



# Highlander Environmental Corp.

Midland, Texas

April 4, 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 Pogo Producing Company, Livingston Ridge 19 #1, Unit D, Section 19, Township 22 South, Range 32 East, Tank Battery Release, Lea County, New Mexico.**

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by Pogo Producing Company (Pogo) to assess a spill from the Livingston Ridge 19 #1 Tank Battery, located in Unit D, Section 19, Township 22 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32° 22' 55.9", W 103° 43' 18.5". According to the State of New Mexico C-141 Initial Report, approximately 90 barrels (bbls) of oil/produced water were released when storage tank overflowed on October 11, 2006. Of the 90 bbls released, 75 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 one well located in Section 19, Township 22 South, Range 32 East with a reported depth of 280 feet below ground surface (bgs). The USGS database showed a well in Section 14 with a reported water depth of 382 feet bgs. Based on the relative site elevation, the depth to groundwater for the Site is greater than 200 feet bgs. 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 5,000 mg/kg.

### **Assessment and Results**

On October 13, 2006, Highlander personnel inspected and sampled the spill area which is located within the diked berm. The spill area measured approximately 30' x 60' and 40' x 30'. A total of five (5) auger holes (AH-1 through AH-5) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Of the samples collected, the TPH concentrations only exceeded the RRAL in AH-1 to a depth of 1 foot, AH-2 to a depth of 2.5 feet and AH-5 to a depth of 1 foot. All three of the samples selected for BTEX were below the RRAL. The chloride concentrations ranged from 21.3 mg/kg (AH-3 at 1-1.5') to 10,200 mg/kg (AH-2 at 0-0.1') with the chlorides delineated in each of the auger holes to a maximum depth of 1 to 2.5 feet below ground surface (bgs). 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.

In December 2006, Lays Construction of Hobbs, New Mexico was onsite to remove two feet of soil in the vicinity of AH-2 and 6 inches of soil adjacent to AH-1 and AH-5. The soils were excavated and stockpiled onsite awaiting transportation for disposal to Sundance in Eunice, New Mexico. The area adjacent to AH-2 was backfilled with one foot of sand covered with one foot of caliche, while the area adjacent to AH-1 and AH-5 was backfilled with pea gravel.

On March 9, 2007, Highlander was onsite to resample the previously impacted areas adjacent to auger holes AH-1, AH-2, and AH-5. Auger holes to depths of 1 foot, 2.5 feet and 1 foot were installed at AH-1, AH-2, and AH-5, respectively. The samples were collected and submitted for analysis of TPH. Analytical results indicated each of the samples were below the respective RRAL. 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 impacted area was confined to a 30' x 60' and 40' x 30' area within the bermed dike. The first 2.0 feet of soils were excavated and stockpiled onsite adjacent to AH-2, while the first six inches were removed in AH-1 and AH-5. No remaining TPH concentrations currently exceed the RRAL. Although not resampled, chloride residuals may remain at 2.5 feet bgs at AH-2. However, based on the depth to groundwater and the results of the assessment, the residual chloride concentrations 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.

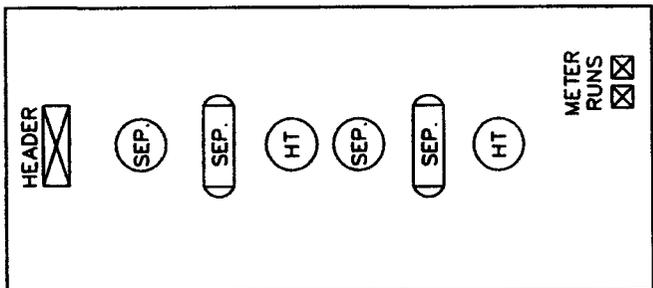
Respectfully submitted,  
Highlander Environmental Corp.

Jeffrey Kindley, P.G.  
Senior Environmental Geologist

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







WELL ●

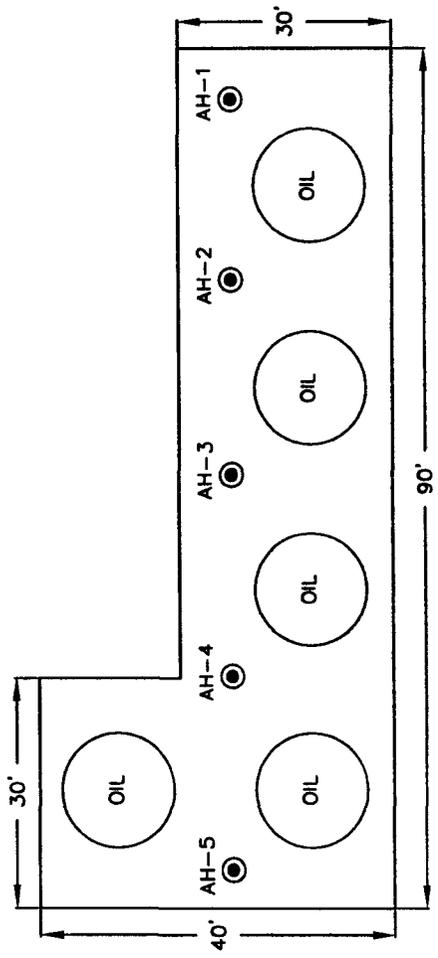


FIGURE NO. 2

LEA COUNTY, NEW MEXICO

POGO PRODUCING COMPANY  
LIVINGSTON RIDGE 19 FED #1 TB

HIGHLANDER ENVIRONMENTAL CORP.  
MIDLAND, TEXAS

DATE:	1/2/07
DRAWN BY:	JJ
FILE:	6/10/06/3017/ Livingston Well

SPILL AREA

SAMPLE LOCATIONS

NOT TO SCALE



**Table 2**  
**Pogo Producing Company**  
**Livingston Ridge #19-1**  
**Lea County, New Mexico**

AH-1	03/09/07	0-1.0'	283	2,570	166	3,020	-	-	-	-
AH-2	03/09/07	2-2.5'	252	912	97.6	1,260	-	-	-	-
AH-5	03/09/07	0-1.0'	87	339	52	478	-	-	-	-

( - ) Not Analyzed

Depths (ft) - Below excavation bottom

**Water Well Data**  
**Average Depth to Groundwater (ft)**  
**Pogo - Livingston Ridge19#1, Lea County, New Mexico**

21 South			31 East		
6	5	4	3	2	1
7	8	9	10	11	12
184					
18	17	16	15	14	13
		630			
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

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

21 South			33 East		
6	5	4	3	2	1
				279	
				107	
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
		179			
31	32	33	34	35	36

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

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

22 South			33 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
					391
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

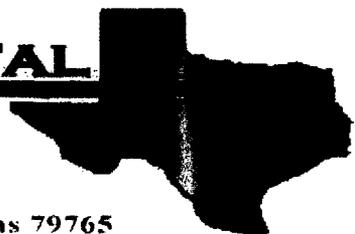
23 South			31 East		
6	5	4	3	2	1
85	354				
7	8	9	10	11	12
140					
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

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

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

- 88 New Mexico State Engineers Well Reports
- 105 USGS Well Reports
- 90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
- Geology and Groundwater Resources of Eddy County, NM (Report 3)

**E** NVIRONMENTAL  
LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ Livingston Ridge 19 Fed #1

Project Number: 2776

Location: Lea County, NM

Lab Order Number: 6J13023

Report Date: 10/23/06

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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'	6J13023-01	Soil	10/13/06 00:00	10-13-2006 16:20
AH-1 1-1.5'	6J13023-02	Soil	10/13/06 00:00	10-13-2006 16:20
AH-2 0-1.0'	6J13023-03	Soil	10/13/06 00:00	10-13-2006 16:20
AH-2 1-1.5'	6J13023-04	Soil	10/13/06 00:00	10-13-2006 16:20
AH-2 2-2.5'	6J13023-05	Soil	10/13/06 00:00	10-13-2006 16:20
AH-2 3-3.5'	6J13023-06	Soil	10/13/06 00:00	10-13-2006 16:20
AH-2 4-4.5'	6J13023-07	Soil	10/13/06 00:00	10-13-2006 16:20
AH-3 0-1.0'	6J13023-08	Soil	10/13/06 00:00	10-13-2006 16:20
AH-3 1-1.5'	6J13023-09	Soil	10/13/06 00:00	10-13-2006 16:20
AH-4 0-1.0'	6J13023-10	Soil	10/13/06 00:00	10-13-2006 16:20
AH-4 1-1.5'	6J13023-11	Soil	10/13/06 00:00	10-13-2006 16:20
AH-5 0-1.0'	6J13023-12	Soil	10/13/06 00:00	10-13-2006 16:20
AH-5 1-1.5'	6J13023-13	Soil	10/13/06 00:00	10-13-2006 16:20

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
 Project Number: 2776  
 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' (6J13023-01) Soil</b>									
Carbon Ranges C6-C12	814	10.0	mg/kg dry	1	EJ61503	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	5110	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	177	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbons</b>	<b>6100</b>	<b>10.0</b>	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		113 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		85.0 %	70-130		"	"	"	"	
<b>AH-1 1-1.5' (6J13023-02) Soil</b>									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EJ61503	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	10.7	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbons</b>	<b>10.7</b>	<b>10.0</b>	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		101 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		90.2 %	70-130		"	"	"	"	
<b>AH-2 0-1.0' (6J13023-03) Soil</b>									
Benzene	7.70	0.200	mg/kg dry	200	EJ61815	10/19/06	10/20/06	EPA 8021B	
Toluene	52.1	0.200	"	"	"	"	"	"	
Ethylbenzene	27.4	0.200	"	"	"	"	"	"	
Xylene (p/m)	70.2	0.200	"	"	"	"	"	"	
Xylene (o)	31.5	0.200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		465 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		178 %	80-120		"	"	"	"	S-04
Carbon Ranges C6-C12	6520	10.0	mg/kg dry	1	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	9370	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	204	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbons</b>	<b>16100</b>	<b>10.0</b>	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		197 %	70-130		"	"	"	"	S-04
Surrogate: 1-Chlorooctadecane		210 %	70-130		"	"	"	"	S-04

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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 1-1.5' (6J13023-04) Soil</b>									
Benzene	28.4	0.500	mg/kg dry	500	EJ61815	10/19/06	10/20/06	EPA 8021B	
Toluene	118	0.500	"	"	"	"	"	"	
Ethylbenzene	50.8	0.500	"	"	"	"	"	"	
Xylene (p/m)	132	0.500	"	"	"	"	"	"	
Xylene (o)	59.5	0.500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		760 %		80-120	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		186 %		80-120	"	"	"	"	S-04
Carbon Ranges C6-C12	13600	50.0	mg/kg dry	5	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	19800	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	992	50.0	"	"	"	"	"	"	
Total Hydrocarbons	34400	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		63.6 %		70-130	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		13.0 %		70-130	"	"	"	"	S-06
<b>AH-2 2-2.5' (6J13023-05) Soil</b>									
Benzene	29.0	0.500	mg/kg dry	500	EJ61815	10/19/06	10/20/06	EPA 8021B	
Toluene	104	0.500	"	"	"	"	"	"	
Ethylbenzene	37.3	0.500	"	"	"	"	"	"	
Xylene (p/m)	99.0	0.500	"	"	"	"	"	"	
Xylene (o)	37.8	0.500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		800 %		80-120	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		124 %		80-120	"	"	"	"	S-04
Carbon Ranges C6-C12	12200	50.0	mg/kg dry	5	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	16800	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	935	50.0	"	"	"	"	"	"	
Total Hydrocarbons	29900	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		56.8 %		70-130	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		11.1 %		70-130	"	"	"	"	S-06
<b>AH-2 3-3.5' (6J13023-06) Soil</b>									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EJ61504	10/15/06	10/17/06	EPA 8015M	
Carbon Ranges C12-C28	19.6	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	19.6	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		95.2 %		70-130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		84.0 %		70-130	"	"	"	"	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
 Project Number: 2776  
 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 4-4.5' (6J13023-07) Soil</b>									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	J [9.71]	10.0	"	"	"	"	"	"	J
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		97.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		87.0 %	70-130		"	"	"	"	
<b>AH-3 0-1.0' (6J13023-08) Soil</b>									
Carbon Ranges C6-C12	158	10.0	mg/kg dry	1	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	1140	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	97.6	10.0	"	"	"	"	"	"	
Total Hydrocarbons	1400	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		109 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		108 %	70-130		"	"	"	"	
<b>AH-3 1-1.5' (6J13023-09) Soil</b>									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	15.8	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	15.8	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		101 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		90.0 %	70-130		"	"	"	"	
<b>AH-4 0-1.0' (6J13023-10) Soil</b>									
Carbon Ranges C6-C12	353	10.0	mg/kg dry	1	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	2000	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	145	10.0	"	"	"	"	"	"	
Total Hydrocarbons	2500	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		111 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		116 %	70-130		"	"	"	"	

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
 Project Number: 2776  
 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
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**AH-4 1-1.5' (6J13023-11) Soil**

Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	11.6	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbons</b>	<b>11.6</b>	<b>10.0</b>	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		96.2 %		70-130	"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		84.8 %		70-130	"	"	"	"	

**AH-5 0-1.0' (6J13023-12) Soil**

Carbon Ranges C6-C12	1800	10.0	mg/kg dry	1	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	3150	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	187	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbons</b>	<b>5140</b>	<b>10.0</b>	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		120 %		70-130	"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		89.2 %		70-130	"	"	"	"	

**AH-5 1-1.5' (6J13023-13) Soil**

Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EJ61504	10/15/06	10/16/06	EPA 8015M	
Carbon Ranges C12-C28	18.8	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbons</b>	<b>18.8</b>	<b>10.0</b>	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		94.2 %		70-130	"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		85.0 %		70-130	"	"	"	"	

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
 Project Number: 2776  
 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-1 0-1.0' (6J13023-01) Soil</b>									
Chloride	510	20.0	mg/kg Wet	2	EJ61410	10/14/06	10/21/06	SW 846 9253	
% Moisture	3.7	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-1 1-1.5' (6J13023-02) Soil</b>									
Chloride	117	20.0	mg/kg Wet	2	EJ61410	10/14/06	10/21/06	SW 846 9253	
% Moisture	4.2	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-2 0-1.0' (6J13023-03) Soil</b>									
Chloride	10200	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	11.2	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-2 1-1.5' (6J13023-04) Soil</b>									
Chloride	7980	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	7.4	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-2 2-2.5' (6J13023-05) Soil</b>									
Chloride	6380	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	6.1	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-2 3-3.5' (6J13023-06) Soil</b>									
Chloride	4790	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	6.4	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-2 4-4.5' (6J13023-07) Soil</b>									
Chloride	42.5	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	7.2	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-3 0-1.0' (6J13023-08) Soil</b>									
Chloride	191	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	12.3	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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-3 1-1.5' (6J13023-09) Soil</b>									
Chloride	21.3	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	4.4	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-4 0-1.0' (6J13023-10) Soil</b>									
Chloride	319	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	13.2	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-4 1-1.5' (6J13023-11) Soil</b>									
Chloride	128	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	3.5	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-5 0-1.0' (6J13023-12) Soil</b>									
Chloride	702	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	15.2	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	
<b>AH-5 1-1.5' (6J13023-13) Soil</b>									
Chloride	53.2	20.0	mg/kg Wet	2	EJ61415	10/14/06	10/15/06	SW 846 9253	
% Moisture	5.4	0.1	%	1	EJ61601	10/13/06	10/16/06	% calculation	

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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 EJ61503 - Solvent Extraction (GC)**

**Blank (EJ61503-BLK1)**

Prepared: 10/15/06 Analyzed: 10/16/06

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	"							
<i>Surrogate: 1-Chlorooctane</i>	47.4		mg/kg	50.0		94.8	70-130			
<i>Surrogate: 1-Chlorooctadecane</i>	42.9		"	50.0		85.8	70-130			

**LCS (EJ61503-BS1)**

Prepared: 10/15/06 Analyzed: 10/16/06

Carbon Ranges C6-C12	487	10.0	mg/kg wet	500		97.4	75-125			
Carbon Ranges C12-C28	477	10.0	"	500		95.4	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	964	10.0	"	1000		96.4	75-125			
<i>Surrogate: 1-Chlorooctane</i>	58.6		mg/kg	50.0		117	70-130			
<i>Surrogate: 1-Chlorooctadecane</i>	44.4		"	50.0		88.8	70-130			

**Calibration Check (EJ61503-CCV1)**

Prepared: 10/15/06 Analyzed: 10/16/06

Carbon Ranges C6-C12	201		mg/kg	250		80.4	80-120			
Carbon Ranges C12-C28	240		"	250		96.0	80-120			
Total Hydrocarbons	441		"	500		88.2	80-120			
<i>Surrogate: 1-Chlorooctane</i>	53.2		"	50.0		106	70-130			
<i>Surrogate: 1-Chlorooctadecane</i>	40.4		"	50.0		80.8	70-130			

**Matrix Spike (EJ61503-MS1)**

Source: 6J13019-08

Prepared: 10/15/06 Analyzed: 10/16/06

Carbon Ranges C6-C12	574	10.0	mg/kg dry	575	ND	99.8	75-125			
Carbon Ranges C12-C28	572	10.0	"	575	ND	99.5	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1150	10.0	"	1150	ND	100	75-125			
<i>Surrogate: 1-Chlorooctane</i>	59.5		mg/kg	50.0		119	70-130			
<i>Surrogate: 1-Chlorooctadecane</i>	43.7		"	50.0		87.4	70-130			

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 8 of 14

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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 EJ61503 - Solvent Extraction (GC)**

Matrix Spike Dup (EJ61503-MSD1)	Source: 6J13019-08			Prepared: 10/15/06		Analyzed: 10/16/06				
Carbon Ranges C6-C12	554	10.0	mg/kg dry	575	ND	96.3	75-125	3.55	20	
Carbon Ranges C12-C28	535	10.0	"	575	ND	93.0	75-125	6.68	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1090	10.0	"	1150	ND	94.8	75-125	5.36	20	
Surrogate: 1-Chlorooctane	58.3		mg/kg	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	43.7		"	50.0		87.4	70-130			

**Batch EJ61504 - Solvent Extraction (GC)**

Blank (EJ61504-BLK1)				Prepared: 10/15/06		Analyzed: 10/16/06				
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	49.5		mg/kg	50.0		99.0	70-130			
Surrogate: 1-Chlorooctadecane	44.7		"	50.0		89.4	70-130			

LCS (EJ61504-BS1)				Prepared: 10/15/06		Analyzed: 10/16/06				
Carbon Ranges C6-C12	491	10.0	mg/kg wet	500		98.2	75-125			
Carbon Ranges C12-C28	483	10.0	"	500		96.6	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	974	10.0	"	1000		97.4	75-125			
Surrogate: 1-Chlorooctane	58.7		mg/kg	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	46.5		"	50.0		93.0	70-130			

Calibration Check (EJ61504-CCV1)				Prepared: 10/15/06		Analyzed: 10/17/06				
Carbon Ranges C6-C12	207		mg/kg	250		82.8	80-120			
Carbon Ranges C12-C28	257		"	250		103	80-120			
Total Hydrocarbons	464		"	500		92.8	80-120			
Surrogate: 1-Chlorooctane	49.0		"	50.0		98.0	70-130			
Surrogate: 1-Chlorooctadecane	41.0		"	50.0		82.0	70-130			

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch EJ61504 - Solvent Extraction (GC)**

<b>Matrix Spike (EJ61504-MS1)</b>		<b>Source: 6J14001-02</b>		<b>Prepared: 10/15/06 Analyzed: 10/16/06</b>						
Carbon Ranges C6-C12	562	10.0	mg/kg dry	588	ND	95.6	75-125			
Carbon Ranges C12-C28	565	10.0	"	588	8.71	94.6	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1130	10.0	"	1180	ND	95.8	75-125			
Surrogate: 1-Chlorooctane	59.3		mg/kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	44.5		"	50.0		89.0	70-130			

<b>Matrix Spike Dup (EJ61504-MSD1)</b>		<b>Source: 6J14001-02</b>		<b>Prepared: 10/15/06 Analyzed: 10/16/06</b>						
Carbon Ranges C6-C12	552	10.0	mg/kg dry	588	ND	93.9	75-125	1.80	20	
Carbon Ranges C12-C28	538	10.0	"	588	8.71	90.0	75-125	4.90	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1090	10.0	"	1180	ND	92.4	75-125	3.60	20	
Surrogate: 1-Chlorooctane	57.8		mg/kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	43.8		"	50.0		87.6	70-130			

**Batch EJ61815 - EPA 5030C (GC)**

<b>Blank (EJ61815-BLK1)</b>				<b>Prepared &amp; Analyzed: 10/18/06</b>						
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	32.7		ug/kg	40.0		81.8	80-120			
Surrogate: 4-Bromofluorobenzene	34.2		"	40.0		85.5	80-120			

<b>LCS (EJ61815-BS1)</b>				<b>Prepared &amp; Analyzed: 10/18/06</b>						
Benzene	1.24	0.0250	mg/kg wet	1.25		99.2	80-120			
Toluene	1.14	0.0250	"	1.25		91.2	80-120			
Ethylbenzene	1.30	0.0250	"	1.25		104	80-120			
Xylene (p/m)	2.25	0.0250	"	2.50		90.0	80-120			
Xylene (o)	1.00	0.0250	"	1.25		80.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	32.6		ug/kg	40.0		81.5	80-120			
Surrogate: 4-Bromofluorobenzene	41.2		"	40.0		103	80-120			

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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 EJ61815 - EPA 5030C (GC)**

**Calibration Check (EJ61815-CCV1)**

Prepared: 10/18/06 Analyzed: 10/20/06

Benzene	50.5		ug/kg	50.0		101	80-120			
Toluene	44.3		"	50.0		88.6	80-120			
Ethylbenzene	41.0		"	50.0		82.0	80-120			
Xylene (p/m)	81.2		"	100		81.2	80-120			
Xylene (o)	40.5		"	50.0		81.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.1		"	40.0		95.2	80-120			
Surrogate: 4-Bromofluorobenzene	35.6		"	40.0		89.0	80-120			

**Matrix Spike (EJ61815-MS1)**

Source: 6J18008-05

Prepared: 10/18/06 Analyzed: 10/20/06

Benzene	1.17	0.0250	mg/kg dry	1.37	ND	85.4	80-120			
Toluene	1.11	0.0250	"	1.37	ND	81.0	80-120			
Ethylbenzene	1.20	0.0250	"	1.37	ND	87.6	80-120			
Xylene (p/m)	2.24	0.0250	"	2.74	ND	81.8	80-120			
Xylene (o)	1.14	0.0250	"	1.37	ND	83.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	34.1		ug/kg	40.0		85.2	80-120			
Surrogate: 4-Bromofluorobenzene	33.7		"	40.0		84.2	80-120			

**Matrix Spike Dup (EJ61815-MSD1)**

Source: 6J18008-05

Prepared: 10/18/06 Analyzed: 10/20/06

Benzene	1.26	0.0250	mg/kg dry	1.37	ND	92.0	80-120	7.44	20	
Toluene	1.17	0.0250	"	1.37	ND	85.4	80-120	5.29	20	
Ethylbenzene	1.37	0.0250	"	1.37	ND	100	80-120	13.2	20	
Xylene (p/m)	2.40	0.0250	"	2.74	ND	87.6	80-120	6.85	20	
Xylene (o)	1.16	0.0250	"	1.37	ND	84.7	80-120	1.79	20	
Surrogate: a,a,a-Trifluorotoluene	33.2		ug/kg	40.0		83.0	80-120			
Surrogate: 4-Bromofluorobenzene	38.8		"	40.0		97.0	80-120			

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 11 of 14

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
 Project Number: 2776  
 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 EJ61410 - Water Extraction</b>										
<b>Blank (EJ61410-BLK1)</b>					Prepared: 10/14/06 Analyzed: 10/21/06					
Chloride	ND	20.0	mg/kg Wet							
<b>LCS (EJ61410-BS1)</b>					Prepared: 10/14/06 Analyzed: 10/21/06					
Chloride	93.6	5.00	mg/kg Wet	100		93.6	80-120			
<b>Matrix Spike (EJ61410-MS1)</b>					Source: 6J13013-03 Prepared: 10/14/06 Analyzed: 10/21/06					
Chloride	521	20.0	mg/kg Wet	500	0.00	104	80-120			
<b>Matrix Spike Dup (EJ61410-MSD1)</b>					Source: 6J13013-03 Prepared: 10/14/06 Analyzed: 10/21/06					
Chloride	532	20.0	mg/kg Wet	500	0.00	106	80-120	2.09	20	
<b>Reference (EJ61410-SRM1)</b>					Prepared: 10/14/06 Analyzed: 10/21/06					
Chloride	51.0		mg/kg	50.0		102	80-120			
<b>Batch EJ61415 - Water Extraction</b>										
<b>Blank (EJ61415-BLK1)</b>					Prepared: 10/14/06 Analyzed: 10/15/06					
Chloride	ND	10.0	mg/kg Wet							
<b>LCS (EJ61415-BS1)</b>					Prepared: 10/14/06 Analyzed: 10/15/06					
Chloride	92.5	5.00	mg/kg Wet	100		92.5	80-120			
<b>Matrix Spike (EJ61415-MS1)</b>					Source: 6J13023-03 Prepared: 10/14/06 Analyzed: 10/15/06					
Chloride	10700	20.0	mg/kg Wet	500	10200	100	80-120			
<b>Matrix Spike Dup (EJ61415-MSD1)</b>					Source: 6J13023-03 Prepared: 10/14/06 Analyzed: 10/15/06					
Chloride	10700	20.0	mg/kg Wet	500	10200	100	80-120	0.00	20	

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
 Project Number: 2776  
 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 EJ61415 - Water Extraction**

**Reference (EJ61415-SRM1)**

Prepared: 10/14/06 Analyzed: 10/15/06

Chloride	51.0		mg/kg	50.0		102	80-120			
----------	------	--	-------	------	--	-----	--------	--	--	--

**Batch EJ61601 - General Preparation (Prep)**

**Blank (EJ61601-BLK1)**

Prepared: 10/13/06 Analyzed: 10/16/06

% Solids	100		%							
----------	-----	--	---	--	--	--	--	--	--	--

**Duplicate (EJ61601-DUP1)**

Source: 6J13004-01

Prepared: 10/13/06 Analyzed: 10/16/06

% Solids	74.4		%		74.5			0.134	20	
----------	------	--	---	--	------	--	--	-------	----	--

**Duplicate (EJ61601-DUP2)**

Source: 6J13017-06

Prepared: 10/13/06 Analyzed: 10/16/06

% Solids	90.4		%		89.9			0.555	20	
----------	------	--	---	--	------	--	--	-------	----	--

**Duplicate (EJ61601-DUP3)**

Source: 6J13021-05

Prepared: 10/13/06 Analyzed: 10/16/06

% Solids	89.8		%		90.8			1.11	20	
----------	------	--	---	--	------	--	--	------	----	--

**Duplicate (EJ61601-DUP4)**

Source: 6J14001-02

Prepared: 10/13/06 Analyzed: 10/16/06

% Solids	85.1		%		85.1			0.00	20	
----------	------	--	---	--	------	--	--	------	----	--

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
Project Manager: Ike Tavarez

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.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

*Raland K Tuttle*

Date: 10/23/2006

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
LaTasha Cornish, Chemist  
Sandra Sanchez, Lab Tech.

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.

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 14 of 14

# 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: **P060** SITE MANAGER: **Ike Tavares**

PROJECT NO.: **2776** PROJECT NAME: **P060 / Livingston Ridge 19 Federal #1**  
*Lea County, NM*

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS		FLURRED (Y/N)	PRESERVATIVE METHOD				
							HCL	HNO3		ICE	NONE			
01	10/17/06		S	X	X	AH-1 0-1.0'	1	1			X			
02			S	X	X	AH-1 1-1.5'	1	1			X			
03			S	X	X	AH-2 0-1.0'	1	1			X			
04			S	X	X	AH-2 1-1.5'	1	1			X			
05			S	X	X	AH-2 2-2.5'	1	1			X			
06			S	X	X	AH-2 3-3.5'	1	1			X			
07			S	X	X	AH-2 4-4.5'	1	1			X			
08			S	X	X	AH-3 0-1.0'	1	1			X			
09			S	X	X	AH-3 1-1.5'	1	1			X			
10			S	X	X	AH-4 0-1.0'	1	1			X			

RELINQUISHED BY: (Signature) *[Signature]* Date: **10/17/06** Time: **4:20**

RELINQUISHED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

RELINQUISHED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

RECEIVING LABORATORY: **ELT** ADDRESS: **60556** STATE: **TX** ZIP: \_\_\_\_\_

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

RECEIVED BY: (Signature) *[Signature]* DATE: **10/20/06** TIME: **4:20**

RECEIVED BY: (Signature) \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

SAMPLED BY: (Print & Sign) *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

ANALYSIS REQUEST (Circle or Specify Method No.)

PCB # 3080/008  PCB # 3080/025  GC/MS Semi Vol. 0270/025  GC/MS Vol. 0240/0280/024  RCI  TCLP Semi Volatiles  TCLP Volatiles  TCLP Metals Ag As Ba Cd Cr Pb Hg Se  RCRA Metals Ag As Ba Cd Cr Pb Hg Se  PAH 0270  (TCLP) 4181 (SOLIS MOD) 7X1005  MTEB 0080/008  BTEX 0080/002

PLM (Asbestos)  Alpha Beta (Air)  Gamma Spec.  HOD, TSS, pH, TDS, Chloride

RESULTS BY: \_\_\_\_\_

FUSEE Charges Authorized: Yes  No

HIGHLANDER CONTACT PERSON: **Ike Tavares**

REMARKS: **Run 3 BTEX on highest TPH (Ah-1 to Ah-5)**

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: 10/13/06 4:20  
 Lab ID #: 10513023  
 Initials: OK

### Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	Yes	No	3.0 °C	
#2 Shipping container in good condition?	<u>Yes</u>	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#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 VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

### Variance Documentation

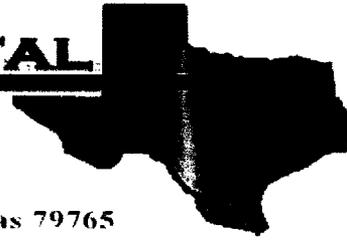
Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

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

**E** **N** **V** **I** **R** **O** **N** **M** **E** **N** **T** **A** **L** **L** **A** **B** **O** **F**



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/ Livingston Ridge 19 Fed #1

Project Number: 2776

Location: Lea County, New Mexico

Lab Order Number: 7C12005

Report Date: 03/15/07

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
Project Manager: Ike Tavarez

Fax: (432) 682-3946

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Area of AH-1 (0-1.0') Bottom	7C12005-01	Soil	03/09/07 00:00	03-12-2007 14:23
Area of AH-2 (2'-2.5') Bottom	7C12005-02	Soil	03/09/07 00:00	03-12-2007 14:23
Area of AH-5 (0-1.0') Bottom	7C12005-03	Soil	03/09/07 00:00	03-12-2007 14:23

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
 Project Number: 2776  
 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>Area of AH-1 (0-1.0') Bottom (7C12005-01) Soil</b>									
Carbon Ranges C6-C12	283	10.0	mg/kg dry	1	EC71203	03/12/07	03/13/07	EPA 8015M	
Carbon Ranges C12-C28	2570	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	166	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbons</b>	<b>3020</b>	<b>10.0</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
Surrogate: 1-Chlorooctane		92.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		133 %	70-130		"	"	"	"	S-04
<b>Area of AH-2 (2'-2.5') Bottom (7C12005-02) Soil</b>									
Carbon Ranges C6-C12	252	10.0	mg/kg dry	1	EC71203	03/12/07	03/13/07	EPA 8015M	
Carbon Ranges C12-C28	912	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	97.6	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbons</b>	<b>1260</b>	<b>10.0</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
Surrogate: 1-Chlorooctane		95.6 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		111 %	70-130		"	"	"	"	
<b>Area of AH-5 (0-1.0') Bottom (7C12005-03) Soil</b>									
Carbon Ranges C6-C12	87.0	10.0	mg/kg dry	1	EC71203	03/12/07	03/13/07	EPA 8015M	
Carbon Ranges C12-C28	339	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	52.1	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbons</b>	<b>478</b>	<b>10.0</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
Surrogate: 1-Chlorooctane		96.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		107 %	70-130		"	"	"	"	

Environmental Lab of Texas

A Xenco Laboratories Company

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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>Area of AH-1 (0-1.0') Bottom (7C12005-01) Soil</b>									
% Moisture	8.5	0.1	%	1	EC71306	03/12/07	03/13/07	% calculation	
<b>Area of AH-2 (2'-2.5') Bottom (7C12005-02) Soil</b>									
% Moisture	6.2	0.1	%	1	EC71306	03/12/07	03/13/07	% calculation	
<b>Area of AH-5 (0-1.0') Bottom (7C12005-03) Soil</b>									
% Moisture	9.6	0.1	%	1	EC71306	03/12/07	03/13/07	% calculation	

Environmental Lab of Texas

A Xenco Laboratories Company

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
 Project Number: 2776  
 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 EC71203 - Solvent Extraction (GC)**

**Blank (EC71203-BLK1)**

Prepared & Analyzed: 03/12/07

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	54.6		mg/kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	64.9		"	50.0		130	70-130			

**LCS (EC71203-BS1)**

Prepared & Analyzed: 03/12/07

Carbon Ranges C6-C12	588	10.0	mg/kg wet	500		118	75-125			
Carbon Ranges C12-C28	480	10.0	"	500		96.0	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	1070	10.0	"	1000		107	75-125			
Surrogate: 1-Chlorooctane	58.9		mg/kg	50.0		118	70-130			
Surrogate: 1-Chlorooctadecane	64.2		"	50.0		128	70-130			

**Calibration Check (EC71203-CCV1)**

Prepared: 03/12/07 Analyzed: 03/13/07

Carbon Ranges C6-C12	216		mg/kg	250		86.4	80-120			
Carbon Ranges C12-C28	235		"	250		94.0	80-120			
Total Hydrocarbons	450		"	500		90.0	80-120			
Surrogate: 1-Chlorooctane	54.1		"	50.0		108	70-130			
Surrogate: 1-Chlorooctadecane	53.0		"	50.0		106	70-130			

**Matrix Spike (EC71203-MS1)**

Source: 7C09017-01

Prepared: 03/12/07 Analyzed: 03/13/07

Carbon Ranges C6-C12	878	10.0	mg/kg dry	669	184	104	75-125			
Carbon Ranges C12-C28	961	10.0	"	669	419	81.0	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	38.6		75-125			
Total Hydrocarbons	1840	10.0	"	1340	642	89.4	75-125			
Surrogate: 1-Chlorooctane	61.7		mg/kg	50.0		123	70-130			
Surrogate: 1-Chlorooctadecane	55.5		"	50.0		111	70-130			

Environmental Lab of Texas

A Xenco Laboratories Company

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
 Project Number: 2776  
 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 EC71203 - Solvent Extraction (GC)**

<b>Matrix Spike Dup (EC71203-MSD1)</b>	<b>Source: 7C09017-01</b>			<b>Prepared: 03/12/07 Analyzed: 03/13/07</b>						
Carbon Ranges C6-C12	867	10.0	mg/kg dry	669	184	102	75-125	1.94	20	
Carbon Ranges C12-C28	971	10.0	"	669	419	82.5	75-125	1.83	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	38.6		75-125		20	
Total Hydrocarbons	1840	10.0	"	1340	642	89.4	75-125	0.00	20	
Surrogate: 1-Chlorooctane	58.6		mg/kg	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	52.7		"	50.0		105	70-130			

Environmental Lab of Texas

A Xenco Laboratories Company

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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 EC71306 - General Preparation (Prep)</b>										
<b>Blank (EC71306-BLK1)</b> Prepared: 03/12/07 Analyzed: 03/13/07										
% Solids	100		%							
<b>Duplicate (EC71306-DUP1)</b> Source: 7C09017-01 Prepared: 03/12/07 Analyzed: 03/13/07										
% Solids	74.3		%		74.7			0.537	20	
<b>Duplicate (EC71306-DUP2)</b> Source: 7C12005-01 Prepared: 03/12/07 Analyzed: 03/13/07										
% Solids	92.7		%		91.5			1.30	20	

Environmental Lab of Texas

A Xenco Laboratories Company

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

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

Project: Pogo/ Livingston Ridge 19 Fed #1  
Project Number: 2776  
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.

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:

3/15/2007

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.

Environmental Lab of Texas

A Xenco Laboratories Company

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 7 of 7



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

Client: Highlander  
 Date/ Time: 3/12/07 1423  
 Lab ID #: 7C12005  
 Initials: DM

**Sample Receipt Checklist**

Client Initials

	Yes	No		Client Initials
#1 Temperature of container/ cooler?	<u>Yes</u>	No	3.0 °C	
#2 Shipping container in good condition?	<u>Yes</u>	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	<u>Not Present</u>	
#4 Custody Seals intact on sample bottles/ container?	Yes	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)?	Yes	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

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 <i>Pogo Producing Co.</i>	Contact <i>PAT ELLIS</i>
Address <i>P.O. Box 10340 Midland, TX 79702</i>	Telephone No. <i>(432) 685-8100</i>
Facility Name <i>Livingston Ridge 19 #1</i>	Facility Type <i>BTRY</i>
Surface Owner <i>BLM</i>	Mineral Owner <i>BLM</i>
Lease No. <i>NM-90587</i>	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<i>D</i>	<i>19</i>	<i>22S</i>	<i>32E</i>	<i>660</i>	<i>N L</i>	<i>330</i>	<i>W L</i>	<i>Lea</i>

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

**NATURE OF RELEASE**

Type of Release <i>oil + water</i>	Volume of Release <i>90 BBLs</i>	Volume Recovered <i>75 BBLs</i>
Source of Release <i>TANK</i>	Date and Hour of Occurrence	Date and Hour of Discovery <i>11:45 AM</i>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <i>LARRY JOHNSON voice mail</i>	<i>10-11-06</i>
By Whom? <i>PATRICK ELLIS</i>	Date and Hour <i>10:00 AM 10-12-06</i>	
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.\*  
*Contract roustabout crew repaired connection and failed to return switch back to operating mode. Tanks overflowed into pad area.*

Describe Area Affected and Cleanup Action Taken.\* *All fluids were contained within the fire walls. Free fluids were removed by vacuum truck and 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: <i>Patrick L. Ellis</i>	Approved by District Supervisor:	
Printed Name: <i>PATRICK L. ELLIS</i>	Approval Date:	Expiration Date:
Title: <i>EHS Supervisor</i>	Conditions of Approval:	
E-mail Address: <i>ellis p@pogoproducing.com</i>	Attached <input type="checkbox"/>	
Date: <i>10-13-06</i> Phone: <i>685-8148</i>		

\* Attach Additional Sheets If Necessary

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	Telephone No. (432) 685-8100
Facility Name: Livingston Ridge 19 #1	Facility Type: Battery

Surface Owner BLM	Mineral Owner BLM	Lease No. NM-90587
-------------------	-------------------	--------------------

**LOCATION OF RELEASE**

Unit Letter	Section\	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	19	22S	32E	660'	North	330'	West	Lea

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

**NATURE OF RELEASE**

Type of Release Oil/Water	Volume of Release 90 BBLs	Volume Recovered 75 bbls
Source of Release Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 10-11-06 @ 11:40 AM NM Time
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson (Voice Mail)	
By Whom? Patrick Ellis	Date and Hour 10-12-06 10:00AM	
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.\*  
Contract roustabout crew, repaired connection and failed to return switch back to operating mode. Tank overflowed onto pad area.

Describe Area Affected and Cleanup Action Taken.\*  
All fluids were contained within firewall. Free fluids were removed by vacuum truck and Highlander Environmental was onsite to assess impact. Site soils were excavated, resampled, and found to be below NMOCD standards.

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: <i>Patrick L. Ellis</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Patrick L. Ellis	Approved by District Supervisor: <i>[Signature]</i>	
Title: Environmental Health and Safety Supervisor	Approval Date: 6-14-07	Expiration Date: _____
E-mail Address: ellisp@pogoproducing.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 4/5/07 Phone: (432) 685-8148		

\* Attach Additional Sheets If Necessary

~~RP-1130~~  
RP# 1086