

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised June 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: Pogo Producing Company	Contact: Pat Ellis
Address: P.O. Box 10340 Midland, Texas 79702-7340	Telephone No. (432) 685-8100
Facility Name: Baylus Cade Federal #10	Facility Type: Transfer Line

Surface Owner Federal	Mineral Owner	Lease No. NMLC034711
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**LOCATION OF RELEASE**

Unit Letter L	Section\ 35	Township 23S	Range 37E	Feet from the 1692'	North/South Line FSL	Feet from the 442'	East/West Line FWL	County Lea
------------------	----------------	-----------------	--------------	------------------------	-------------------------	-----------------------	-----------------------	---------------

Latitude 32° 15.488' Longitude 103° 08.432'

**NATURE OF RELEASE**

Type of Release Produced Water & Oil	Volume of Release 40BBL	Volume Recovered 35 BBL
Source of Release 3" Polypipe Flowline	Date and Hour of Occurrence 12/21/06	Date and Hour of Discovery 12/21/06 @ 3:45 pm

Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Answering Automated Service
--	---

By Whom? Pat Ellis	Date and Hour 12/21/06 @ 6:00 pm
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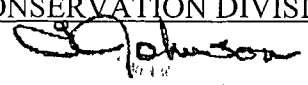
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.
---	---

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
A 3" polypipe flowline froze and burst. The line was repaired.

Describe Area Affected and Cleanup Action Taken.\*  
The area affected was an approximately 18' x 30' spill area in the pasture. All free fluids were removed by vacuum truck. Highlander Environmental was contacted to evaluate spill. Samples were collected and spill was excavated to depths ranging from 3.0'-7.5' below ground surface. One borehole was drilled for additional delineation. Soil hauled to Sundance in Eunice for disposal.

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:	<b>OIL CONSERVATION DIVISION</b> 	
Printed Name: Pat Ellis	Approved by District <b>SENIOR</b> <b>ENVIRONMENTAL ENGINEER</b>	
Title: EH&S Supervisor	Approval Date: <u>2-12-08</u>	Expiration Date: _____
E-mail Address: <u>PatrickE@pxp.com</u>	Conditions of Approval: _____	Attached <input type="checkbox"/>
Date: _____ Phone: (432) 685-8148		

\* Attach Additional Sheets If Necessary

# SITE INFORMATION

RP # 1425

## Report Type: CLOSURE REPORT

### General Site Information:

Site:	Baylus Cade Federal #10
Company:	Pogo Producing Company
Spill Location:	Section 35, T23S R37E
Unit Letter:	Unit L
Lease Number:	
County:	Lea
Spill GPS:	32° 15.488', 103° 08.432'
Surface Owner:	Federal
Mineral Owner:	
Directions:	

### Release Data:

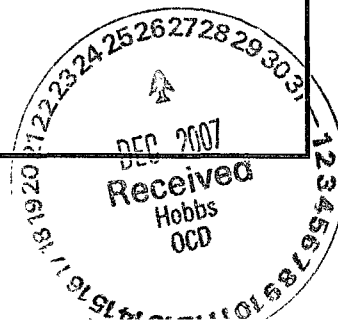
Date Released:	12/21/2006
Type Release:	Produced Water & Oil
Source of Contamination:	3" Polypipe Flowline
Fluid Released:	40 bbls
Fluids Recovered:	35bbls

### Official Communication:

Name:	Pat Ellis	Ike Tavarez
Company:	PXP	Highlander Environmental Corp.
Address:	300 N. Marienfeld St.	1910 N. Big Spring
P.O. Box	Box 10340	
City:	Midland Texas, 79701-7340	Midland, Texas
Phone number:	(432) 685-8100	(432) 682- 4559
Email:	PatrickE@pxp.com	itavarez@hec-enviro.com

### Ranking Criteria:

Depth to Groundwater:	Ranking Score	Site Data
<50 ft	20	
50-99 ft	10	Average Depth >50'<100' BS
>100 ft.	0	
WellHead Protection:	Ranking Score	Site Data
Water Source <1,000 ft., Private <200 ft.	20	None
Water Source >1,000 ft., Private >200 ft.	0	
Surface Body of Water:	Ranking Score	Site Data
<200 ft.	20	None
200 ft - 1,000 ft.	10	None
>1,000 ft.	0	
Total Ranking Score:		10
Acceptable Soil IRRAL (mg/kg)		
Benzene	Total BTEX	TPH
10	50	1,000

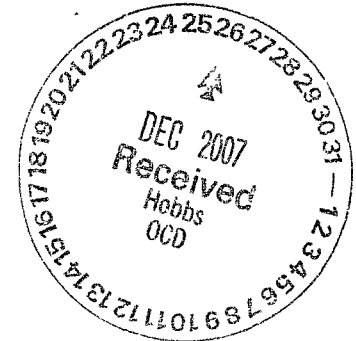




# Highlander Environmental Corp.

Midland, Texas

November 21, 2007



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

**Re: Assessment and Closure Report for the Latigo Petroleum, Inc. (Pogo Producing Company), Baylus Cade Federal #10 Well, Unit L, Section 35, Township 23 South, Range 37 East, Lea County, New Mexico.**

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by Pogo Producing Company to assess a spill from the Baylus Cade Federal #10 well location, located in Unit L, Section 35, Township 23 South, Range 37 East, Lea County, New Mexico (Site). The spill site coordinates are N 32° 15.488', W 103° 08.432'. According to the State of New Mexico C-141 Initial Report, approximately 40 barrels (bbls) of oil/produced water were released when a 3" poly line flow line froze and burst on December 21, 2006. Of the 40 bbls released, 35 bbls were recovered. The State of New Mexico C-141 (Initial and Final) are included in Appendix C. The Site is shown on Figure 1.

## **Groundwater and Regulatory**

The New Mexico State Engineer's Office database showed wells located in Sections 9, 16 and 32, Township 23 South, Range 37 East with reported depths ranging from 100' to 115'. Wells in Sections 8 and 20, Township 23 South, Range 38 East had reported depths of 335' and 225', respectively. Wells in Sections 5, 8 and 12, Township 24 South, Range 27 East had reported depths of 106', 90' and 18', respectively. The USGS database showed wells in Sections 32 and 33, Township 23 South, Range 37 East and Section 3, Township 24 South, Range 37 East with reported depths 97', 86' and 88', respectively. The New Mexico State Engineer and USGS water well reports are shown in Appendix A.

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil

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

## Assessment and Results

On January 11, 2007, Highlander personnel inspected and sampled the spill area which is located within the diked berm. The spill occurred off the south edge of the pad and measured approximately 20' x 90'. Additionally, there was some light overspray to the east along the edge of the pad. A total of four auger holes, AH-1, AH-2, AH-3 and AH-4 were placed in the spill area and samples were collected to depths ranging from 1.5' below ground surface to 7.5' below ground surface. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. The TPH concentrations exceeded the RRAL in all four auger holes in the 0-1.0' sample and in the 1.0'-1.5' sample in AH-2. BTEX concentrations also exceeded the RRAL in the 0-1.0' sample from AH-2. Chloride concentrations were elevated in AH-1 and AH-2, but declined with depth to 1,510 mg/kg in AH-1 (7.0'-7.5') and 423 mg/kg in AH-2 (6.0'-6.5'). Chloride impact was not observed in AH-3 or AH-4. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix B. The auger hole locations are shown on Figure 2. The results of the sampling are summarized in Table 1.

Based upon the results of the sampling, the areas around AH-1 and AH-2 were excavated to depths ranging from 3.0' to 7.5' and the areas around AH-3 and AH-4 were excavated to depth ranging from 1.0' to 2.5'. A total of 396 cubic yards of soil was hauled to Sundance Services, Inc. for disposal. Additionally, one borehole (BH-1) was installed in the vicinity of AH-1 and advanced to a depth of 14'-15'. Samples collected at 9.0'-10.0' and 14.0'-15.0' were analyzed for chlorides and had concentrations of 96.6 mg/kg and 100 mg/kg, respectively. The auger hole and borehole locations are shown on Figure 3.

Confirmation samples were collected from the previous auger hole locations on June 8, 2007. TPH and BTEX concentrations were below the RRAL with the exception of AH-2A, which had a TPH concentration slightly above the RRAL at 1180 mg/kg. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix B. The results of the sampling are summarized in Table 2.

## Conclusions

The soils which exceeded the RRAL have been removed with the exception of the area of AH-2A, which was slightly above the TPH RRAL. The excavation in the vicinity of AH-1 and AH-2 has also eliminated the bulk of the elevated chloride concentrations. The excavated soil was



hauled to Sundance Services, Inc. for disposal. Based on the depth to groundwater and the results of the assessment, the residual chloride and TPH concentrations and do not appear to be an imminent threat to groundwater.

Based upon the results of the assessment work performed at this site, Pogo requests closure of this Site. If you require any additional information or have any questions or comments concerning the assessment/closure report, please call at (432) 682-4559.

Respectfully submitted,  
Highlander Environmental Corp.



Timothy M. Reed, P.G.  
Vice President

cc: Pat Ellis – Pogo Producing Company  
Don Riggs – Pogo Producing Company



## TABLES

**Table 1**  
**Pogo Producing**  
**Baylus Cade Federal #10 Flowline Leak**  
**Lea County, New Mexico**

Sample ID	Date Sampled	Soils Status		Sample Depth (ft)	TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
		Insitu	Removed		C6-C12	C12-C28	C28-C35	Total					
AH-1	1/11/2007		X	0-1.0'	165	923	93.6	1,180	<0.025	0.0797	0.155	1.004	3,450
AH-1	1/11/2007		X	1'-1.5'	<10.0	49.5	<10.0	49.5	-	-	-	-	2,240
AH-1	1/11/2007		X	2'-2.5'	<10.0	87.3	<10.0	87.3	-	-	-	-	4,240
AH-1	1/11/2007		X	3'-3.5'	-	-	-	-	-	-	-	-	1,890
AH-1	1/11/2007	X		4'-4.5'	-	-	-	-	-	-	-	-	2,770
AH-1	1/11/2007	X		6'-6.5'	-	-	-	-	-	-	-	-	2,430
AH-1	1/11/2007	X		7'-7.5'	-	-	-	-	-	-	-	-	1,510
AH-2	1/11/2007		X	0-1.0'	9,730	14,000	809	24,500	9.69	70.3	62.6	140.7	3,120
AH-2	1/11/2007		X	1'-1.5'	4,240	6,180	356	10,800	-	-	-	-	4,170
AH-2	1/11/2007		X	2'-2.5'	32.9	94.0	<10.0	127	<0.002	<0.002	0.00563	0.02352	5,150
AH-2	1/11/2007		X	3'-3.5'	-	-	-	-	-	-	-	-	2,310
AH-2	1/11/2007		X	4'-4.5'	-	-	-	-	-	-	-	-	559
AH-2	1/11/2007		X	5'-5.5'	-	-	-	-	-	-	-	-	432
AH-2	1/11/2007		X	6'-6.5'	-	-	-	-	-	-	-	-	423
AH-3	1/11/2007		X	0-1.0'	785	1,760	87.8	2,630	-	-	-	-	1.15
AH-3	1/11/2007	X		1'-1.5'	<10.0	50.6	<10.0	50.6	-	-	-	-	4.34
AH-4	1/11/2007		X	0-1.0'	3,100	6,310	344	9,750	-	-	-	-	11.9
AH-4	1/11/2007	X		1'-1.5'	<10.0	30.2	<10.0	30.2	-	-	-	-	0.590

(-) Not Analyzed

**Table 2**  
**Pogo Producing**  
**Baylus Cade Federal #10 Flowline Leak**  
**Lea County, New Mexico**

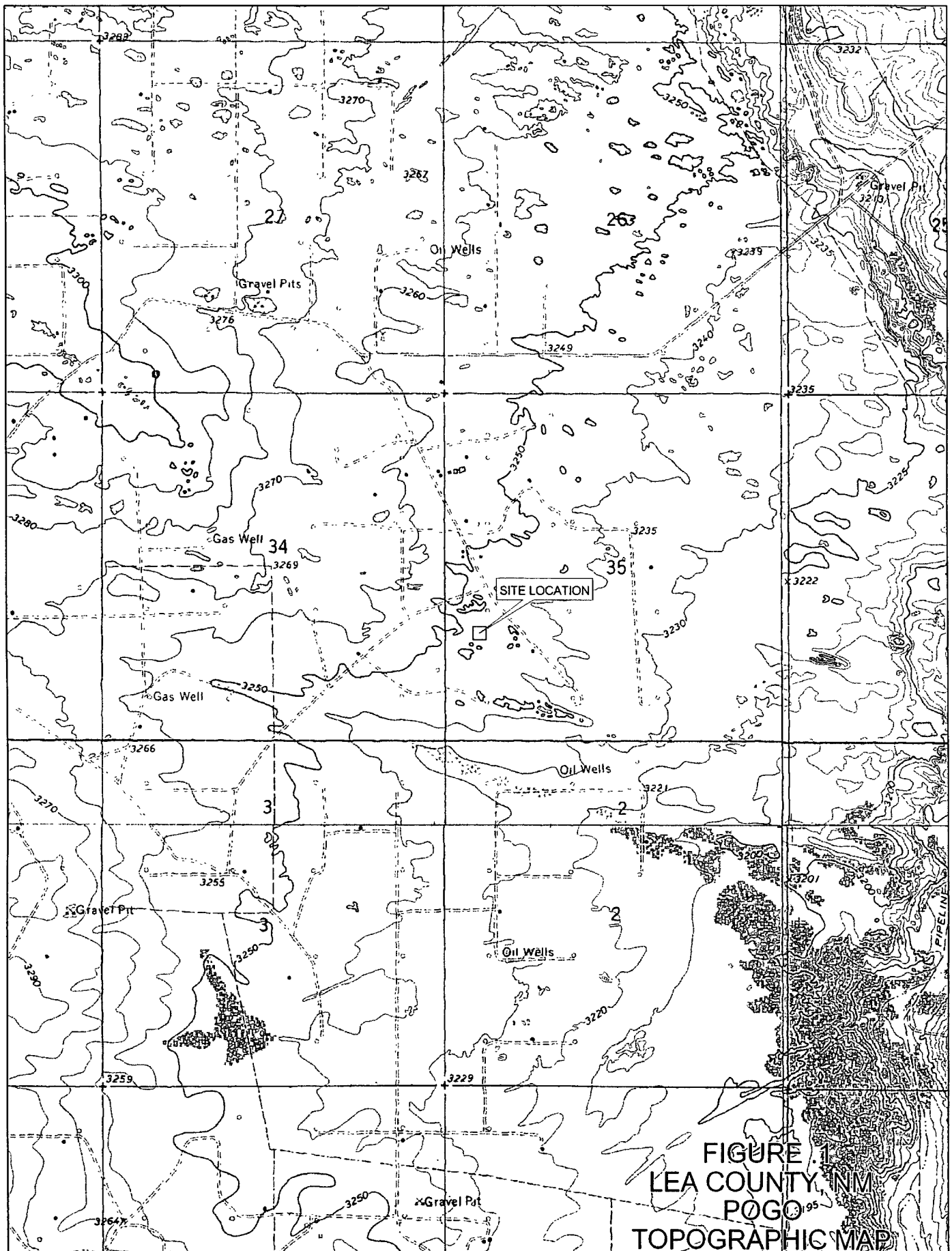
Sample ID	Date Sampled	Soils Status		Sample Depth (ft)	TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
		Insitu	Removed		C6-C12	C12-C28	C28-C35	Total					
BH-1	5/15/2007	X		9-10'	-	-	-	-	-	-	-	-	96.6
BH-1	5/15/2007	X		14-15'	-	-	-	-	-	-	-	-	100
AH-1A	6/8/2007	X		0-1.0'	<10.0	<10.0	<10.0	<10.0	<0.002	<0.002	<0.002	<0.002	-
				BEB (3.0')									
AH-2A	6/8/2007	X		0-1.0'	264	812	93.4	1180	<0.025	0.757	1.22	4.27	-
				BEB (7.0')									
AH-3A	6/7/2007	X		0-1.0'	<10.0	23.2	21.8	45.0	<0.002	<0.002	<0.002	<0.002	-
				BEB (1.0')									
AH-4A	6/7/2007	X		0-1.0'	<10.0	<10.0	<10.0	<10.0	<0.002	<0.002	<0.002	<0.002	-
				BEB (1.0')									

(-) Not Analyzed

(BEB) Below Excavation Bottom

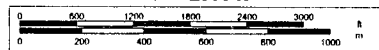


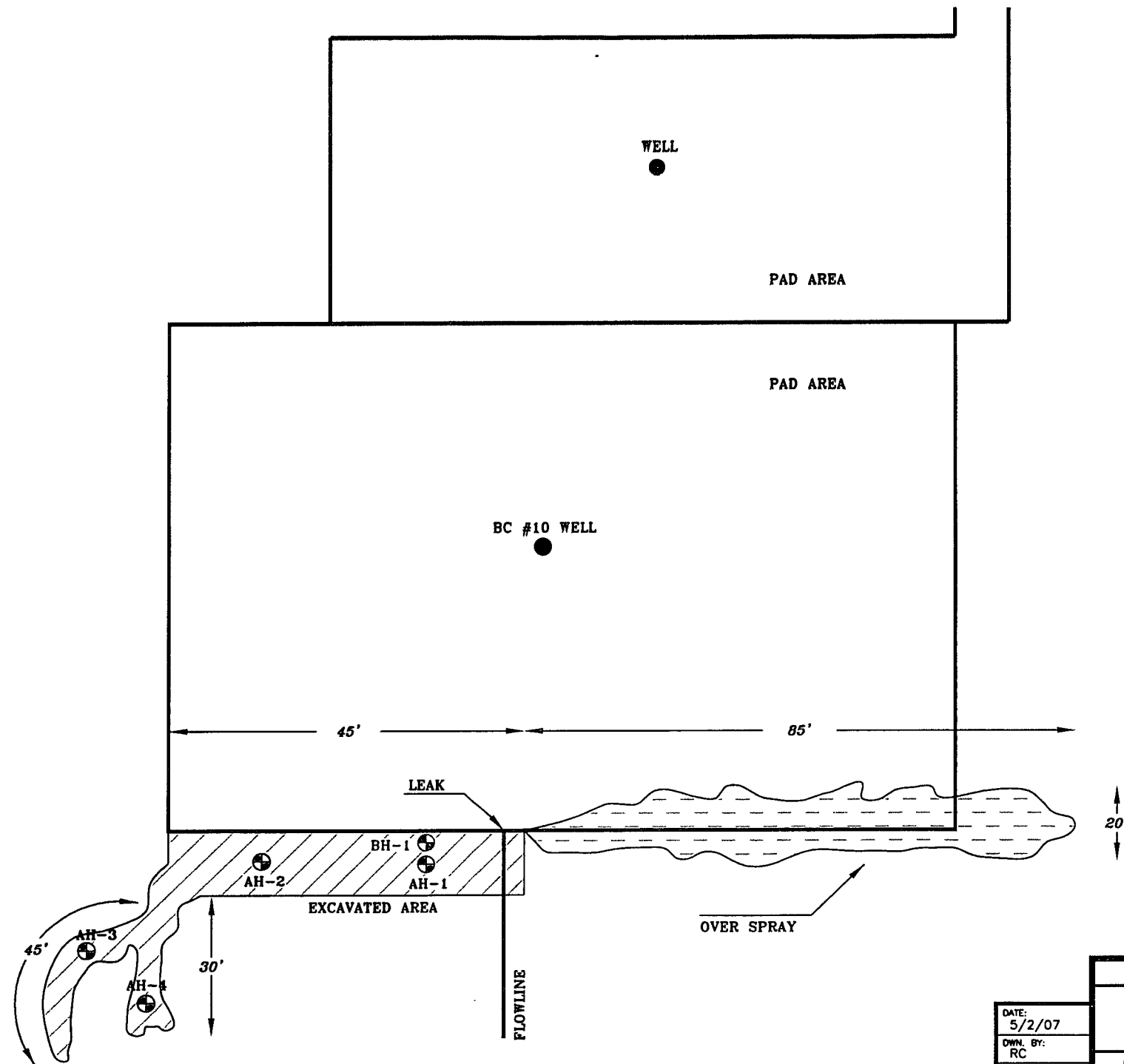
## FIGURES



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www.delorme.com

Scale 1 : 24,000  
1" = 2000 ft





**LEGEND**

- SPILL AREA
- OVER SPRAY AREA
- AUGER HOLES

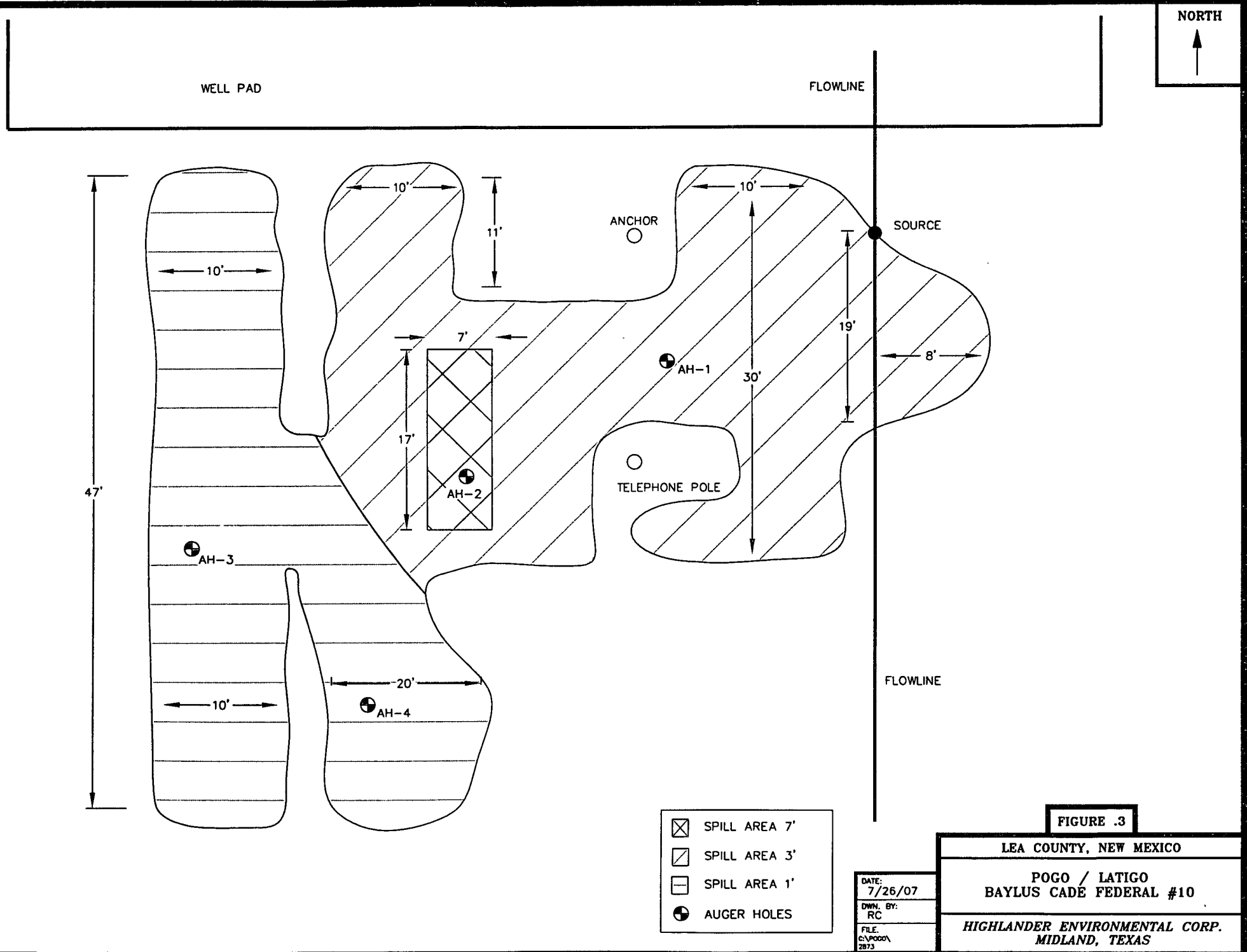
**FIGURE .2**

LEA COUNTY, NEW MEXICO

POGO / LATIGO  
BAYLUS CADE FEDERAL #10

HIGHLANDER ENVIRONMENTAL CORP.  
MIDLAND, TEXAS

DATE:  
5/2/07  
OWN. BY:  
RC  
FILE:  
C:\POGO\2873



## **APPENDIX A**

### **Water Well Data**

**Water Well Data**  
**Average Depth to Groundwater (ft)**  
**Pogo Producing Company - Baylus Cade Federal #10, Lea County, New Mexico**

**21 South 36 East**

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
106		195			
19	20	21	22	23	24
			150		
30	29	28	27	26	25
				150	148
31	32	33	34	35	36

**21 South 37 East**

6	73	5	4	75	3	2	1
7		8	9	10	11	12	
18		17	16	15	14	13	
19		71	70	22	23	24	
		98		53			
30	29	28	27	26	25		
	85	71	76				
31	32	33	34	35	36		

**21 South 38 East**

6	5	4
7	8	9
18	17	16
19	20	21
30	29	28
31	32	33

**22 South 36 East**

6	5	4	3	2	1
195	212				137
7	8	9	10	11	12
18	17	16	15	14	13
		170			
19	20	21	22	23	24
			22		
30	29	28	27	26	25
			160		118
31	32	33	34	35	36

**22 South 37 East**

6	5	85	4	3	2	1
7	8	9	90	10	11	12
18	17	16	15	14	13	
190			125	65		
19	20	21	22	23	24	
		65			60	
30	29	28	27	26	25	
			53	65		
31	32	33	34	35	36	

**22 South 38 East**

6	5	4
7	8	9
18	17	16
19	20	21
30	29	28
31	32	33

**23 South 36 East**

6	5	4	3	2	1
		160			
7	8	9	10	11	12
18	17	16	15	14	13
		220	149		
19	20	21	22	23	24
			400	143	
30	29	28	27	26	25
31	32	33	34	35	36

**23 South 37 East**

6	102	5	4	3	70	2	64	1
7		8	9	100	10	11		12
18		17	16	115	15	14		13
			100					
19		20	21	22	23	24		
		108						
30		29	28	27	26	25		
			117	88				
31	32	106	33	34	35	36		

**23 South 38 East**

6	5	4
7	8	9
18	17	16
19	20	21
30	29	28
31	32	33

- 88 New Mexico State Engineers Well Reports
- 105 USGS Well Reports
- 90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
- Geology and Groundwater Resources of Eddy County, NM (Report 3)
- 34 NMOCD - Groundwater Data
- 54 Windmill
- 80 Drilled TMW - Total Depth 80' (dry)

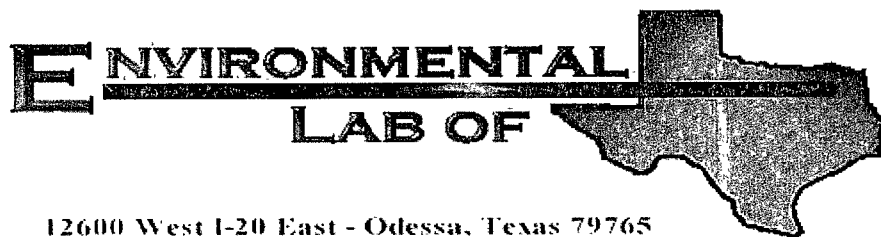
## **APPENDIX B**

### **Lab Analysis**

**Lab Analysis**

**January 26, 2007**





#1

12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories, Inc. Company

## Analytical Report

**Prepared for:**

Ike Tavaréz

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak

Project Number: 2873

Location: Lea Co., NM

Lab Order Number: 7A12024

Report Date: 01/26/07

Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax: (432) 682-3946

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-1 0-1.0'	7A12024-01	Soil	01/11/07 00 00	01-12-2007 16:30
AH-1 1-1.5'	7A12024-02	Soil	01/11/07 00 00	01-12-2007 16 30
AH-1 2-2.5'	7A12024-03	Soil	01/11/07 00 00	01-12-2007 16 30
AH-1 3-3.5'	7A12024-04	Soil	01/11/07 00 00	01-12-2007 16 30
AH-1 4-4.5'	7A12024-05	Soil	01/11/07 00 00	01-12-2007 16 30
AH-1 6-6.5'	7A12024-06	Soil	01/11/07 00 00	01-12-2007 16 30
AH-1 7-7.5'	7A12024-07	Soil	01/11/07 00 00	01-12-2007 16 30
AH-2 0-1.0'	7A12024-08	Soil	01/11/07 00:00	01-12-2007 16:30
AH-2 1-1.5'	7A12024-09	Soil	01/11/07 00 00	01-12-2007 16 30
AH-2 2-2.5'	7A12024-10	Soil	01/11/07 00 00	01-12-2007 16 30
AH-2 3-3.5'	7A12024-11	Soil	01/11/07 00 00	01-12-2007 16 30
AH-2 4-4.5'	7A12024-12	Soil	01/11/07 00 00	01-12-2007 16 30
AH-2 5-5.5'	7A12024-13	Soil	01/11/07 00 00	01-12-2007 16 30
AH-2 6-6.5'	7A12024-14	Soil	01/11/07 00 00	01-12-2007 16 30
AH-3 0-1.0'	7A12024-16	Soil	01/11/07 00 00	01-12-2007 16 30
AH-3 1-1.5'	7A12024-17	Soil	01/11/07 00 00	01-12-2007 16 30
AH-4 0-1.0'	7A12024-19	Soil	01/11/07 00 00	01-12-2007 16 30
AH-4 1-1.5'	7A12024-20	Soil	01/11/07 00 00	01-12-2007 16 30

Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-1 0-1.0' (7A12024-01) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EA71504	01/15/07	01/15/07	EPA 8021B	
Toluene	0.0797	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.155	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.339	0.0250	"	"	"	"	"	"	
Xylene (o)	0.665	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		123 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		149 %	80-120		"	"	"	"	S-04
Carbon Ranges C6-C12	165	10.0	mg/kg dry	1	EA71509	01/15/07	01/17/07	EPA 8015M	
Carbon Ranges C12-C28	923	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	93.6	10.0	"	"	"	"	"	"	
Total Hydrocarbons	1180	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		123 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		128 %	70-130		"	"	"	"	
<b>AH-1 1-1.5' (7A12024-02) Soil</b>									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EA71509	01/15/07	01/17/07	EPA 8015M	
Carbon Ranges C12-C28	49.5	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	49.5	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		118 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		128 %	70-130		"	"	"	"	
<b>AH-1 2-2.5' (7A12024-03) Soil</b>									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EA71509	01/15/07	01/17/07	EPA 8015M	
Carbon Ranges C12-C28	87.3	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	87.3	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		113 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		128 %	70-130		"	"	"	"	

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Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-2 0-1.0' (7A12024-08) Soil</b>									
Benzene	9.69	0.200	mg/kg dry	200	EA71504	01/15/07	01/15/07	EPA 8021B	
Toluene	70.3	0.200	"	"	"	"	"	"	
Ethylbenzene	62.6	0.200	"	"	"	"	"	"	
Xylene (p/m)	101	0.200	"	"	"	"	"	"	
Xylene (o)	39.7	0.200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		602 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		156 %	80-120		"	"	"	"	S-04
Carbon Ranges C6-C12	9730	100	mg/kg dry	10	EA71509	01/15/07	01/17/07	EPA 8015M	
Carbon Ranges C12-C28	14000	100	"	"	"	"	"	"	
Carbon Ranges C28-C35	809	100	"	"	"	"	"	"	
Total Hydrocarbons	24500	100	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		32.2 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		34.8 %	70-130		"	"	"	"	S-06
<b>AH-2 1-1.5' (7A12024-09) Soil</b>									
Carbon Ranges C6-C12	4240	50.0	mg/kg dry	5	EA71509	01/15/07	01/17/07	EPA 8015M	
Carbon Ranges C12-C28	6180	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	356	50.0	"	"	"	"	"	"	
Total Hydrocarbons	10800	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		38.4 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		40.4 %	70-130		"	"	"	"	S-06
<b>AH-2 2-2.5' (7A12024-10) Soil</b>									
Carbon Ranges C6-C12	32.9	10.0	mg/kg dry	1	EA71509	01/15/07	01/17/07	EPA 8015M	
Carbon Ranges C12-C28	94.0	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	127	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		104 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		108 %	70-130		"	"	"	"	

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Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project: Pogo/ Bayluc Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-3 0-1.0' (7A12024-16) Soil</b>									
Carbon Ranges C6-C12	785	10.0	mg/kg dry	1	EA71509	01/15/07	01/18/07	EPA 8015M	
Carbon Ranges C12-C28	1760	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	87.8	10.0	"	"	"	"	"	"	
Total Hydrocarbons	2630	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		140 %	70-130		"	"	"	"	S-04
Surrogate: 1-Chlorooctadecane		150 %	70-130		"	"	"	"	S-04
<b>AH-3 1-1.5' (7A12024-17) Soil</b>									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EA71509	01/15/07	01/18/07	EPA 8015M	
Carbon Ranges C12-C28	50.6	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	50.6	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		105 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		110 %	70-130		"	"	"	"	
<b>AH-4 0-1.0' (7A12024-19) Soil</b>									
Carbon Ranges C6-C12	3100	50.0	mg/kg dry	5	EA71509	01/15/07	01/18/07	EPA 8015M	
Carbon Ranges C12-C28	6310	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	344	50.0	"	"	"	"	"	"	
Total Hydrocarbons	9750	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		37.4 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		42.2 %	70-130		"	"	"	"	S-06
<b>AH-4 1-1.5' (7A12024-20) Soil</b>									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EA71509	01/15/07	01/18/07	EPA 8015M	
Carbon Ranges C12-C28	30.2	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	30.2	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		124 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		130 %	70-130		"	"	"	"	

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Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavaréz

Fax (432) 682-3946

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-1 0-1.0' (7A12024-01) Soil</b>									
Chloride	3450	50.0	mg/kg	100	EA71808	01/18/07	01/18/07	EPA 300.0	
% Moisture	9.6	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	
<b>AH-1 1-1.5' (7A12024-02) Soil</b>									
Chloride	2240	40.0	mg/kg	80	EA71808	01/18/07	01/18/07	EPA 300.0	
% Moisture	13.6	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	
<b>AH-1 2-2.5' (7A12024-03) Soil</b>									
Chloride	4240	50.0	mg/kg	100	EA71904	01/19/07	01/19/07	EPA 300.0	
% Moisture	13.6	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	
<b>AH-1 3-3.5' (7A12024-04) Soil</b>									
Chloride	1890	40.0	mg/kg	80	EA71904	01/19/07	01/19/07	EPA 300.0	
<b>AH-1 4-4.5' (7A12024-05) Soil</b>									
Chloride	2770	50.0	mg/kg	100	EA71904	01/19/07	01/19/07	EPA 300.0	
<b>AH-1 6-6.5' (7A12024-06) Soil</b>									
Chloride	2430	50.0	mg/kg	100	EA72305	01/23/07	01/23/07	EPA 300.0	
<b>AH-1 7-7.5' (7A12024-07) Soil</b>									
Chloride	1510	25.0	mg/kg	50	EA72305	01/23/07	01/23/07	EPA 300.0	
<b>AH-2 0-1.0' (7A12024-08) Soil</b>									
Chloride	3120	50.0	mg/kg	100	EA71904	01/19/07	01/19/07	EPA 300.0	
% Moisture	9.6	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	
<b>AH-2 1-1.5' (7A12024-09) Soil</b>									
Chloride	4170	50.0	mg/kg	100	EA71904	01/19/07	01/19/07	EPA 300.0	
% Moisture	10.0	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	

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Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number. 2873  
Project Manager. Ike Tavaréz

Fax. (432) 682-3946

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-2 2-2.5' (7A12024-10) Soil</b>									
Chloride	5150	100	mg/kg	200	EA71904	01/19/07	01/19/07	EPA 300.0	
% Moisture	12.6	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	
<b>AH-2 3-3.5' (7A12024-11) Soil</b>									
Chloride	2310	40.0	mg/kg	80	EA71904	01/19/07	01/19/07	EPA 300.0	
<b>AH-2 4-4.5' (7A12024-12) Soil</b>									
Chloride	559	10.0	mg/kg	20	EA71904	01/19/07	01/19/07	EPA 300.0	
<b>AH-2 5-5.5' (7A12024-13) Soil</b>									
Chloride	432	10.0	mg/kg	20	EA71904	01/19/07	01/19/07	EPA 300.0	
<b>AH-2 6-6.5' (7A12024-14) Soil</b>									
Chloride	423	10.0	mg/kg	20	EA72305	01/23/07	01/23/07	EPA 300.0	
<b>AH-3 0-1.0' (7A12024-16) Soil</b>									
Chloride	J [1.15]	5.00	mg/kg	10	EA71904	01/19/07	01/19/07	EPA 300.0	J
% Moisture	2.2	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	
<b>AH-3 1-1.5' (7A12024-17) Soil</b>									
Chloride	J [4.34]	5.00	mg/kg	10	EA71904	01/19/07	01/19/07	EPA 300.0	J
% Moisture	1.1	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	
<b>AH-4 0-1.0' (7A12024-19) Soil</b>									
Chloride	11.9	5.00	mg/kg	10	EA71904	01/19/07	01/19/07	EPA 300.0	
% Moisture	3.0	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	
<b>AH-4 1-1.5' (7A12024-20) Soil</b>									
Chloride	J [0.590]	5.00	mg/kg	10	EA71904	01/19/07	01/19/07	EPA 300.0	J
% Moisture	2.2	0.1	%	1	EA71607	01/15/07	01/16/07	% calculation	

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Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

### Volatile Organic Compounds by EPA Method 8260B

#### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-2 2-2.5' (7A12024-10) Soil									
Benzene	ND	0.00200	mg/kg dry	2	EA72403	01/24/07	01/24/07	EPA 8260B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	0.00563	0.00200	"	"	"	"	"	"	
Xylene (p/m)	0.0145	0.00200	"	"	"	"	"	"	
Xylene (o)	0.00902	0.00200	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		112 %	70-139		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		107 %	52-149		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	76-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	66-145		"	"	"	"	

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1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax: (432) 682-3946

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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**Batch EA71504 - EPA 5030C (GC)**

**Blank (EA71504-BLK1)**

Prepared & Analyzed 01/15/07

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	40.0		ug/kg	40.0		100		80-120	
Surrogate: 4-Bromofluorobenzene	44.7		"	40.0		112		80-120	

**LCS (EA71504-BS1)**

Prepared & Analyzed 01/15/07

Benzene	1.27	0.0250	mg/kg wet	1.25		102		80-120	
Toluene	1.24	0.0250	"	1.25		99.2		80-120	
Ethylbenzene	1.22	0.0250	"	1.25		97.6		80-120	
Xylene (p/m)	2.41	0.0250	"	2.50		96.4		80-120	
Xylene (o)	1.15	0.0250	"	1.25		92.0		80-120	
Surrogate: a,a,a-Trifluorotoluene	35.2		ug/kg	40.0		88.0		80-120	
Surrogate: 4-Bromofluorobenzene	40.8		"	40.0		102		80-120	

**Calibration Check (EA71504-CCV1)**

Prepared & Analyzed 01/15/07

Benzene	50.8		ug/kg	50.0		102		80-120	
Toluene	48.2		"	50.0		96.4		80-120	
Ethylbenzene	48.7		"	50.0		97.4		80-120	
Xylene (p/m)	90.5		"	100		90.5		80-120	
Xylene (o)	43.3		"	50.0		86.6		80-120	
Surrogate: a,a,a-Trifluorotoluene	35.6		"	40.0		89.0		80-120	
Surrogate: 4-Bromofluorobenzene	36.2		"	40.0		90.5		80-120	

**Matrix Spike (EA71504-MS1)**

Source: 7A12026-02

Prepared 01/15/07 Analyzed 01/16/07

Benzene	1.17	0.0250	mg/kg dry	1.32	ND	88.6		80-120	
Toluene	1.17	0.0250	"	1.32	ND	88.6		80-120	
Ethylbenzene	1.43	0.0250	"	1.32	ND	108		80-120	
Xylene (p/m)	2.31	0.0250	"	2.64	ND	87.5		80-120	
Xylene (o)	1.08	0.0250	"	1.32	ND	81.8		80-120	
Surrogate: a,a,a-Trifluorotoluene	38.4		ug/kg	40.0		96.0		80-120	
Surrogate: 4-Bromofluorobenzene	47.5		"	40.0		119		80-120	

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Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

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**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
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**Batch EA71504 - EPA 5030C (GC)**

Matrix Spike Dup (EA71504-MSD1)		Source: 7A12026-02		Prepared 01/15/07		Analyzed 01/16/07				
Benzene	1.27	0.0250	mg/kg dry	1.32	ND	96.2	80-120	8.23	20	
Toluene	1.29	0.0250	"	1.32	ND	97.7	80-120	9.77	20	
Ethylbenzene	1.59	0.0250	"	1.32	ND	120	80-120	10.5	20	
Xylene (p/m)	2.55	0.0250	"	2.64	ND	96.6	80-120	9.89	20	
Xylene (o)	1.23	0.0250	"	1.32	ND	93.2	80-120	13.0	20	
Surrogate: a,a,a-Trifluorotoluene	33.3		ug/kg	40.0		83.2	80-120			
Surrogate: 4-Bromofluorobenzene	42.5		"	40.0		106	80-120			

**Batch EA71509 - Solvent Extraction (GC)**

Blank (EA71509-BLK1)		Prepared 01/15/07		Analyzed 01/17/07						
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	49.4		mg/kg	50.0		98.8	70-130			
Surrogate: 1-Chlorooctadecane	48.3		"	50.0		96.6	70-130			

LCS (EA71509-BS1)		Prepared 01/15/07		Analyzed 01/17/07						
Carbon Ranges C6-C12	561	10.0	mg/kg wet	500		112	75-125			
Carbon Ranges C12-C28	473	10.0	"	500		94.6	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	1030	10.0	"	1000		103	75-125			
Surrogate: 1-Chlorooctane	58.4		mg/kg	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	49.5		"	50.0		99.0	70-130			

Calibration Check (EA71509-CCV1)		Prepared 01/15/07		Analyzed 01/17/07						
Carbon Ranges C6-C12	228		mg/kg	250		91.2	80-120			
Carbon Ranges C12-C28	251		"	250		100	80-120			
Total Hydrocarbons	479		"	500		95.8	80-120			
Surrogate: 1-Chlorooctane	51.3		"	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	47.1		"	50.0		94.2	70-130			

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Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavaréz

Fax (432) 682-3946

**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
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**Batch EA71509 - Solvent Extraction (GC)**

Matrix Spike (EA71509-MS1)		Source: 7A12026-04		Prepared 01/15/07		Analyzed 01/17/07	
Carbon Ranges C6-C12	639	10.0	mg/kg dry	525	ND	122	75-125
Carbon Ranges C12-C28	534	10.0	"	525	ND	102	75-125
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125
Total Hydrocarbons	1170	10.0	"	1050	ND	111	75-125
Surrogate 1-Chlorooctane	62.5		mg/kg	50.0		125	70-130
Surrogate 1-Chlorooctadecane	62.5		"	50.0		125	70-130

Matrix Spike Dup (EA71509-MSD1)	Source: 7A12026-04			Prepared 01/15/07		Analyzed 01/17/07			
Carbon Ranges C6-C12	632	10.0	mg/kg dry	525	ND	120	75-125	1.65	20
Carbon Ranges C12-C28	509	10.0	"	525	ND	97.0	75-125	5.03	20
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20
Total Hydrocarbons	1140	10.0	"	1050	ND	109	75-125	1.82	20
Surrogate 1-Chlorooctane	51.1		mg/kg	50.0		102	70-130		
Surrogate 1-Chlorooctadecane	52.1		"	50.0		104	70-130		

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Fax (432) 682-3946

## 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 EA71607 - General Preparation (Prep)

Blank (EA71607-BLK1) Prepared 01/15/07 Analyzed 01/16/07

% Solids 99.8 %

Duplicate (EA71607-DUP1) Source: 7A12022-01 Prepared 01/15/07 Analyzed 01/16/07

% Solids 96.4 % 94.6 1.88 20

Duplicate (EA71607-DUP2) Source: 7A12022-32 Prepared 01/15/07 Analyzed 01/16/07

% Solids 95.2 % 95.1 0.105 20

Duplicate (EA71607-DUP3) Source: 7A12024-20 Prepared 01/15/07 Analyzed 01/16/07

% Solids 97.7 % 97.8 0.102 20

Duplicate (EA71607-DUP4) Source: 7A12027-12 Prepared 01/15/07 Analyzed 01/16/07

% Solids 92.4 % 92.0 0.434 20

Duplicate (EA71607-DUP5) Source: 7A15002-03 Prepared 01/15/07 Analyzed 01/16/07

% Solids 83.9 % 85.9 2.36 20

#### Batch EA71808 - Water Extraction

Blank (EA71808-BLK1) Prepared & Analyzed 01/18/07

Chloride ND 0.500 mg/kg

LCS (EA71808-BS1) Prepared & Analyzed 01/18/07

Chloride 11.0 0.500 mg/kg 10.0 110 80-120

Calibration Check (EA71808-CCV1) Prepared & Analyzed 01/18/07

Chloride 10.4 mg/L 10.0 104 80-120

Environmental Lab of Texas

A Xenco Laboratories, Inc. Company

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Highlander Environmental Corp  
1910 N. Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

**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
<b>Batch EA71808 - Water Extraction</b>										
<b>Duplicate (EA71808-DUP1)</b>		<b>Source: 7A12021-01</b>		<b>Prepared &amp; Analyzed 01/18/07</b>						
Chloride	27.8	10.0	mg/kg		28.4			2.14	20	
<b>Duplicate (EA71808-DUP2)</b>		<b>Source: 7A12024-01</b>		<b>Prepared &amp; Analyzed 01/18/07</b>						
Chloride	3520	50.0	mg/kg		3450			2.01	20	
<b>Matrix Spike (EA71808-MS1)</b>		<b>Source: 7A12021-01</b>		<b>Prepared &amp; Analyzed 01/18/07</b>						
Chloride	248	10.0	mg/kg	200	28.4	110	80-120			
<b>Matrix Spike (EA71808-MS2)</b>		<b>Source: 7A12024-01</b>		<b>Prepared &amp; Analyzed 01/18/07</b>						
Chloride	4580	50.0	mg/kg	1000	3450	113	80-120			
<b>Batch EA71904 - Water Extraction</b>										
<b>Blank (EA71904-BLK1)</b>		<b>Prepared &amp; Analyzed 01/19/07</b>								
Chloride	ND	0.500	mg/kg							
<b>LCS (EA71904-BS1)</b>		<b>Prepared &amp; Analyzed 01/19/07</b>								
Chloride	10.1	0.500	mg/kg	10.0		101	80-120			
<b>Calibration Check (EA71904-CCV1)</b>		<b>Prepared &amp; Analyzed 01/19/07</b>								
Chloride	10.1		mg/L	10.0		101	80-120			
<b>Duplicate (EA71904-DUP1)</b>		<b>Source: 7A12024-03</b>		<b>Prepared &amp; Analyzed 01/19/07</b>						
Chloride	4210	50.0	mg/kg		4240			0.710	20	
<b>Duplicate (EA71904-DUP2)</b>		<b>Source: 7A15001-01</b>		<b>Prepared &amp; Analyzed 01/19/07</b>						
Chloride	647	50.0	mg/kg		617			4.75	20	

Environmental Lab of Texas

A Xenco Laboratories, Inc. Company

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Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

## 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
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#### Batch EA71904 - Water Extraction

##### Matrix Spike (EA71904-MS1)

Source: 7A12024-03

Prepared & Analyzed 01/19/07

Chloride	5050	50.0	mg/kg	1000	4240	81.0	80-120			
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##### Matrix Spike (EA71904-MS2)

Source: 7A15001-01

Prepared & Analyzed 01/19/07

Chloride	1690	50.0	mg/kg	1000	617	107	80-120			
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#### Batch EA72305 - Water Extraction

##### Blank (EA72305-BLK1)

Prepared & Analyzed 01/23/07

Chloride	ND	0.500	mg/kg							
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##### LCS (EA72305-BS1)

Prepared & Analyzed: 01/23/07

Chloride	10.7	0.500	mg/kg	10.0		107	80-120			
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##### Calibration Check (EA72305-CCV1)

Prepared & Analyzed 01/23/07

Chloride	9.89		mg/L	10.0		98.9	80-120			
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##### Duplicate (EA72305-DUP1)

Source: 7A19009-01

Prepared & Analyzed 01/23/07

Chloride	4160	50.0	mg/kg		4220			1.43	20	
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##### Duplicate (EA72305-DUP2)

Source: 7A12024-06

Prepared & Analyzed 01/23/07

Chloride	2450	50.0	mg/kg		2430			0.820	20	
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##### Matrix Spike (EA72305-MS1)

Source: 7A19009-01

Prepared & Analyzed 01/23/07

Chloride	6600	100	mg/kg	2000	4220	119	80-120			
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##### Matrix Spike (EA72305-MS2)

Source: 7A12024-06

Prepared & Analyzed 01/23/07

Chloride	3630	50.0	mg/kg	1000	2430	120	80-120			
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Environmental Lab of Texas

A Xenco Laboratories, Inc. Company

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Highlander Environmental Corp.  
1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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#### Batch EA72403 - EPA 5030C (GCMS)

##### Blank (EA72403-BLK1)

Prepared & Analyzed 01/24/07

Benzene	ND	0.00100	mg/kg wet						
Toluene	ND	0.00100	"						
Ethylbenzene	ND	0.00100	"						
Xylene (p/m)	ND	0.00100	"						
Xylene (o)	ND	0.00100	"						
Surrogate Dibromofluoromethane	55.8		ug/kg	50.0		112		70-139	
Surrogate 1,2-Dichloroethane-d4	48.6		"	50.0		97.2		52-149	
Surrogate Toluene-d8	54.7		"	50.0		109		76-125	
Surrogate 4-Bromofluorobenzene	52.9		"	50.0		106		66-145	

##### LCS (EA72403-BS1)

Prepared: 01/24/07 Analyzed 01/25/07

Benzene	0.0501	0.00100	mg/kg wet	0.0500		100		70-130	
Toluene	0.0484	0.00100	"	0.0500		96.8		70-130	
Ethylbenzene	0.0545	0.00100	"	0.0500		109		70-130	
Xylene (p/m)	0.102	0.00100	"	0.100		102		70-130	
Xylene (o)	0.0543	0.00100	"	0.0500		109		70-130	
Surrogate Dibromofluoromethane	50.0		ug/kg	50.0		100		70-139	
Surrogate 1,2-Dichloroethane-d4	42.7		"	50.0		85.4		52-149	
Surrogate Toluene-d8	47.2		"	50.0		94.4		76-125	
Surrogate 4-Bromofluorobenzene	51.8		"	50.0		104		66-145	

##### Calibration Check (EA72403-CCV1)

Prepared & Analyzed 01/24/07

Toluene	47.8		ug/kg	50.0		95.6		70-130	
Ethylbenzene	51.4		"	50.0		103		70-130	
Surrogate Dibromofluoromethane	55.6		"	50.0		111		0-200	
Surrogate 1,2-Dichloroethane-d4	51.2		"	50.0		102		0-200	
Surrogate Toluene-d8	47.5		"	50.0		95.0		0-200	
Surrogate 4-Bromofluorobenzene	60.5		"	50.0		121		0-200	

Environmental Lab of Texas

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Highlander Environmental Corp  
1910 N. Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax: (432) 682-3946

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch EA72403 - EPA 5030C (GCMS)

Matrix Spike (EA72403-MS1)		Source: 7A19001-04		Prepared 01/24/07		Analyzed 01/25/07				
Benzene	0.114	0.00200	mg/kg dry	0.116	ND	98.3	70-130			
Toluene	0.103	0.00200	"	0.116	ND	88.8	70-130			
Ethylbenzene	0.102	0.00200	"	0.116	ND	87.9	70-130			
Xylene (p/m)	0.188	0.00200	"	0.233	ND	80.7	70-130			
Xylene (o)	0.102	0.00200	"	0.116	ND	87.9	70-130			
Surrogate Dibromofluoromethane	54.4		ug/kg	50.0		109	70-139			
Surrogate 1,2-Dichloroethane-d4	48.7		"	50.0		97.4	52-149			
Surrogate Toluene-d8	45.0		"	50.0		90.0	76-125			
Surrogate 4-Bromofluorobenzene	47.7		"	50.0		95.4	66-145			
Matrix Spike Dup (EA72403-MSD1)		Source: 7A19001-04		Prepared 01/24/07		Analyzed 01/25/07				
Benzene	0.125	0.00200	mg/kg dry	0.116	ND	108	70-130	9.40	20	
Toluene	0.123	0.00200	"	0.116	ND	106	70-130	17.7	20	
Ethylbenzene	0.122	0.00200	"	0.116	ND	105	70-130	17.7	20	
Xylene (p/m)	0.233	0.00200	"	0.233	ND	100	70-130	21.4	20	R
Xylene (o)	0.125	0.00200	"	0.116	ND	108	70-130	20.5	20	R
Surrogate Dibromofluoromethane	63.4		ug/kg	50.0		131	70-139			
Surrogate 1,2-Dichloroethane-d4	61.6		"	50.0		123	52-149			
Surrogate Toluene-d8	50.9		"	50.0		102	76-125			
Surrogate 4-Bromofluorobenzene	55.9		"	50.0		112	66-145			

Environmental Lab of Texas

A Xenco Laboratories, Inc. Company

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Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

### 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.

R The RPD exceeded the method control limit. The individual analyte QA/QC recoveries, however, were within acceptance limits

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:



Date: 1/26/2007

Brent Barron, Laboratory Director/Corp. Technical Director  
Celey D. Keene, Org. Tech Director  
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer  
Jeanne Mc Murrey, Inorg. Tech Director

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

A Xenco Laboratories, Inc. Company

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PAGE: 1 OF: 3

PAGE: / OFF:  
ANALYSIS REQUEST  
(Circle or Specify Method No.)

# HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.  
Midland, Texas 79705

Fax (432) 682-3946

(432) 682-4559

**STIS MANAGER:**

The Tavaroz

**PROJECT NO.:**

PO60/Baylus Cade Federal #10 Flawline

1 pc Count + 4, NIM

### SAMPLE IDENTIFICATION

NUMBER	DATE	NAME	MATERIAL	CONC	GRAB	DEPTH	NUM	FILTER	HCL	HNO <sub>3</sub>	ICE	NON	OTC	MTBE	TPH	PAH	RCMA	TEP	TEP	TEP	RCI	GC.M	GC.M	PCB	Pest	BOD	Carm	Alph	PLM
-01	4/11/07		S	X	AH-1	0-1.0'	1				X		X		X									X					
-02			S	X	AH-1	1'-1.5'	1				X			X										X					
-03			S	X	AH-1	2'-2.5'	1				X			X										X					
-04			S	X	AH-1	3'-3.5'	1				X													X					
-05			S	X	AH-1	4'-4.5'	1				X													X					
-06			S	X	AH-1	6'-6.5'	1				X													<del>X</del>					
-07			S	X	AH-1	7'-7.5'	1				X													<del>X</del>					
-08			S	X	AH-2	0-1.0'	1				X		X											X					
-09			S	X	AH-2	1'-1.5'	1				X			X										X					
-10			S	X	AH-2	2'-2.5'	1				X		<del>X</del>											X					

RELINQUISHED BY: (Signature) <i>[Signature]</i>	Date: 11/12/07 Time: 4:30	RECEIVED BY: (Signature) <i>[Signature]</i>	Date: _____ Time: _____	SAMPLED BY: (Print & Sign) <i>[Signature]</i>	Date: 11/12/07 Time: _____
RELINQUISHED BY: (Signature) <i>[Signature]</i>	Date: _____ Time: _____	RECEIVED BY: (Signature) <i>[Signature]</i>	Date: _____ Time: _____	SAMPLE SHIPPED BY: (Circle) FEDX <input checked="" type="checkbox"/> HUS _____ UPS _____	ARRBILL # _____ OTHER: _____
RELINQUISHED BY: (Signature) <i>[Signature]</i>	Date: _____ Time: _____	RECEIVED BY: (Signature) <i>[Signature]</i>	Date: _____ Time: _____	<input checked="" type="checkbox"/> HAND DELIVERED	Results by: _____
RECEIVING LABORATORY: <i>PLT</i>	ADDRESS: _____ CITY: <i>adelphi</i> STATE: <i>TX</i> ZIP: _____ CONTACT: _____ PHONE: _____	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 11/26/07 TIME: 4:30	HIGHLANDER CONTACT PERSON: <i>Ike Tovar</i>	
SAMPLE CONDITION WHEN RECEIVED: <i>022 gals 1.5</i>		MATRIX: <i>W-Water</i> <i>SD-Solid</i> <i>(S-Sed)</i> <i>SL-Sludge</i> <i>O-Other</i>		REMARKS: <i>IT TPA Exceeds 1,000 malky run deeper Horizon</i>	

Please fill out all codes - Laboratory retains yellow copy	Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy	Accounting Receives Gold copy.
--	--	--------------------------------

Hilberts

④ Add as per e-mail 1/23





# Environmental Lab of Texas

## Variance/ Corrective Action Report- Sample Log-In

Client: Highlander Environmental  
 Date/ Time: 01-12-07 @ 1630  
 Lab ID #: 7A12024  
 Initials: JMM

### Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	<u>(Yes)</u>	No	1.5 °C	
#2	Shipping container in good condition?	<u>(Yes)</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>(Not Present)</u>	
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	<u>(Not Present)</u>	
#5	Chain of Custody present?	<u>(Yes)</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>(Yes)</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>(Yes)</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>(Yes)</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>(Yes)</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>(Yes)</u>	No		
#11	Containers supplied by ELOT?	<u>(Yes)</u>	No		
#12	Samples in proper container/ bottle?	<u>(Yes)</u>	No	See Below	
#13	Samples properly preserved?	<u>(Yes)</u>	No	See Below	
#14	Sample bottles intact?	<u>(Yes)</u>	No		
#15	Preservations documented on Chain of Custody?	<u>(Yes)</u>	No		
#16	Containers documented on Chain of Custody?	<u>(Yes)</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>(Yes)</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>(Yes)</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>(Not Applicable)</u>	
#20	VOC samples have zero headspace?	<u>(Yes)</u>	No	Not Applicable	

### Variance Documentation

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- Check all that Apply:
- ☐ See attached e-mail/ fax
  - ☐ Client understands and would like to proceed with analysis
  - ☐ Cooling process had begun shortly after sampling event

**Jeanne McMurrey**

---

**From:** "Ray" <rtaylor@hec-enviro.com>  
**To:** "Jeanne McMurrey" <jeanne@elabtxas.com>  
**Sent:** Tuesday, January 23, 2007 8:35 AM  
**Subject:** RE: Environmental Lab of Texas News

Request for further analysis on  
Project Pogo Baylus Cade Fed #10 Flowline Leak  
Project # 2873  
Lab order # 7A12024

Please run BTEX on AH-2 2'-2.5'  
Chlorides on AH-1 6'-6.5' & 7'-7.5'  
AH-2 6'-6.5'

Raymond P. Taylor

-----Original Message-----

**From:** Jeanne McMurrey [mailto:jeanne@elabtxas.com]  
**Sent:** Friday, January 12, 2007 3:00 PM  
**To:** Ray Taylor; Jeff Kindley; Gary Miller; Jim Hunnicutt; Ike Tavarez; Tim Reed  
**Subject:** Re: Environmental Lab of Texas News

Jeanne McMurrey  
Environmental Lab of Texas I, Ltd.  
12600 West I-20 East  
Odessa, Texas 79765  
432-563-1800

--

This message has been scanned for viruses and  
dangerous content by **Basin Broadband, Inc.**,  
utilizing DefenderMX technology, and is believed to be clean.

1/23/2007

**Lab Analysis**

**May 23, 2007**

# 2

Report Date: May 23, 2007  
2873Work Order: 7051702  
Pogo-Baylus Code Federal #10

Page Number: 1 of 1

## Summary Report

Ike Tavarez  
Highlander Environmental Services  
1910 N. Big Spring Street  
Midland, TX, 79705

Report Date: May 23, 2007

Work Order: 7051702

Project Name: Pogo-Baylus Code Federal #10  
Project Number: 2873

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
124325	BH-1 (9-10')	soil	2007-05-15	00:00	2007-05-16
124326	BH-1 (14-15')	soil	2007-05-15	00:00	2007-05-16

## Sample: 124325 - BH-1 (9-10')

Param	Flag	Result	Units	RL
Chloride		96.6	mg/Kg	1.00

## Sample: 124326 - BH-1 (14-15')

Param	Flag	Result	Units	RL
Chloride		100	mg/Kg	1.00



# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944  
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313  
6015 Harris Parkway, Suite 110 Ft Worth, Texas 76132 817•201•5260  
E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Ike Tavarez  
Highlander Environmental Services  
1910 N Big Spring Street  
Midland, TX, 79705

Report Date: May 23, 2007

Work Order: 7051702



Project Name: Pogo-Baylus Code Federal #10  
Project Number: 2873

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
124325	BH-1 (9-10')	soil	2007-05-15	00:00	2007-05-16
124326	BH-1 (14-15')	soil	2007-05-15	00:00	2007-05-16

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

This report consists of a total of 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc

  
Dr Blair Leftwich, Director

### Standard Flags

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

## Case Narrative

Samples for project Pogo-Baylus Code Federal #10 were received by TraceAnalysis, Inc. on 2007-05-16 and assigned to work order 7051702. Samples for work order 7051702 were received intact at a temperature of 4 C.

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

Test	Method
Chloride (IC)	E 300.0

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 7051702 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

## Analytical Report

### Sample: 124325 - BH-1 (9-10')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	37432	Date Analyzed:	2007-05-23	Analyzed By:	ER
Prep Batch:	32458	Sample Preparation:	2007-05-22	Prepared By:	ER

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		96.6	mg/Kg	5	1.00

### Sample: 124326 - BH-1 (14-15')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	37430	Date Analyzed:	2007-05-22	Analyzed By:	ER
Prep Batch:	32457	Sample Preparation:	2007-05-22	Prepared By:	ER

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		100	mg/Kg	5	1.00

### Method Blank (1) QC Batch: 37430

QC Batch:	37430	Date Analyzed:	2007-05-22	Analyzed By:	ER
Prep Batch:	32457	QC Preparation:	2007-05-22	Prepared By:	ER

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.140	mg/Kg	1

### Method Blank (1) QC Batch: 37432

QC Batch:	37432	Date Analyzed:	2007-05-23	Analyzed By:	ER
Prep Batch:	32458	QC Preparation:	2007-05-22	Prepared By:	ER

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.140	mg/Kg	1

### Laboratory Control Spike (LCS-1)

QC Batch:	37430	Date Analyzed:	2007-05-22	Analyzed By:	ER
Prep Batch:	32457	QC Preparation:	2007-05-22	Prepared By:	ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec. Limit
Chloride	12.2	mg/Kg	1	12.5	<0.140	98	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	12.8	mg/Kg	1	12.5	<0.140	102	90 - 110	5	20

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

#### Laboratory Control Spike (LCS-1)

QC Batch: 37432  
Prep Batch: 32458

Date Analyzed: 2007-05-23  
QC Preparation: 2007-05-22

Analyzed By: ER  
Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec. Limit
Chloride	12.3	mg/Kg	1	12.5	<0.140	98	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	12.0	mg/Kg	1	12.5	<0.140	96	90 - 110	2	20

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

#### Matrix Spike (MS-1) Spiked Sample: 124326

QC Batch: 37430  
Prep Batch: 32457

Date Analyzed: 2007-05-22  
QC Preparation: 2007-05-22

Analyzed By: ER  
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	<sup>1</sup> 234	mg/Kg	5	62.5	100.375	214	75.6 - 117

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec. Limit	RPD	RPD Limit
Chloride	<sup>2</sup> 195	mg/Kg	5	62.5	100.375	151	75.6 - 117	18	20

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

#### Matrix Spike (MS-1) Spiked Sample: 124333

QC Batch: 37432  
Prep Batch: 32458

Date Analyzed: 2007-05-23  
QC Preparation: 2007-05-22

Analyzed By: ER  
Prepared By: ER

<sup>1</sup> Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>2</sup> Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec. Limit
Chloride	<sup>3</sup>	549	mg/Kg	50	625	224.831	52	75.6 - 117

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	<sup>4</sup>	540	mg/Kg	50	625	224.831	50	75.6 - 117	2	20

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

#### Standard (ICV-1)

QC Batch: 37430

Date Analyzed: 2007-05-22

Analyzed By: ER

Param	Flag	Units	ICVs True Conc	ICVs Found Conc	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.9	95	90 - 110	2007-05-22

#### Standard (CCV-1)

QC Batch: 37430

Date Analyzed: 2007-05-22

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.8	94	90 - 110	2007-05-22

#### Standard (ICV-1)

QC Batch: 37432

Date Analyzed: 2007-05-23

Analyzed By: ER

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.8	94	90 - 110	2007-05-23

#### Standard (CCV-1)

QC Batch: 37432

Date Analyzed: 2007-05-23

Analyzed By: ER

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.8	94	90 - 110	2007-05-23

<sup>3</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>4</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.



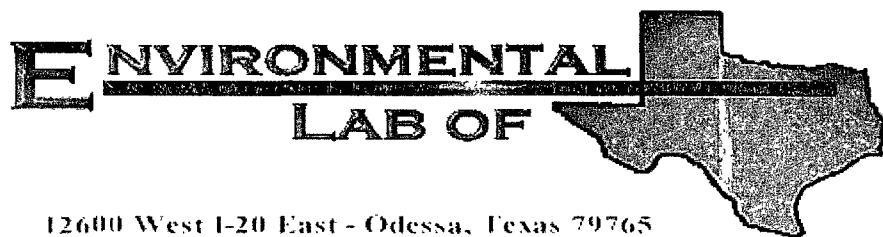


**Lab Analysis**

**June 20, 2007**



# 3



12600 West I-20 East - Odessa, Texas 79765

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## Analytical Report

**Prepared for:**

Ike Tavaréz

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak

Project Number: 2873

Location: Lea Co., NM

Lab Order Number: 7F13021

Report Date: 06/20/07

Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavaraz

Fax (432) 682-3946

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-3A (0-1 0') BEB (1 0')	7F13021-01	Soil	06/07/07 00 00	06-13-2007 15 00
AH-4A (0-1.0') BEB (1 0')	7F13021-02	Soil	06/07/07 00 00	06-13-2007 15 00
AH-1A (0-1 0') BEB (3 0')	7F13021-03	Soil	06/08/07 00:00	06-13-2007 15 00
AH-2A (0-1 0') BEB (7 0')	7F13021-04	Soil	06/08/07 00 00	06-13-2007 15:00

Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-3A (0-1.0') BEB (1.0') (7F13021-01) Soil</b>									
Benzene	ND	0.00200	mg/kg dry	2	EF71809	06/18/07	06/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		80.0 %	75-125		"	"	"	"	
Surrogate: <i>4</i> -Bromofluorobenzene		77.2 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF71402	06/14/07	06/15/07	EPA 8015M	
Carbon Ranges C12-C28	23.2	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	21.8	10.0	"	"	"	"	"	"	
Total Hydrocarbons	45.0	10.0	"	"	"	"	"	"	
Surrogate: <i>1</i> -Chlorooctane		88.6 %	70-130		"	"	"	"	
Surrogate: <i>1</i> -Chlorooctadecane		96.2 %	70-130		"	"	"	"	
<b>AH-4A (0-1.0') BEB (1.0') (7F13021-02) Soil</b>									
Benzene	ND	0.00200	mg/kg dry	2	EF71809	06/18/07	06/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		76.0 %	75-125		"	"	"	"	
Surrogate: <i>4</i> -Bromofluorobenzene		70.8 %	75-125		"	"	"	"	S-04
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF71402	06/14/07	06/15/07	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: <i>1</i> -Chlorooctane		82.8 %	70-130		"	"	"	"	
Surrogate: <i>1</i> -Chlorooctadecane		92.6 %	70-130		"	"	"	"	
<b>AH-1A (0-1.0') BEB (3.0') (7F13021-03) Soil</b>									
Benzene	ND	0.00200	mg/kg dry	2	EF71809	06/18/07	06/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		73.6 %	75-125		"	"	"	"	S-04
Surrogate: <i>4</i> -Bromofluorobenzene		72.2 %	75-125		"	"	"	"	S-04
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF71402	06/14/07	06/15/07	EPA 8015M	

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Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-1A (0-1.0') BEB (3.0') (7F13021-03) Soil</b>									
Carbon Ranges C12-C28	ND	10 0	mg/kg dry	1	EF71402	06/14/07	06/15/07	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		86 0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		95 6 %	70-130		"	"	"	"	
<b>AH-2A (0-1.0') BEB (7.0') (7F13021-04) Soil</b>									
Benzene	J [0.00985]	0 0250	mg/kg dry	25	EF71809	06/18/07	06/19/07	EPA 8021B	J
Toluene	0.757	0 0250	"	"	"	"	"	"	
Ethylbenzene	1.22	0 0250	"	"	"	"	"	"	
Xylene (p/m)	3.11	0 0250	"	"	"	"	"	"	
Xylene (o)	1.16	0 0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		78 2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89 6 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	264	10 0	mg/kg dry	1	EF71402	06/14/07	06/15/07	EPA 8015M	
Carbon Ranges C12-C28	812	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	93.4	10 0	"	"	"	"	"	"	
Total Hydrocarbons	1180	10 0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		101 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		96 6 %	70-130		"	"	"	"	

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1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavaréz

Fax (432) 682-3946

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-3A (0-1.0') BEB (1.0') (7F13021-01) Soil</b>									
Chloride	21.3	5 00	mg/L	1	EF71517	06/15/07	06/15/07	SW846-9253	
% Moisture	7.2	0 1	%	"	EF71509	06/14/07	06/14/07	% calculation	
<b>AH-4A (0-1.0') BEB (1.0') (7F13021-02) Soil</b>									
Chloride	21.3	5 00	mg/L	1	EF71517	06/15/07	06/15/07	SW846-9253	
% Moisture	9.4	0 1	%	"	EF71509	06/14/07	06/14/07	% calculation	
<b>AH-1A (0-1.0') BEB (3.0') (7F13021-03) Soil</b>									
Chloride	2450	5 00	mg/L	1	EF71517	06/15/07	06/15/07	SW846-9253	
% Moisture	10.7	0 1	%	"	EF71509	06/14/07	06/14/07	% calculation	
<b>AH-2A (0-1.0') BEB (7.0') (7F13021-04) Soil</b>									
Chloride	2230	5 00	mg/L	1	EF71517	06/15/07	06/15/07	SW846-9253	
% Moisture	10.4	0 1	%	"	EF71509	06/14/07	06/14/07	% calculation	

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Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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**Batch EF71402 - Solvent Extraction (GC)**

**Blank (EF71402-BLK1)**

Prepared 06/14/07 Analyzed 06/15/07

Carbon Ranges C6-C12	ND	10 0	mg/kg wet						
Carbon Ranges C12-C28	ND	10 0	"						
Carbon Ranges C28-C35	ND	10 0	"						
Total Hydrocarbons	ND	10 0	"						
Surrogate 1-Chlorooctane	38 0		mg/kg	50 0		76 0	70-130		
Surrogate 1-Chlorooctadecane	40 0		"	50 0		80 0	70-130		

**LCS (EF71402-BS1)**

Prepared 06/14/07 Analyzed 06/15/07

Carbon Ranges C6-C12	494	10 0	mg/kg wet	500		98.8	75-125		
Carbon Ranges C12-C28	443	10 0	"	500		88.6	75-125		
Carbon Ranges C28-C35	ND	10 0	"	0 00			75-125		
Total Hydrocarbons	937	10 0	"	1000		93.7	75-125		
Surrogate 1-Chlorooctane	47.7		mg/kg	50 0		95.4	70-130		
Surrogate 1-Chlorooctadecane	44.6		"	50 0		89.2	70-130		

**Calibration Check (EF71402-CCV1)**

Prepared 06/14/07 Analyzed 06/15/07

Carbon Ranges C6-C12	217		mg/kg	250		86.8	80-120		
Carbon Ranges C12-C28	239		"	250		95.6	80-120		
Total Hydrocarbons	456		"	500		91.2	80-120		
Surrogate 1-Chlorooctane	46.7		"	50 0		93.4	70-130		
Surrogate 1-Chlorooctadecane	50.3		"	50 0		101	70-130		

**Matrix Spike (EF71402-MS1)**

Source: 7F13011-03

Prepared 06/14/07 Analyzed 06/15/07

Carbon Ranges C6-C12	569	10 0	mg/kg dry	546	ND	104	75-125		
Carbon Ranges C12-C28	499	10 0	"	546	ND	91.4	75-125		
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125		
Total Hydrocarbons	1070	10 0	"	1090	ND	98.2	75-125		
Surrogate 1-Chlorooctane	51.4		mg/kg	50 0		103	70-130		
Surrogate 1-Chlorooctadecane	45.9		"	50 0		91.8	70-130		

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Midland TX, 79705

Project Pogo/ Bayliss Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax. (432) 682-3946

**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
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**Batch EF71402 - Solvent Extraction (GC)**

**Matrix Spike Dup (EF71402-MSD1)**

Source: 7F13011-03

Prepared 06/14/07 Analyzed 06/15/07

Carbon Ranges C6-C12	555	10.0	mg/kg dry	546	ND	102	75-125	1.94	20	
Carbon Ranges C12-C28	485	10.0	"	546	ND	88.8	75-125	2.89	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1040	10.0	"	1090	ND	95.4	75-125	2.89	20	
Surrogate 1-Chlorooctane	48.9		mg/kg	50.0		97.8	70-130			
Surrogate 1-Chlorooctadecane	44.4		"	50.0		88.8	70-130			

**Batch EF71809 - EPA 5030C (GC)**

**Blank (EF71809-BLK1)**

Prepared & Analyzed 06/18/07

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate a,a,a-Trifluorotoluene	39.0		ug/kg	50.0		78.0	75-125			
Surrogate 4-Bromofluorobenzene	38.4		"	50.0		76.8	75-125			

**LCS (EF71809-BS1)**

Prepared & Analyzed 06/18/07

Benzene	0.0401	0.00100	mg/kg wet	0.0500		80.2	80-120			
Toluene	0.0410	0.00100	"	0.0500		82.0	80-120			
Ethylbenzene	0.0445	0.00100	"	0.0500		89.0	80-120			
Xylene (p/m)	0.0806	0.00100	"	0.100		80.6	80-120			
Xylene (o)	0.0415	0.00100	"	0.0500		83.0	80-120			
Surrogate a,a,a-Trifluorotoluene	37.8		ug/kg	50.0		75.6	75-125			
Surrogate 4-Bromofluorobenzene	37.8		"	50.0		75.6	75-125			

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1910 N. Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

**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
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**Batch EF71809 - EPA 5030C (GC)**

**Calibration Check (EF71809-CCV1)**

Prepared & Analyzed: 06/18/07

Benzene	0.0425		mg/kg wet	0.0500		85.0	80-120			
Toluene	0.0436		"	0.0500		87.2	80-120			
Ethylbenzene	0.0428		"	0.0500		85.6	80-120			
Xylene (p/m)	0.0841		"	0.100		84.1	80-120			
Xylene (o)	0.0446		"	0.0500		89.2	80-120			
Surrogate a,a,a-Trifluorotoluene	43.7		ug/kg	50.0		87.4	75-125			
Surrogate 4-Bromofluorobenzene	43.3		"	50.0		86.6	75-125			

**Matrix Spike (EF71809-MS1)**

Source: 7F15009-01

Prepared & Analyzed: 06/18/07

Benzene	1.10	0.0250	mg/kg dry	1.34	ND	82.1	80-120			
Toluene	1.15	0.0250	"	1.34	ND	85.8	80-120			
Ethylbenzene	1.25	0.0250	"	1.34	ND	93.3	80-120			
Xylene (p/m)	2.26	0.0250	"	2.69	ND	84.0	80-120			
Xylene (o)	1.18	0.0250	"	1.34	ND	88.1	80-120			
Surrogate a,a,a-Trifluorotoluene	43.5		ug/kg	50.0		87.0	75-125			
Surrogate 4-Bromofluorobenzene	40.6		"	50.0		81.2	75-125			

**Matrix Spike Dup (EF71809-MSD1)**

Source: 7F15009-01

Prepared & Analyzed: 06/18/07

Benzene	1.06	0.0250	mg/kg dry	1.34	ND	79.1	80-120	3.72	20	M8
Toluene	1.10	0.0250	"	1.34	ND	82.1	80-120	4.41	20	
Ethylbenzene	1.20	0.0250	"	1.34	ND	89.6	80-120	4.05	20	
Xylene (p/m)	2.17	0.0250	"	2.69	ND	80.7	80-120	4.01	20	
Xylene (o)	1.14	0.0250	"	1.34	ND	85.1	80-120	3.46	20	
Surrogate a,a,a-Trifluorotoluene	37.6		ug/kg	50.0		75.2	75-125			
Surrogate 4-Bromofluorobenzene	38.7		"	50.0		77.4	75-125			

Environmental Lab of Texas

A Xenco Laboratories Company

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Highlander Environmental Corp.  
1910 N Big Spring St  
Midland TX, 79705

Project Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number 2873  
Project Manager Ike Tavarez

Fax (432) 682-3946

**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 EF71509 - General Preparation (Prep)**

**Blank (EF71509-BLK1)** Prepared & Analyzed 06/14/07

% Solids 100 %

**Duplicate (EF71509-DUP1)** Source: 7F13016-01 Prepared & Analyzed 06/14/07

% Solids 90.5 % 91.2 0.770 20

**Duplicate (EF71509-DUP2)** Source: 7F14010-08 Prepared & Analyzed 06/14/07

% Solids 92.5 % 90.1 2.63 20

**Duplicate (EF71509-DUP3)** Source: 7F14010-28 Prepared & Analyzed 06/14/07

% Solids 96.3 % 93.6 2.84 20

**Batch EF71517 - General Preparation (WetChem)**

**Blank (EF71517-BLK1)** Prepared & Analyzed 06/15/07

Chloride 0.00 5.00 mg/L

**LCS (EF71517-BS1)** Prepared & Analyzed 06/15/07

Chloride 94.7 5.00 mg/L 100 94.7 80-120

**Matrix Spike (EF71517-MS1)** Source: 7F13011-03 Prepared & Analyzed 06/15/07

Chloride 468 5.00 mg/L 500 42.5 85.1 80-120

**Matrix Spike Dup (EF71517-MSD1)** Source: 7F13011-03 Prepared & Analyzed 06/15/07

Chloride 468 5.00 mg/L 500 42.5 85.1 80-120 0.00 20

**Reference (EF71517-SRM1)** Prepared & Analyzed 06/15/07

Chloride 53.2 5.00 mg/L 50.0 106 80-120

Environmental Lab of Texas

A Xenco Laboratories Company

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Highlander Environmental Corp  
1910 N. Big Spring St  
Midland TX, 79705

Project Pogo/ Baylous Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavaraz

Fax: (432) 682-3946

### Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect

M8 The MS and/or MSD were below the acceptance limits See Blank Spike (LCS)

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: 

Date: 6/20/2007

Brent Barron, Laboratory Director/Corp. Technical Director  
Celey D. Keene, Org. Tech Director  
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer  
Jeanne Mc Murrey, Inorg. Tech Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

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# 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

CLIENT NAME:

Pogo

SITE MANAGER:

Ike Tavaréz

PROJECT NO.:

2873

PROJECT NAME:

Pogo/ Bayl's Cade Fed #10 Flowline Leak  
Lea Co, NM

LAB I.D.  
NUMBER

DATE

TIME

MATRIX  
COMP.

GRAB

SAMPLE IDENTIFICATION

7F13021 / 284220

NUMBER OF CONTAINERS  
FILTERED (Y/N)

PRESERVATIVE  
METHOD

HCL

HNOS

ICE

NONE

BTX 8020/802

MTBE 8080/808

TPH 418.1

PAH 8270

PCPA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

PCB 8080/808

GC/MS Vol. 8240/8240/824

GC/MS Semi. Vol. 8270/827

PCB's 8080/808

PCB 808/808

BOD, TSS, pH, TDS, Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

RELINQUISHED BY: (Signature)

Date: 6/13/07

RECEIVED BY: (Signature)

Date: 6/13/07

SAMPLED BY: (Print & Sign)

Date: 6/13/07

RELINQUISHED BY: (Signature)

Date: 6/13/07

RECEIVED BY: (Signature)

Date: 6/13/07

SAMPLE SHIPPED BY: (Circle)

AIRBILL #

RELINQUISHED BY: (Signature)

Date: 6/13/07

RECEIVED BY: (Signature)

Date: 6/13/07

FEDEX BUS  
GAND DELIVERED UPS OTHER:

OTHER:

RECEIVING LABORATORY:

ELT

RECEIVED BY: (Signature)

Date: 6/13/07

HIGHLANDER CONTACT PERSON:

Results by:

ADDRESS:

CITY:

STATE: Texas

ZIP:

CONTACT:

PHONE:

DATE: 6/13/07

TIME: 15:00

Ike Tavaréz

RUSH Charges

Authorized:

Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX:

W-Water

A-Air

SD-Solid

S-Soil

SL-Sludge

O-Other

REMARKS:

6.0 w/ label 4 oz glass

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: 6-13-07 15:00  
Lab ID #: 7F13021  
Initials: AL

**Sample Receipt Checklist**

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	6-0 °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<del>Not Present</del>
#4	Custody Seals intact on sample bottles/ container?	Yes	No	<del>Not Present</del>
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<del>Not Applicable</del>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

**Variance Documentation**

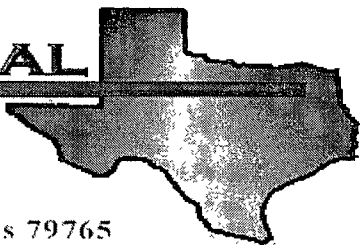
Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that Apply:
- ☐ See attached e-mail/ fax
  - ☐ Client understands and would like to proceed with analysis
  - ☐ Cooling process had begun shortly after sampling event

# ENVIRONMENTAL LAB OF



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

## Analytical Report

**Prepared for:**

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak

Project Number: 2873

Location: Lea Co., NM

Lab Order Number: 7F13021

Report Date: 06/20/07

Highlander Environmental Corp.  
1910 N Big Spring St.  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-3A (0-1.0') BEB (1.0')	7F13021-01	Soil	06/07/07 00:00	06-13-2007 15:00
AH-4A (0-1.0') BEB (1.0')	7F13021-02	Soil	06/07/07 00:00	06-13-2007 15:00
AH-1A (0-1 0') BEB (3.0')	7F13021-03	Soil	06/08/07 00:00	06-13-2007 15:00
AH-2A (0-1.0') BEB (7.0')	7F13021-04	Soil	06/08/07 00:00	06-13-2007 15:00

Highlander Environmental Corp.  
1910 N Big Spring St.  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

## Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-3A (0-1.0') BEB (1.0') (7F13021-01) Soil</b>									
Benzene	ND	0.00200	mg/kg dry	2	EF71809	06/18/07	06/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate. a,a,a-Trifluorotoluene		80.0 %	75-125		"	"	"	"	
Surrogate 4-Bromofluorobenzene		77.2 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF71402	06/14/07	06/15/07	EPA 8015M	
Carbon Ranges C12-C28	23.2	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	21.8	10.0	"	"	"	"	"	"	
Total Hydrocarbons	45.0	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		88.6 %	70-130		"	"	"	"	
Surrogate 1-Chlorooctadecane		96.2 %	70-130		"	"	"	"	
<b>AH-4A (0-1.0') BEB (1.0') (7F13021-02) Soil</b>									
Benzene	ND	0.00200	mg/kg dry	2	EF71809	06/18/07	06/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate. a,a,a-Trifluorotoluene		76.0 %	75-125		"	"	"	"	
Surrogate 4-Bromofluorobenzene		70.8 %	75-125		"	"	"	"	S-04
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF71402	06/14/07	06/15/07	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		82.8 %	70-130		"	"	"	"	
Surrogate 1-Chlorooctadecane		92.6 %	70-130		"	"	"	"	

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Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-1A (0-1.0') BEB (3.0') (7F13021-03) Soil</b>									
Benzene	ND	0.00200	mg/kg dry	2	EF71809	06/18/07	06/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		73.6 %	75-125		"	"	"	"	S-04
Surrogate 4-Bromofluorobenzene		72.2 %	75-125		"	"	"	"	S-04
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF71402	06/14/07	06/15/07	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		86.0 %	70-130		"	"	"	"	
Surrogate 1-Chlorooctadecane		95.6 %	70-130		"	"	"	"	

**AH-2A (0-1.0') BEB (7.0') (7F13021-04) Soil**

Benzene	J [0.00985]	0.0250	mg/kg dry	25	EF71809	06/18/07	06/19/07	EPA 8021B	J
Toluene	0.757	0.0250	"	"	"	"	"	"	
Ethylbenzene	1.22	0.0250	"	"	"	"	"	"	
Xylene (p/m)	3.11	0.0250	"	"	"	"	"	"	
Xylene (o)	1.16	0.0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		78.2 %	75-125		"	"	"	"	
Surrogate 4-Bromofluorobenzene		89.6 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	264	10.0	mg/kg dry	1	EF71402	06/14/07	06/15/07	EPA 8015M	
Carbon Ranges C12-C28	812	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	93.4	10.0	"	"	"	"	"	"	
Total Hydrocarbons	1180	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		101 %	70-130		"	"	"	"	
Surrogate 1-Chlorooctadecane		96.6 %	70-130		"	"	"	"	

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A Xenco Laboratories Company

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Highlander Environmental Corp.  
1910 N Big Spring St.  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-3A (0-1.0') BEB (1.0') (7F13021-01) Soil</b>									
Chloride	21.3	5.00	mg/L	1	EF71517	06/15/07	06/15/07	SW846-9253	
% Moisture	7.2	0.1	%	"	EF71509	06/14/07	06/14/07	% calculation	
<b>AH-4A (0-1.0') BEB (1.0') (7F13021-02) Soil</b>									
Chloride	21.3	5.00	mg/L	1	EF71517	06/15/07	06/15/07	SW846-9253	
% Moisture	9.4	0.1	%	"	EF71509	06/14/07	06/14/07	% calculation	
<b>AH-1A (0-1.0') BEB (3.0') (7F13021-03) Soil</b>									
Chloride	2450	5.00	mg/L	1	EF71517	06/15/07	06/15/07	SW846-9253	
% Moisture	10.7	0.1	%	"	EF71509	06/14/07	06/14/07	% calculation	
<b>AH-2A (0-1.0') BEB (7.0') (7F13021-04) Soil</b>									
Chloride	2230	5.00	mg/L	1	EF71517	06/15/07	06/15/07	SW846-9253	
% Moisture	10.4	0.1	%	"	EF71509	06/14/07	06/14/07	% calculation	

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Highlander Environmental Corp.  
1910 N Big Spring St.  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

**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
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**Batch EF71402 - Solvent Extraction (GC)**

**Blank (EF71402-BLK1)**

Prepared: 06/14/07 Analyzed: 06/15/07

Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate 1-Chlorooctane	38.0		mg/kg	50.0		76.0	70-130			
Surrogate 1-Chlorooctadecane	40.0		"	50.0		80.0	70-130			

**LCS (EF71402-BS1)**

Prepared: 06/14/07 Analyzed: 06/15/07

Carbon Ranges C6-C12	494	10.0	mg/kg wet	500		98.8	75-125			
Carbon Ranges C12-C28	443	10.0	"	500		88.6	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	937	10.0	"	1000		93.7	75-125			
Surrogate 1-Chlorooctane	47.7		mg/kg	50.0		95.4	70-130			
Surrogate 1-Chlorooctadecane	44.6		"	50.0		89.2	70-130			

**Calibration Check (EF71402-CCV1)**

Prepared: 06/14/07 Analyzed: 06/15/07

Carbon Ranges C6-C12	217		mg/kg	250		86.8	80-120			
Carbon Ranges C12-C28	239		"	250		95.6	80-120			
Total Hydrocarbons	456		"	500		91.2	80-120			
Surrogate 1-Chlorooctane	46.7		"	50.0		93.4	70-130			
Surrogate 1-Chlorooctadecane	50.3		"	50.0		101	70-130			

**Matrix Spike (EF71402-MS1)**

Source: 7F13011-03

Prepared: 06/14/07 Analyzed: 06/15/07

Carbon Ranges C6-C12	569	10.0	mg/kg dry	546	ND	104	75-125			
Carbon Ranges C12-C28	499	10.0	"	546	ND	91.4	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1070	10.0	"	1090	ND	98.2	75-125			
Surrogate 1-Chlorooctane	51.4		mg/kg	50.0		103	70-130			
Surrogate 1-Chlorooctadecane	45.9		"	50.0		91.8	70-130			

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Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

**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 EF71402 - Solvent Extraction (GC)**

**Matrix Spike Dup (EF71402-MSD1)** Source: 7F13011-03 Prepared: 06/14/07 Analyzed: 06/15/07

Carbon Ranges C6-C12	555	10.0	mg/kg dry	546	ND	102	75-125	1.94	20	
Carbon Ranges C12-C28	485	10.0	"	546	ND	88.8	75-125	2.89	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1040	10.0	"	1090	ND	95.4	75-125	2.89	20	
Surrogate 1-Chlorooctane	48.9		mg/kg	50.0		97.8	70-130			
Surrogate 1-Chlorooctadecane	44.4		"	50.0		88.8	70-130			

**Batch EF71809 - EPA 5030C (GC)**

**Blank (EF71809-BLK1)**

Prepared & Analyzed: 06/18/07

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate a,a,a-Trifluorotoluene	39.0		ug/kg	50.0		78.0	75-125			
Surrogate 4-Bromofluorobenzene	38.4		"	50.0		76.8	75-125			

**LCS (EF71809-BS1)**

Prepared & Analyzed: 06/18/07

Benzene	0.0401	0.00100	mg/kg wet	0.0500		80.2	80-120			
Toluene	0.0410	0.00100	"	0.0500		82.0	80-120			
Ethylbenzene	0.0445	0.00100	"	0.0500		89.0	80-120			
Xylene (p/m)	0.0806	0.00100	"	0.100		80.6	80-120			
Xylene (o)	0.0415	0.00100	"	0.0500		83.0	80-120			
Surrogate a,a,a-Trifluorotoluene	37.8		ug/kg	50.0		75.6	75-125			
Surrogate 4-Bromofluorobenzene	37.8		"	50.0		75.6	75-125			

Environmental Lab of Texas  
A Xenco Laboratories Company

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Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

**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
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**Batch EF71809 - EPA 5030C (GC)**

**Calibration Check (EF71809-CCV1)**

Prepared & Analyzed: 06/18/07

Benzene	0.0425		mg/kg wet	0.0500		85.0	80-120			
Toluene	0.0436		"	0.0500		87.2	80-120			
Ethylbenzene	0.0428		"	0.0500		85.6	80-120			
Xylene (p/m)	0.0841		"	0.100		84.1	80-120			
Xylene (o)	0.0446		"	0.0500		89.2	80-120			
Surrogate a,a,a-Trifluorotoluene	43.7		ug/kg	50.0		87.4	75-125			
Surrogate 4-Bromofluorobenzene	43.3		"	50.0		86.6	75-125			

**Matrix Spike (EF71809-MS1)**

Source: 7F15009-01

Prepared & Analyzed: 06/18/07

Benzene	1.10	0.0250	mg/kg dry	1.34	ND	82.1	80-120			
Toluene	1.15	0.0250	"	1.34	ND	85.8	80-120			
Ethylbenzene	1.25	0.0250	"	1.34	ND	93.3	80-120			
Xylene (p/m)	2.26	0.0250	"	2.69	ND	84.0	80-120			
Xylene (o)	1.18	0.0250	"	1.34	ND	88.1	80-120			
Surrogate a,a,a-Trifluorotoluene	43.5		ug/kg	50.0		87.0	75-125			
Surrogate 4-Bromofluorobenzene	40.6		"	50.0		81.2	75-125			

**Matrix Spike Dup (EF71809-MSD1)**

Source: 7F15009-01

Prepared & Analyzed: 06/18/07

Benzene	1.06	0.0250	mg/kg dry	1.34	ND	79.1	80-120	3.72	20	M8
Toluene	1.10	0.0250	"	1.34	ND	82.1	80-120	4.41	20	
Ethylbenzene	1.20	0.0250	"	1.34	ND	89.6	80-120	4.05	20	
Xylene (p/m)	2.17	0.0250	"	2.69	ND	80.7	80-120	4.01	20	
Xylene (o)	1.14	0.0250	"	1.34	ND	85.1	80-120	3.46	20	
Surrogate a,a,a-Trifluorotoluene	37.6		ug/kg	50.0		75.2	75-125			
Surrogate 4-Bromofluorobenzene	38.7		"	50.0		77.4	75-125			

Environmental Lab of Texas  
A Xenco Laboratories Company

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Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

**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
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**Batch EF71509 - General Preparation (Prep)**

**Blank (EF71509-BLK1)**

Prepared & Analyzed: 06/14/07

% Solids 100 %

**Duplicate (EF71509-DUP1)**

Source: 7F13016-01

Prepared & Analyzed: 06/14/07

% Solids 90.5 % 91.2 0.770 20

**Duplicate (EF71509-DUP2)**

Source: 7F14010-08

Prepared & Analyzed: 06/14/07

% Solids 92.5 % 90.1 2.63 20

**Duplicate (EF71509-DUP3)**

Source: 7F14010-28

Prepared & Analyzed: 06/14/07

% Solids 96.3 % 93.6 2.84 20

**Batch EF71517 - General Preparation (WetChem)**

**Blank (EF71517-BLK1)**

Prepared & Analyzed: 06/15/07

Chloride 0.00 5.00 mg/L

**LCS (EF71517-BS1)**

Prepared & Analyzed: 06/15/07

Chloride 94.7 5.00 mg/L 100 94.7 80-120

**Matrix Spike (EF71517-MS1)**

Source: 7F13011-03

Prepared & Analyzed: 06/15/07

Chloride 468 5.00 mg/L 500 42.5 85.1 80-120

**Matrix Spike Dup (EF71517-MSD1)**

Source: 7F13011-03

Prepared & Analyzed: 06/15/07

Chloride 468 5.00 mg/L 500 42.5 85.1 80-120 0.00 20

**Reference (EF71517-SRM1)**

Prepared & Analyzed: 06/15/07

Chloride 53.2 5.00 mg/L 50.0 106 80-120

Environmental Lab of Texas  
A Xenco Laboratories Company

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Highlander Environmental Corp.  
1910 N Big Spring St.  
Midland TX, 79705

Project: Pogo/ Baylus Cade Fed #10 Flowline Leak  
Project Number: 2873  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

### Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

M8 The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).

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: 

Date: 6/20/07

Brent Barron, Laboratory Director/Corp. Technical Director  
Celey D. Keene, Org. Tech Director  
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer  
Jeanne Mc Murrey, Inorg. Tech Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

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A Xenco Laboratories Company

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# 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

CLIENT NAME:

Pogo

SITE MANAGER:

Ike Tavaraz

PROJECT NO.:

2873

PROJECT NAME:

Pogo / Bayliss Cade Fed #10 Flowline Leak  
Lea Co, NM

LAB I.D.  
NUMBER

DATE

TIME

MATRIX

COMP.

GRAB

SAMPLE IDENTIFICATION

7F13021 / 284220

NUMBER OF CONTAINERS

FILTERED (Y/N)

PRESERVATIVE  
METHOD

HCL

FINO3

ICE

NONE

PTX 8020/802

MTBE 8020/802

TPH 418.1

PAH 8270

ECRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

ECI

GC-MS Vol. 8240/8260/824

GC-MS Semi. Vol. 8270/825

PCB's 8080/808

Pest. 808/808

BOD, TSS, pH, TDS, Chloride

Gamma Spec.

Alpha Beta (Air)

PIM (Asbestos)

RELINQUISHED BY: (Signature)

*[Signature]*

Date: June 13, 2007  
Time: 15:00

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: ELT

ADDRESS:

CITY: Odessa

STATE: Texas

ZIP: \_\_\_\_\_

CONTACT: \_\_\_\_\_

PHONE: \_\_\_\_\_

RECEIVED BY: *[Signature]*

DATE: 6/13/07

TIME: 15:00

SAMPLED BY: (Print & Sign)

*[Signature]*

Date: 6/13/07  
Time: \_\_\_\_\_

SAMPLE SHIPPED BY: (Circle)

FEDEX

BUS

AIRBILL # \_\_\_\_\_

HAND DELIVERED

UPS

OTHER: \_\_\_\_\_

HIGHLANDER CONTACT PERSON:

Ike Tavaraz

Results by:

RUSH Charges

Authorized:

Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX:

W-Water  
S-Soil

A-Air  
SL-Sludge

SD-Solid  
O-Other

REMARKS:

6.0 w/ label 4 oz glass

# Environmental Lab of Texas

## Variance/ Corrective Action Report- Sample Log-In

Client: Highlander  
 Date/ Time: 6-13-07 15:00  
 Lab ID #: TF13021  
 Initials: AL

### Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	<u>Yes</u>	No	6.0 °C	
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<del>Not Present</del>	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	<del>Not Present</del>	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by EL0T?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	<del>Not Applicable</del>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

### Variance Documentation

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

Check all that Apply: ☐ See attached e-mail/ fax  
☐ Client understands and would like to proceed with analysis  
☐ Cooling process had begun shortly after sampling event



**APPENDIX C**

**NMOCD  
C-141 Filings**

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

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

Form C-141  
Revised October 10, 2003

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

## Release Notification and Corrective Action

## OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Latigo Petroleum, INC	Contact	Par Ellis
Address	P.O. Box 10340 Midland, TX 79702	Telephone No.	(432) 685-8148
Facility Name	Baylus Cade Federal #10	Facility Type	Well

Surface Owner	FEDERAL	Mineral Owner		Lease No.	NMLC 034711
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## LOCATION OF RELEASE

API 30-025-33887

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	35	23S	37E	1692'	FSL	442'	FWL	LCA

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

## NATURE OF RELEASE

Type of Release	WATER + OIL	Volume of Release	40 BBLs	Volume Recovered	35 BBLs
Source of Release	3" Polypipe Flowline	Date and Hour of Occurrence	12-21-06 @ 3:45 PM		
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Answering Automated service		
By Whom?	Par Ellis	Date and Hour	12-21-06 @ 6:00 PM		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

None

Describe Cause of Problem and Remedial Action Taken.\*

A 3" polypipe flowline froze and burst. The line was repaired.

Describe Area Affected and Cleanup Action Taken.\*

The area affected was approximately 18' x 30' spill area in pasture. All free fluids were removed by vacuum truck. Highlander Environmental was contacted to evaluate + remediate spill area.

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

## OIL CONSERVATION DIVISION

Signature: Patrick L. Ellis	ENVR ENGR	
Printed Name: PATRICK L. ELLIS	Approved by District Supervisor: [Signature]	
Title: EH+S Supervisor	Approval Date: 6.5.07	Expiration Date: 8.5.07
E-mail Address: ellisp@pogoproducing.com	Conditions of Approval:	
Date: 1-3-07 Phone: 432 685-8148	FINAL REPORT BY [Signature]	
		Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

RP# 1825  
1425