ND	0.500	mg/kg							
LCS (EE62504-BS1)				Prepared & Analyzed: 05/25/06						
Chloride	10.5	0.500	mg/kg	10.0		105	80-120			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE62504 - Water Extraction										
Calibration Check (EE62504-CCV1)				Prepared & Analyzed: 05/25/06						
Chloride	10.3		mg/L	10.0		103	80-120			
Duplicate (EE62504-DUP1)		Source: 6E22004-12		Prepared & Analyzed: 05/25/06						
Chloride	14400	200	mg/kg		14200			1.40	20	
Duplicate (EE62504-DUP2)		Source: 6E22004-22		Prepared & Analyzed: 05/25/06						
Chloride	24.1	5.00	mg/kg		23.7			1.67	20	
Matrix Spike (EE62504-MS1)		Source: 6E22004-12		Prepared & Analyzed: 05/25/06						
Chloride	20000	200	mg/kg	4000	14200	145	80-120			S-07
Matrix Spike (EE62504-MS2)		Source: 6E22004-22		Prepared & Analyzed: 05/25/06						
Chloride	120	5.00	mg/kg	100	23.7	96.3	80-120			
Batch EE62605 - Water Extraction										
Blank (EE62605-BLK1)				Prepared & Analyzed: 05/26/06						
Chloride	ND	0.500	mg/kg							
LCS (EE62605-BS1)				Prepared & Analyzed: 05/26/06						
Chloride	10.0	0.500	mg/kg	10.0		100	80-120			
Calibration Check (EE62605-CCV1)				Prepared & Analyzed: 05/26/06						
Chloride	10.2		mg/kg	10.0		102	80-120			
Duplicate (EE62605-DUP1)		Source: 6E22004-32		Prepared & Analyzed: 05/26/06						
Chloride	13.3	5.00	mg/kg		14.6			9.32	20	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE62605 - Water Extraction										
Duplicate (EE62605-DUP2)	**Source: 6E23010-02**			Prepared & Analyzed: 05/26/06						
Chloride	70.3	10.0	mg/kg		66.8			5.11	20	
Matrix Spike (EE62605-MS1)	**Source: 6E22004-32**			Prepared & Analyzed: 05/26/06						
Chloride	103	5.00	mg/kg	100	14.6	88.4	80-120			
Matrix Spike (EE62605-MS2)	**Source: 6E23010-02**			Prepared & Analyzed: 05/26/06						
Chloride	257	10.0	mg/kg	200	66.8	95.1	80-120			

Notes and Definitions

S-07	Recovery outside Laboratory historical or method prescribed limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 5/30/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

PAGE: 1 OF: 4

CLIENT NAME: Pogo Producing Co. SITE MANAGER: Ike Tavarez

PROJECT NO.: 2526 PROJECT NAME: Pogo/State 2 Well #2 Eddy Co. NM.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8082/608	Pest. 608/808	BOD, TSS, pH, TDS Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
01	5-18-06		S		X	T-1 2.0'	1				X															X			
02			S		X	T-1 4.0'	1				X															X			
03			S		X	T-1 6.0'	1				X															X			
04			S		X	T-1 8.0'	1				X															X			
05			S		X	T-1 10.0'	1				X															X			
06			S		X	T-1 12.0'	1				X															X			
07			S		X	T-1 14.0'	1				X															X			
08			S		X	T-2 2.0'	1				X															X			
09			S		X	T-2 4.0'	1				X															X			
10			S		X	T-2 6.0'	1				X															X			

RELINQUISHED BY: (Signature) Date: 5-19-06 Time: 4:55 RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:

RECEIVED BY: (Signature) DATE: 05-19-06 TIME: 1655

SAMPLED BY: (Print & Sign) Ike Tavarez Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL # HAND DELIVERED UPS OTHER:

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C 4oz glass w/labels no seals

MATRIX: W-Water A-Air SD-Solids S-Soil SL-Sludge O-Other

REMARKS:

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

ANALYSIS REQUEST (Circle or Specify Method No.)

4326823946 P.4

May 19 06 04:49p Acad

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

PAGE: 2 OF: 4

CLIENT NAME: Pogo Producing Co. SITE MANAGER: IKE Tavarez

PROJECT NO.: 2524 PROJECT NAME: Pogo / State 24 #2

Eddy Co. NM.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
11	5-18-06		S		1	T-2 8.0'	1				1	
12			S		1	T-2 10.0'	1				1	
13			S		1	T-2 12.0'	1				1	
14			S		1	T-2 14.0'	1				1	
15			S		1	T-3 2.0'	1				1	
16			S		1	T-3 4.0'	1				1	
17			S		1	T-3 6.0'	1				1	
18			S		1	T-3 8.0'	1				1	
19			S		1	T-4 2.0'	1				1	
20			S		1	T-4 4.0'	1				1	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GCMS Vol. 8240/8260/624	GCMS Semi Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
													X			

RELINQUISHED BY: (Signature) Date: 5-19-06 Time: 4:55 RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) IKE Tavarez Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RECEIVING LABORATORY: ECI ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:

RECEIVED BY: (Signature) Jane McKinney DATE: 05-19-06 TIME: 1655

HIGHLANDER CONTACT PERSON: IKE Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C 4oz glass w/labels no seals

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS:

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

4326823946 P.5

May 19 06 04:49p Acad

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

PAGE: 3 OF: 4

CLIENT NAME: Pogo Producing Co. SITE MANAGER: Mike Tavarez

PROJECT NO.: 2524 PROJECT NAME: Pogo / State 2 well #2 Eddy Co. NM.

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
21	5-18-06		S		1	T-4 6.0'	1				1															X			
22	"		S		1	T-4 8.0	1				1															X			
23			S		1	T-4 10.0	1				1															X			
24			S		1	T-5 2.0'	1				1															X			
25			S		1	T-5 4.0'	1				1															X			
26			S		1	T-5 6.0'	1				1															X			
27			S		1	T-6 2.0'	1				1															X			
28			S		1	T-6 4.0'	1				1															X			
29			S		1	T-6 6.0'	1				1															X			
30	↓		S		1	T-6 8.0'	1				1															X			

RELINQUISHED BY: (Signature) Date: 5-19-06 Time: 0955 RECEIVED BY: (Signature) Date: Time:

SAMPLER: (Print & Sign) Mike Tavarez Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: ENT ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:

RECEIVED BY: (Signature) Dana McMurrey DATE: 05-19-06 TIME: 1655

HIGHLANDER CONTACT PERSON: Mike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C 4oz glass w/labels no seals

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS:

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

Analysis Request and Chain of Custody Record

PAGE: 4 OF: 4

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

CLIENT NAME: Pogo Producing SITE MANAGER: Ike Tavarez

PROJECT NO.: 2524 PROJECT NAME: Pogo/State 2 Well #2 Eddy Co NM.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
31	5/18/06		S		X	T-6 10.0'	1				X	
32	"		S		X	T-7 2.0'	1				X	
33	"		S		X	T-7 4.0	1				X	
34	V		S		X	T-7 6.0'	1				X	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GCMS Vol. 8240/8260/624	GCMS Semi Vol. 8270/625	PCB's 8080/608	Pest. 608/808	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
													X			
													X			
													X			
													X			

RELINQUISHED BY: (Signature) Date: 5-19-06 Time: 4:35 RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) Ike Tavarez Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: ETC ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:

RECEIVED BY: (Signature) Jeanne McMurry DATE: 05-19-06 TIME: 1655

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C 4oz glass w/labels no seals

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS:

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Highlander

Date/Time: 5/19/06 16:55

Order #: 6E22009

Initials: CL

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	4.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Apolicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

Gulf Coast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

01/14/10

Technical Report for

CRA West Chester

GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM

SSOW #750-402-D002-1100

Accutest Job Number: T44472

Sampling Date: 12/14/09

Report to:

Conestoga Rovers & Associates
9033 Meridian Way
West Chester, OH 45069
abown@craworld.com; pfowler@craworld.com;
jeff.kindley@tetratech.com
ATTN: Angela Bown

Total number of pages in report: 36

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Paul K Canevaro

Paul Canevaro
Laboratory Director

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marianne Walker 713-271-4700

Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004) OK (9103) UT(7132714700)

Test results relate only to samples analyzed.

Sections:

1 2 3 4 5 6

Table of Contents

-1-

Sample Summary

CRA West Chester

Job No: T44472

GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM
Project No: SSOW #750-402-D002-1100

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T44472-1	12/14/09	10:20	JD	12/19/09	SO	Soil	T-6 2'
T44472-2	12/14/09	10:26	JD	12/19/09	SO	Soil	T-6 4'
T44472-3	12/14/09	10:32	JD	12/19/09	SO	Soil	T-6 6'
T44472-4	12/14/09	10:38	JD	12/19/09	SO	Soil	T-6 8'
T44472-5	12/14/09	10:43	JD	12/19/09	SO	Soil	T-6 10'
T44472-6	12/14/09	10:50	JD	12/19/09	SO	Soil	T-1 2'
T44472-7	12/14/09	10:55	JD	12/19/09	SO	Soil	T-1 4'
T44472-8	12/14/09	11:00	JD	12/19/09	SO	Soil	T-1 6'
T44472-9	12/14/09	11:10	JD	12/19/09	SO	Soil	T-1 8'
T44472-10	12/14/09	11:23	JD	12/19/09	SO	Soil	T-1 10'
T44472-11	12/14/09	12:30	JD	12/19/09	SO	Soil	T-2 2'
T44472-12	12/14/09	12:40	JD	12/19/09	SO	Soil	T-2 4'
T44472-13	12/14/09	12:50	JD	12/19/09	SO	Soil	T-2 6'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

CRA West Chester

Job No: T44472

GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM
Project No: SSOW #750-402-D002-1100

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T44472-14	12/14/09	13:00	JD	12/19/09	SO	Soil	T-2 8'
T44472-15	12/14/09	13:05	JD	12/19/09	SO	Soil	T-2 10'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	CRA West Chester	**Job No**	T44472
Site:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM	**Report Date**	1/12/2010 12:26:54 PM

15 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 12/14/2009 and were received at Accutest on 12/19/2009 properly preserved, at 2.4 Deg. C and intact. These Samples received an Accutest job number of T44472. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. All Chloride samples were subcontracted to Accutest Mountain States due to instrument repair.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Wet Chemistry By Method SM 2540 G

Matrix SO **Batch ID:** GN19692

- Sample(s) T44434-9DUP were used as the QC samples for Solids, Percent.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

ACCUTEST Laboratories

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Accutest Laboratories Gulf Coast, Inc.	**Job No**	T44472
Site:	CRAOHWC: GHSI Oxy State 2 Well #2 Fl Leak	**Report Dat**	1/11/2010 11:49:55 AM

On 12/19/2009, 15 Samples were received at Accutest Laboratories. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of T44472 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix SO **Batch ID:** GP1281

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for Chloride are outside control limits. Probable cause due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Chloride are outside control limits. Probable cause due to matrix interference.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

3.1

Client Sample ID:	T-6 2'		
Lab Sample ID:	T44472-1	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	95.6
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	27.9	26	mg/kg	5	01/06/10 13:46		EPA 300/SW846 9056
Solids, Percent	95.6		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.2

Client Sample ID:	T-6 4'		
Lab Sample ID:	T44472-2	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	93.6
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	107	27	mg/kg	5	01/06/10 14:21		EPA 300/SW846 9056
Solids, Percent	93.6		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Report of Analysis

Client Sample ID:	T-6 6'		
Lab Sample ID:	T44472-3	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	86.7
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	4040	140	mg/kg	25	01/06/10 10:52		EPA 300/SW846 9056
Solids, Percent	86.7		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.4

Client Sample ID:	T-6 8'		
Lab Sample ID:	T44472-4	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	90.9
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	12900	140	mg/kg	25	01/06/10 11:04		EPA 300/SW846 9056
Solids, Percent	90.9		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.5

Client Sample ID:	T-6 10'		
Lab Sample ID:	T44472-5	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	95.2
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	1460	53	mg/kg	10	01/06/10 14:56		EPA 300/SW846 9056
Solids, Percent	95.2		%	1	12/21/09	AA	*SM 2540 G*

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.6

Client Sample ID:	T-1 2'		
Lab Sample ID:	T44472-6	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	94.5
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	91.0	26	mg/kg	5	01/06/10 15:07		EPA 300/SW846 9056
Solids, Percent	94.5		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.7

Client Sample ID:	T-1 4'		
Lab Sample ID:	T44472-7	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	88.9
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	320	28	mg/kg	5	01/06/10 15:19		EPA 300/SW846 9056
Solids, Percent	88.9		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.8

Client Sample ID:	T-1 6'		
Lab Sample ID:	T44472-8	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	88.5
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	2050	56	mg/kg	10	01/06/10 15:42		EPA 300/SW846 9056
Solids, Percent	88.5		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.9

Client Sample ID:	T-1 8'		
Lab Sample ID:	T44472-9	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	92.1
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	12200	140	mg/kg	25	01/06/10 12:02		EPA 300/SW846 9056
Solids, Percent	92.1		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.10

Client Sample ID:	T-1 10'		
Lab Sample ID:	T44472-10	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	92.8
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	6810	130	mg/kg	25	01/06/10 12:37		EPA 300/SW846 9056
Solids, Percent	92.8		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Report of Analysis

Client Sample ID:	T-2 2'		
Lab Sample ID:	T44472-11	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	95.7
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	2890	130	mg/kg	25	01/06/10 12:48		EPA 300/SW846 9056
Solids, Percent	95.7		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.12

Client Sample ID:	T-2 4'		
Lab Sample ID:	T44472-12	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	89.9
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	7770	140	mg/kg	25	01/06/10 13:00		EPA 300/SW846 9056
Solids, Percent	89.9		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Report of Analysis

Client Sample ID:	T-2 6'		
Lab Sample ID:	T44472-13	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	92.5
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	13600	140	mg/kg	25	01/06/10 13:11		EPA 300/SW846 9056
Solids, Percent	92.5		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.14

Client Sample ID:	T-2 8'		
Lab Sample ID:	T44472-14	Date Sampled:	12/14/09
Matrix:	SO - Soil	Date Received:	12/19/09
		Percent Solids:	89.7
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	20800	280	mg/kg	50	01/06/10 15:54		EPA 300/SW846 9056
Solids, Percent	89.7		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Report of Analysis

Client Sample ID:	T-2 10'		
Lab Sample ID:	T44472-15	**Date Sampled:**	12/14/09
Matrix:	SO - Soil	**Date Received:**	12/19/09
		Percent Solids:	90.9
Project:	GHSI:PXP State 2 Well #2 Flow Line Leak/58447DM		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride [a]	10500	140	mg/kg	25	01/06/10 13:35		EPA 300/SW846 9056
Solids, Percent	90.9		%	1	12/21/09	AA	SM 2540 G

(a) Analysis performed by Accutest Mountain States

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Analysis Request of Chain of Custody Record

PAGE: | OF: 2

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

T44472

CLIENT NAME: Glenn Springs
SITE MANAGER: Tim Reed / IK Tuvang
PROJECT NO.: 119-6402526
PROJECT NAME: State 2 well #2 Flr leak
Eddy Co, NM

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
1	12/14	1020	S		X	T-6 2'	1				X	
2		1026	S			T-6 4'	1				X	
3		1052	S			T-6 6'	1				X	
4		1058	S			T-6 8'	1				X	
5		1043	S			T-6 10'	1				X	
6		1050	S			T-1 2'	1				X	
7		1055	S			T-1 4'	1				X	
8		1100	S			T-1 6'	1				X	
9		1110	S			T-1 8'	1				X	
10		1123	S			T-1 10'	1				X	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B; TPH 8015 MOD. TX1005 (Ext. to C35); PAH 8270; RCRA Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd 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; Chloride; Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature) — Date: December 15, 2009 — Time: 1600
RECEIVED BY: (Signature) — Date: — Time:
SAMPLED BY: (Print & Initial) Jeff Deems — Date: 12/14/09 — Time:

RELINQUISHED BY: (Signature) — Date: 12/19/09 — Time: 1000 am
RECEIVED BY: (Signature) — Date: — Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

RELINQUISHED BY: (Signature) — Date: — Time:
RECEIVED BY: (Signature) — Date: — Time:
TETRA TECH CONTACT PERSON: Tim Reed / IK Tuvang — Results by:

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

SAMPLE CONDITION WHEN RECEIVED:
REMARKS: Temp: 2.4

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

4.1

T44472: Chain of Custody
Page 1 of 4

Analysis Request of Chain of Custody Record

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

T44472

CLIENT NAME: Glenn Springs
SITE MANAGER: Tim Reed/Ike Tavarez
PROJECT NO.: 114-6402526
PROJECT NAME: State 2 Well #2 FL Leak

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION (Eddy Co., NM)	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
11	12/14	1230	S		X	T-2 2'	1				X													X				
12	12/14	1240	S		X	T-2 4'	1				X													X				
13	12/14	1250	S		X	T-2 6'	1				X													X				
14	12/14	100	S		X	T-2 8'	1				X													X				
15	12/14	105	S		X	T-2 10'	1				X													X				

RELINQUISHED BY: (Signature) Date: 12/14/09 Time: 1600
RECEIVED BY: (Signature) Date: Time:
SAMPLED BY: (Print & Initial) Jeff Deems Date: 12/14/09 Time:

RELINQUISHED BY: (Signature) Date: 12/19/09 Time: 1000 CST
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
OTHER:

RECEIVING LABORATORY: Accutest Labs
ADDRESS:
CITY: Houston STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: Tim Reed/Ike Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:
REMARKS:
Temp: 2.4

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

4.1

T44472: Chain of Custody
Page 2 of 4

SAMPLE INSPECTION FORM

Accutest Job Number: T44472 Client: Tetra Tech Date/Time Received: 12/19/09 1000

# of Coolers Received: 1 Thermometer #: IR-1 Temperature Adjustment Factor: +0.4

Cooler Temps: #1: 2.4 #2: _____ #3: _____ #4: _____ #5: _____ #6: _____ #7: _____ #8: _____

Method of Delivery: (FEDEX) UPS Accutest Courier Greyhound Delivery Other

Airbill Numbers: _____

COOLER INFORMATION
- [ ] Custody seal missing or not intact
- [ ] Temperature criteria not met
- [ ] Wet ice received in cooler

CHAIN OF CUSTODY
- [ ] Chain of Custody not received
- [ ] Sample D/T unclear or missing
- [ ] Analyses unclear or missing
- [ ] COC not properly executed

SAMPLE INFORMATION
- [ ] Sample containers received broken
- [ ] VOC vials have headspace
- [ ] Sample labels missing or illegible
- [ ] ID on COC does not match label(s)
- [ ] D/T on COC does not match label(s)
- [ ] Sample/Bottles rcvd but no analysis on COC
- [ ] Sample listed on COC, but not received
- [ ] Bottles missing for requested analysis
- [ ] Insufficient volume for analysis
- [ ] Sample received improperly preserved

TRIP BLANK INFORMATION
- [ ] Trip Blank on COC but not received
- [ ] Trip Blank received but not on COC
- [ ] Trip Blank not intact
- [ ] Received Water Trip Blank
- [ ] Received Soil TB

Number of Encores? _____
Number of 5035 kits? _____
Number of lab-filtered metals? _____

Summary of Discrepancies:

TECHNICIAN SIGNATURE/DATE: [signature] 12/19/09

INFORMATION AND SAMPLE LABELING VERIFIED BY: _____

CORRECTIVE ACTIONS

Client Representative Notified: _____ **Date:** _____

By Accutest Representative: _____ **Via:** Phone Email

Client Instructions:

4.1

SAMPLE RECEIPT LOG

JOB #: T44472 DATE/TIME RECEIVED: 12/19/09 1000

CLIENT: Tetra Tech INITIALS: EF

COOLER#	SAMPLE ID	FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	PH	
1	1	T-6 2'	12/14/09 1020	S	4oz	1	2-43	1 2 3 4 5 6 7 8	<2	>12
	2	T-6 4'	1026			1		1 2 3 4 5 6 7 8	<2	>12
	3	T-6 6'	1037			1		1 2 3 4 5 6 7 8	<2	>12
	4	T-6 8'	1038			1		1 2 3 4 5 6 7 8	<2	>12
	5	T-6 10'	1043			1		1 2 3 4 5 6 7 8	<2	>12
	6	T-1 2'	1050			1		1 2 3 4 5 6 7 8	<2	>12
	7	T-1 4'	1055			1		1 2 3 4 5 6 7 8	<2	>12
	8	T-1 6'	1100			1		1 2 3 4 5 6 7 8	<2	>12
	9	T-1 8'	1110			1		1 2 3 4 5 6 7 8	<2	>12
	10	T-1 10'	1123			1		1 2 3 4 5 6 7 8	<2	>12
	11	T-2 2'	1230			1		1 2 3 4 5 6 7 8	<2	>12
	12	T-2 4'	1240			1		1 2 3 4 5 6 7 8	<2	>12
	13	T-2 6'	1250			1		1 2 3 4 5 6 7 8	<2	>12
	14	T-2 8'	100			1		1 2 3 4 5 6 7 8	<2	>12
	15	T-2 10'	105			1		1 2 3 4 5 6 7 8	<2	>12
								1 2 3 4 5 6 7 8	<2	>12
								1 2 3 4 5 6 7 8	<2	>12
		EF	12/19/09					1 2 3 4 5 6 7 8	<2	>12
								1 2 3 4 5 6 7 8	<2	>12
								1 2 3 4 5 6 7 8	<2	>12
								1 2 3 4 5 6 7 8	<2	>12

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

Rev 8/13/01 ewp

4.1 4

T44472: Chain of Custody
Page 4 of 4

Misc. Forms

Custody Documents and Other Forms

(Accutest Mountain States)

Includes the following where applicable:

- Chain of Custody

SUBCONTRACT COC

ACCUTEST Laboratories
10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # T44472

Client Information	Subcontract Information
Company Name: Accutest Gulf Coast	Subcontract Laboratory: Accutest Mountain States
Project Contact: Marianne Walker	Email: mariannw@accutest.com
Laboratory Contact:	Email:
Address: 10165 Harwin Dr, Suite 150	Address:
City: Houston	State: TX	Zip: 77036
City:	State:	Zip:
Phone No.: 713-271-4700	Phone No.:

Requested Analyses: Chloride (300.0)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Wastewater; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Liquid; SOL - Other Solid

Accutest Sample Number	Collection Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	HNO3	H2SO4	NaHSO4	ZnAc	MeOH	Other	Chloride (300.0)	LAB USE ONLY
T44472-1	12/14/09		SO	1							1		X	
T44472-2	12/14/09		SO	1							1		X	
T44472-3	12/14/09		SO	1							1		X	
T44472-4	12/14/09		SO	1							1		X	
T44472-5	12/14/09		SO	1							1		X	
T44472-6	12/14/09		SO	1							1		X	
T44472-7	12/14/09		SO	1							1		X	
T44472-8	12/14/09		SO	1							1		X	
T44472-9	12/14/09		SO	1							1		X	
T44472-10	12/14/09		SO	1							1		X	

Turnaround Time (Business days)

- [ ] STANDARD — Approved By/ Date:
- [ ] 10 day
- [ ] 4 Day RUSH
- [X] 3 Day EMERGENCY — 1/8/2010
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Real time analytical data available via Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [X] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] TRRP-13
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

*** CRA/Oxy work - Must be done on time***

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler: 1	Date Time: 1-4-10	Received By: 1	Relinquished By: 2	Date Time:	Received By: 2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Yes	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 3.0

5.1

T44472: Chain of Custody
Page 1 of 4
Accutest Mountain States

SUBCONTRACT COC

ACCUTEST Laboratories
10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: T44472

Client Information

Company Name: Accutest Gulf Coast
Project Contact: Marianne Walker | Email: mariannw@accutest.com
Address: 10165 Harwin Dr, Suite 150
City: Houston | State: TX | Zip: 77036
Phone No.: 713-271-4700

Subcontract Information

Subcontract Laboratory: Accutest Mountain States
Laboratory Contact: | Email:
Address:
City: | State: | Zip:
Phone No.:

Requested Analyses

Accutest Sample Number	Collection Date	Collection Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	HNO3	H2SO4	DI/NH4OH	TSP	NONE	OTHER	Chloride (300.0)
T44472-11	12/14/09		SO	1							1		X
T44472-12	12/14/09		SO	1							1		X
T44472-13	12/14/09		SO	1							1		X
T44472-14	12/14/09		SO	1							1		X
T44472-15	12/14/09		SO	1							1		X

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Wastewater
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Liquid
SOL - Other Solid

LAB USE ONLY

Turnaround Time (Business days)

- [ ] STANDARD
- [ ] 10 day
- [ ] 4 Day RUSH
- [X] 3 Day EMERGENCY — Approved By/ Date: 1/8/2010
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Real time analytical data available via Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [X] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] TRRP-13
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

*** CRA/Oxy work - Must be done on time***

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time: 1-410	Received By: 1	Relinquished By: 2	Date Time:	Received By: 2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 3.0

5.1

T44472: Chain of Custody
Page 2 of 4

SUBCONTRACT COC

ACCUTEST Laboratories
10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # T44472

Client Information	Subcontract Information
Company Name: Accutest Gulf Coast	Subcontract Laboratory: Accutest Mountain States
Project Contact: Marianne Walker; Email: mariannw@accutest.com	Laboratory Contact; Email
Address: 10165 Harwin Dr, Suite 150	Address
City: Houston; State: TX; Zip: 77036	City; State; Zip
Phone No.: 713-271-4700	Phone No.

Requested Analyses: Chloride (300.0)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Wastewater; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Liquid; SOL - Other Solid

Accutest Sample Number	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NaHSO4	TSP	NONE	OTHER	Chloride (300.0)	LAB USE ONLY
T44472-1	12/14/09		SO	1							1		X	
T44472-2	12/14/09		SO	1							1		X	
T44472-3	12/14/09		SO	1							1		X	
T44472-4	12/14/09		SO	1							1		X	
T44472-5	12/14/09		SO	1							1		X	
T44472-6	12/14/09		SO	1							1		X	
T44472-7	12/14/09		SO	1							1		X	
T44472-8	12/14/09		SO	1							1		X	
T44472-9	12/14/09		SO	1							1		X	
T44472-10	12/14/09		SO	1							1		X	

Turnaround Time (Business days) — Approved By / Date:
- [ ] STANDARD
- [ ] 10 day
- [ ] 4 Day RUSH
- [X] 3 Day EMERGENCY — 1/8/2010
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Real time analytical data available via Lablink

Data Deliverable Information
- [ ] Commercial "A"
- [X] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] TRRP-13
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks
*** CRA/Oxy work - Must be done on time***

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	1-4-10	1	2		2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Yes	Preserved where applicable ☐	On Ice ☒ Cooler Temp. 3.0

5.1

5

T44472: Chain of Custody
Page 3 of 4

SUBCONTRACT COC

ACCUTEST Laboratories
10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # T44472

Client Information	Subcontract Information
Company Name: Accutest Gulf Coast	Subcontract Laboratory: Accutest Mountain States
Project Contact: Marianne Walker — Email: mariannw@accutest.com	Laboratory Contact — Email
Address: 10165 Harwin Dr, Suite 150	Address
City: Houston — State: TX — Zip: 77036	City — State — Zip
Phone No.: 713-271-4700	Phone No.

Requested Analyses: Chloride (300.0)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Wastewater; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Liquid; SOL - Other Solid

Accutest Sample Number	Collection Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	HNO3	H2SO4	NaOH	ZnAcNaOH	TSP	NONE	OTHER	Chloride (300.0)	LAB USE ONLY
T44472-11	12/14/09		SO	1							1		X	
T44472-12	12/14/09		SO	1							1		X	
T44472-13	12/14/09		SO	1							1		X	
T44472-14	12/14/09		SO	1							1		X	
T44472-15	12/14/09		SO	1							1		X	

Turnaround Time (Business days)

- [ ] STANDARD — Approved By:/ Date:
- [ ] 10 day
- [ ] 4 Day RUSH
- [X] 3 Day EMERGENCY — 1/8/2010
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Real time analytical data available via Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [X] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] TRRP-13
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

*** CRA/Oxy work - Must be done on time***

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	1-4-10	1	2		2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp 3.0

5.1

T44472: Chain of Custody
Page 4 of 4

General Chemistry

QC Data Summaries

(Accutest Mountain States)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T44472
Account: ALGC - Accutest Laboratories Gulf Coast, Inc.
Project: CRAOHWC: GHSI Oxy State 2 Well #2 Fl Leak

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP1281/GN2795	5.0	0.0	mg/kg	200	189	94.5	90-110%

Associated Samples:
Batch GP1281: T44472-1, T44472-10, T44472-11, T44472-12, T44472-13, T44472-14, T44472-15, T44472-2, T44472-3, T44472-4, T44472-5, T44472-6, T44472-7, T44472-8, T44472-9
(*) Outside of QC limits

6.1

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T44472
Account: ALGC - Accutest Laboratories Gulf Coast, Inc.
Project: CRAOHWC: GHSI Oxy State 2 Well #2 Fl Leak

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP1281/GN2795	T44472-1	mg/kg	27.9	523	487	87.8	80-120%
Chloride	GP1281/GN2795	T44472-7	mg/kg	320	562	858	95.7	80-120%

Associated Samples:
Batch GP1281: T44472-1, T44472-10, T44472-11, T44472-12, T44472-13, T44472-14, T44472-15, T44472-2, T44472-3, T44472-4, T44472-5, T44472-6, T44472-7, T44472-8, T44472-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

6.2

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T44472
Account: ALGC - Accutest Laboratories Gulf Coast, Inc.
Project: CRAOHWC: GHSI Oxy State 2 Well #2 Fl Leak

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP1281/GN2795	T44472-1	mg/kg	27.9	523	495	1.6	20%

Associated Samples:
Batch GP1281: T44472-1, T44472-10, T44472-11, T44472-12, T44472-13, T44472-14, T44472-15, T44472-2, T44472-3, T44472-4, T44472-5, T44472-6, T44472-7, T44472-8, T44472-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

6.3