Highlander Environmental Corp.

Midland, Texas

February 27, 2006

Mr. Larry Johnson
Environmental Engineer Specialist
Oil Conservation Division- District I
1625 N. French Drive
Hobbs, New Mexico 88240

RE: Closure Request for the Pogo Producing Company (Arch Petroleum), C. E. Lamunyon Tank Battery #2 Spill, Located in Unit Letter F, Section 21, Township 23 South, Range 37 East, Lea County, New Mexico.

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by Pogo Producing Company (Pogo) to assess a spill on the C. E. Lamunyon Tank Battery #2, located in Section 21, Township 23 South, Range 37 East, Lea County, New Mexico (Site). The site coordinates are N 32° 17' 33.7", W 103° 10' 10.0". The State of New Mexico C-141 (Initial) is shown in Appendix C. The Site is shown on Figure 1.

Background

According to the State of New Mexico C-141 report, the spill occurred on October 23, 2005, from a hole in a 90° elbow of the flow line from a separator. A total of 100 barrels of oil and produced water were released and 100 barrels of fluid were recovered. The oil and water were contained inside the facility firewall.

Groundwater and Regulatory

The New Mexico State Engineer's Office database did not show any wells in Section 21, however, wells in the vicinity to the north and south of the section had reported depths to water ranging from 100' to 115' below ground surface. The New Mexico State Engineer 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,

Facility - pPAC0613827474
Incident - nPAC0613827582
application - pPAC0613828971

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.

Previous Assessment

On October 25, 2005 and November 10, 2005, Highlander personnel inspected and sampled the spill area. The tank battery measured approximately 40' x 125'. A total of five (5) auger holes (AH-1, AH-2, AH-3, AH-4 and AH-5) were installed using a stainless steel hand auger. Deeper samples could not be collected due to dense caliche formation at approximately 10' to 12' below surface. Selected samples were analyzed for TPH by method 8015 modified, BTEX by EPA method 8021B and chloride by EPA method 300.0. The auger hole locations are shown on Figure 2. The results of the sampling are summarized in Table 1.

Referring to Table 1, the TPH and BTEX concentrations were all below the RRAL at 0-1' below surface in auger holes AH-1, AH-2 and AH-3. Based on the chloride concentrations, the impact appears to be confined to the east end of the facility. The chloride impact was defined in AH-2 and AH-3 at depths of 9.0' and 1.0', respectively. The chloride impact appears to have migrated deeper in the vicinity of AH-1, AH-4 and AH-5.

Highlander prepared and submitted a report "Work Plan for the Pogo Producing Company (Arch Petroleum), C. E. Lamunyon Tank Battery #2 Spill, Located in Section 21, Township 23 South, Range 37 East, Lea County, New Mexico", to the NMOCD to install a borehole at the Site.

Borehole Installation

On January 26, 2006, Highlander personnel supervised the installation of one (1) borehole to evaluate the vertical extent of subsurface impact at the east end of the facility. The soil borings was installed using small hollow-stem auger rig. Due to accessibility, the auger hole was placed between AH-1, AH-4 and AH-5. There was no accessibility south of the facility due to the facility flow-lines and surface sand.

During the drilling, soil samples were collected at 15.0'-15.5' and 20.0'-20.5'. Due to the dense formation, the rig broke down and halted the drilling. On February 2, 2006, the rig was repaired and the drilling continued, to collect the final sample at 25.0-25.5' below surface. Once completed, the borehole was grouted to surface. The soil sample results are shown in Table 2. The soil samples were be placed into laboratory supplied containers and delivered to a laboratory under chain-of-custody control for chloride analysis by EPA method 300.0. The laboratory reports are shown in Appendix B.

Conclusions and Recommendations

Referring to Table 1, the TPH and BTEX concentrations were all below the RRAL at 0-1' below surface in auger holes AH-1, AH-2 and AH-3. Based on the chloride concentrations, the impact appears to extend deeper and to be confined to the east side of the facility. Referring to Table 2, BH-1 showed a chloride concentrations of 466 mg/kg (15.0-15.5'), 568 mg/kg (20.0-20.5') and 187 mg/kg (25.0-25.5'). The chloride impact in the east end of the facility appears to be delineated at approximately 25' below surface. Considering the depth to groundwater and limited spill area, the chloride concentrations detected do not appear to be an imminent threat to groundwater.

Based upon the results of the investigation, Pogo requests closure of this Site. The Final C-141 is enclosed in Appendix C. If you require any additional information or have any questions or comments concerning the assessment/closure report, please call at (432) 682-4559. If you require any additional information or have any questions or comments, please call.

HIGHLANDER ENVIRONMENTAL CORP.

Ike Tavarez, P.G.
Project Manager/Senior Geologist

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

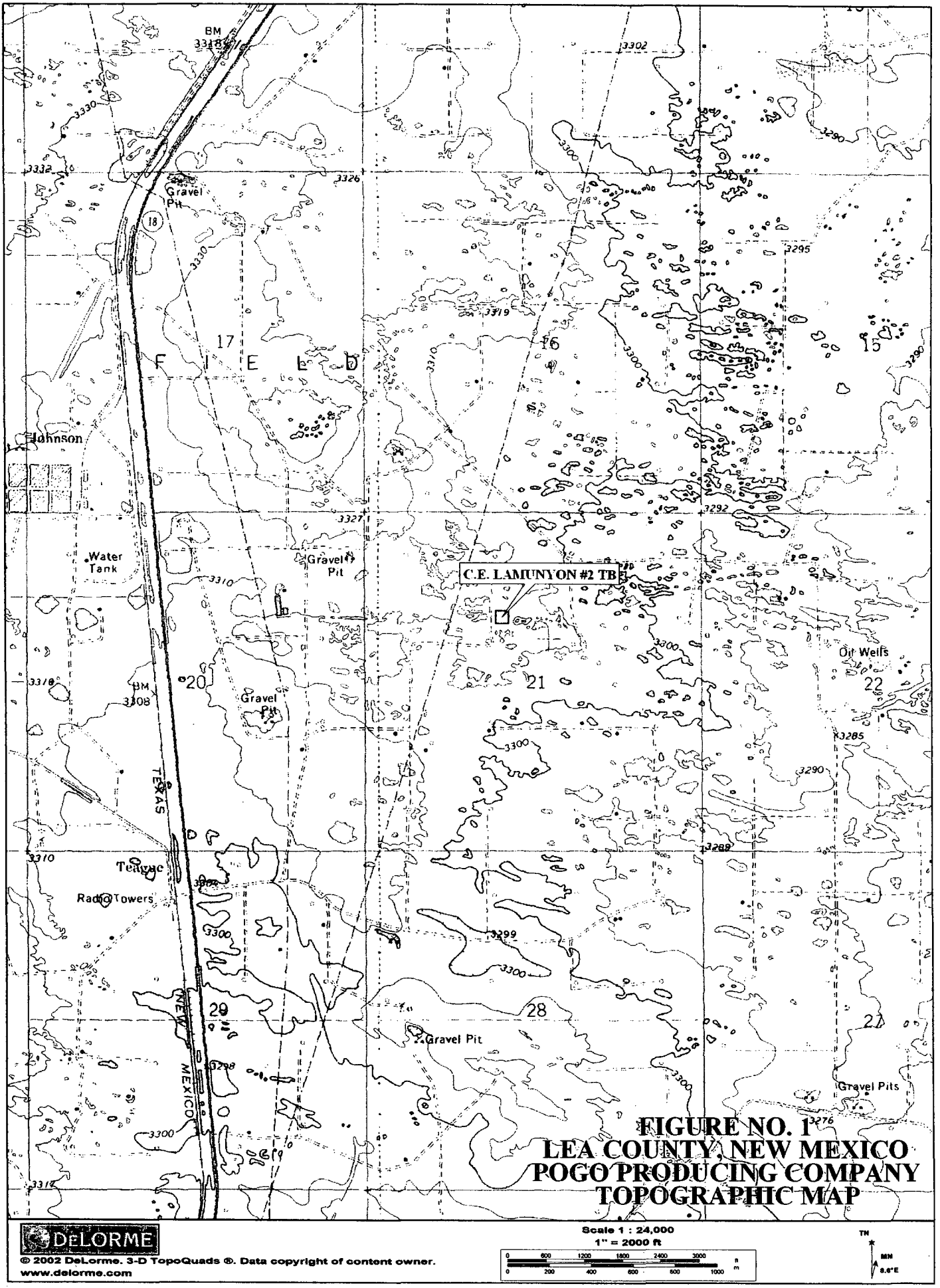

FIGURE NO. 1
LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
TOPOGRAPHIC MAP

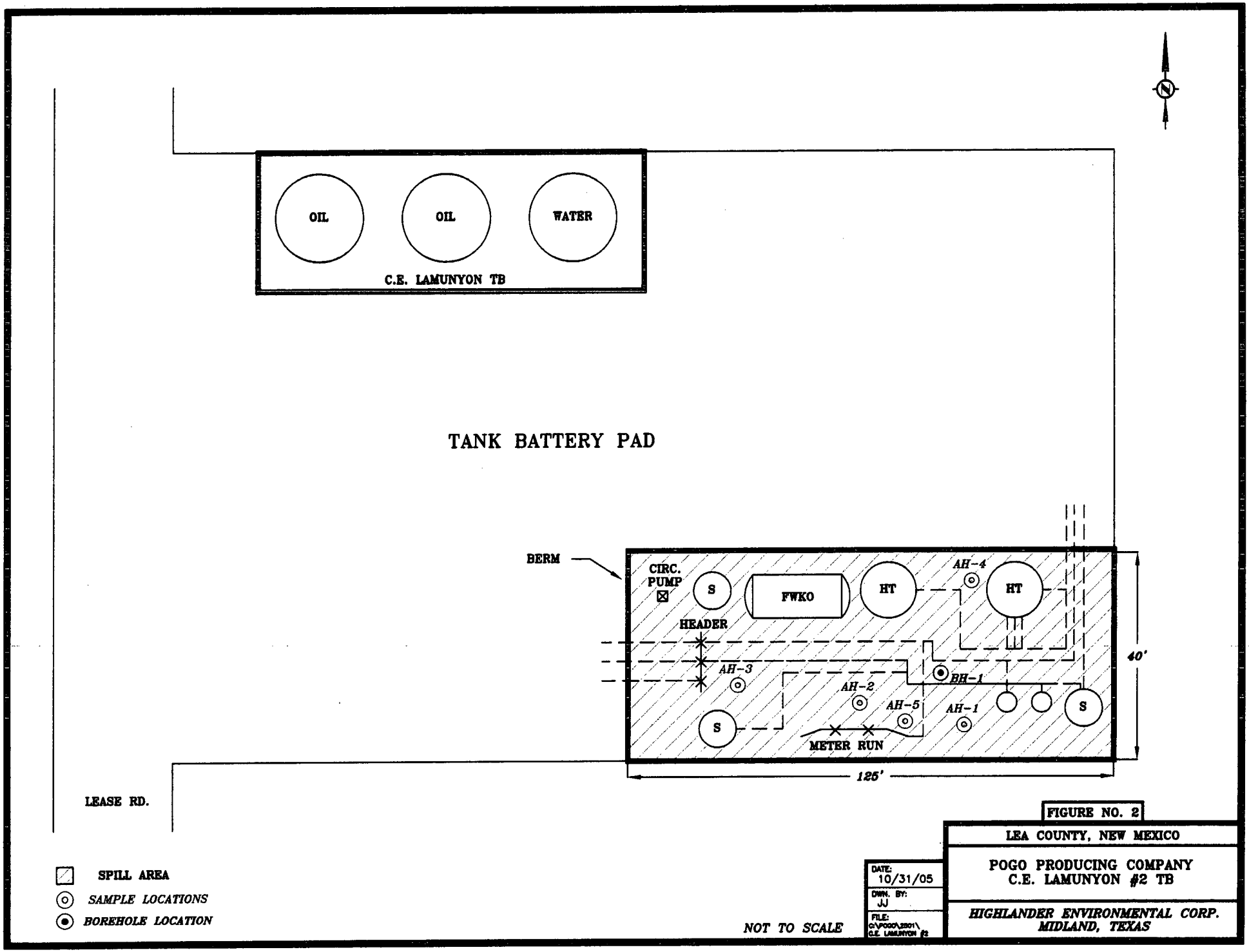
OIL
OIL
WATER
C.E. LAMUNYON TB
TANK BATTERY PAD
BERM
CIRC. PUMP
S
FWKO
HT
HT
AH-4
HEADER
AH-3
AH-2
AH-5
AH-1
BH-1
S
S
METER RUN
40'
125'
LEASE RD.
SPILL AREA
SAMPLE LOCATIONS
BOREHOLE LOCATION
NOT TO SCALE
DATE: 10/31/05
DWN. BY: JJ
FILE: G:\POGO\2501\C.E. LAMUNYON #2
FIGURE NO. 2
LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
C.E. LAMUNYON #2 TB
HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

Table 1
Pogo Producing Company
C.E. Lamunyon Tank Battery #2

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Total Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
AH-1	10/25/2005	0-1.0	172	951	1,120	0.22	2.14	2.74	7.26	6860
	10/25/2005	1-1.5	-	-	-	-	-	-	-	2300
	10/25/2005	2-2.5	-	-	-	-	-	-	-	2060
	10/25/2005	3-3.5	-	-	-	-	-	-	-	1660
	10/25/2005	4-4.5	-	-	-	-	-	-	-	1750
	10/25/2005	5-5.5	-	-	-	-	-	-	-	2210
	10/25/2005	6-6.5	-	-	-	-	-	-	-	980
	10/25/2005	7-7.5	-	-	-	-	-	-	-	1070
	10/25/2005	8-8.8	-	-	-	-	-	-	-	1260
	10/25/2005	9-9.5	-	-	-	-	-	-	-	616
	10/25/2005	10-10.5	-	-	-	-	-	-	-	731
	11/10/2005	11-11.5	-	-	-	-	-	-	-	1910
AH-2	10/25/2005	0-1.0	712	2,720	3,430	<0.025	1.29	3.44	8.96	7960
	10/25/2005	1-1.5	-	-	-	-	-	-	-	1940
	10/25/2005	2-2.5	-	-	-	-	-	-	-	727
	10/25/2005	3-3.5	-	-	-	-	-	-	-	369
	10/25/2005	4-4.5	-	-	-	-	-	-	-	574
	10/25/2005	5-5.5	-	-	-	-	-	-	-	688
	10/25/2005	6-6.5	-	-	-	-	-	-	-	54.6
	10/25/2005	7-7.5	-	-	-	-	-	-	-	466
	10/25/2005	8-8.8	-	-	-	-	-	-	-	391
	10/25/2005	9-9.5	-	-	-	-	-	-	-	241
	10/25/2005	10-10.5	-	-	-	-	-	-	-	161

(-) not analyzed

Table 1
Pogo Producing Company
C.E. Lamunyon Tank Battery #2

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Total Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
AH-3	10/25/2005	0-1.0	21.4	117	138	<0.025	<0.025	<0.025	<0.025	1650
	10/25/2005	1-1.5	-	-	-	-	-	-	-	14
	10/25/2005	2-2.5	-	-	-	-	-	-	-	22.5
AH-4	11/10/2005	0-1.0	-	-	-	-	-	-	-	754
	11/10/2005	2-2.5	-	-	-	-	-	-	-	660
	11/10/2005	4-4.5	-	-	-	-	-	-	-	555
	11/10/2005	6-6.5	-	-	-	-	-	-	-	205
	11/10/2005	8-8.8	-	-	-	-	-	-	-	432
	11/10/2005	10-10.5	-	-	-	-	-	-	-	519
	11/10/2005	10.5-11.0	-	-	-	-	-	-	-	441
	11/10/2005	12-12.5	-	-	-	-	-	-	-	819
AH-5	11/10/2005	0-1.0	-	-	-	-	-	-	-	6040
	11/10/2005	2-2.5	-	-	-	-	-	-	-	1970
	11/10/2005	4-4.5	-	-	-	-	-	-	-	1660
	11/10/2005	6-6.5	-	-	-	-	-	-	-	1760
	11/10/2005	8-8.8	-	-	-	-	-	-	-	3010
	11/10/2005	10-10.5	-	-	-	-	-	-	-	2850

(-) not analyzed

Table 2
Pogo Producing Company
C.E. Lamunyon Tank Battery #2

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Total Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
BH-1	1/26/2006	15'-16	-	-	-	-	-	-	-	466
	1/26/2006	20-21	-	-	-	-	-	-	-	568
	2/26/2006	25-26	-	-	-	-	-	-	-	187

(-) not analyzed

APPENDIX A

Depth to Groundwater Data Reports

Water Well - Average Depth to Groundwater

Pogo/ Teague Field

22 South 36 East

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

22 South 37 East

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

22 South 38 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

23 South 36 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16 220	15 149	14	13
19	20	21	22 400	23	24
30	29	28	27	26	25
31 189	32	33	34	35	36 127

23 South 37 East

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

23 South 38 East

6	5	4	3	2	1
7	8 335	9	10	11	12
18	17	16	15	14	13
19	20 265	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 36 East

6	5	4 165	3	2	1
7	8	9	10	11	12
18	17	16	15 312	14	13
19	20 97	21	22	23 160	24
30	29	28	27	26	25
31	32	33 53	34	35	36

24 South 37 East

6	5 106	4	3	2	1
7	8 90	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23 94	24 100
30	29	28 70	27	26	25 90
31	32	33	34	35	36

24 South 38 East

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

150 Average depth to groundwater (ft)

New Mexico Office of State Engineer Well Reports

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 23S Range: 37E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 11/07/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	23S	37E	09				1	100	100	100
CP	23S	37E	16				1	115	115	115
CP	23S	37E	32				1	106	106	106

Record Count: 3

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 23S Range: 38E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○Non-Domestic ○Domestic
◉All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 11/07/2005

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	23S	38E	08				1	335	335	335
CP	23S	38E	20				1	265	265	265

Record Count: 2

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 23S Range: 36E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

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AVERAGE DEPTH OF WATER REPORT 11/07/2005

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	23S	36E	15				1	149	149	149
CP	23S	36E	16				1	220	220	220
CP	23S	36E	22				1	400	400	400
CP	23S	36E	31				2	178	200	189
CP	23S	36E	36				5	123	133	127

Record Count: 10

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 22S Range: 36E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic ◉ All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

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AVERAGE DEPTH OF WATER REPORT 11/07/2005

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	22S	36E	01				1	137	137	137
CP	22S	36E	05				1	212	212	212
CP	22S	36E	06				1	195	195	195
CP	22S	36E	16				1	170	170	170
CP	22S	36E	22				1	22	22	22
CP	22S	36E	27				1	160	160	160

Record Count: 6

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 22S Range: 37E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 11/07/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	22S	37E	05				2	79	90	85
CP	22S	37E	09				2	85	94	90
CP	22S	37E	14				1	65	65	65
CP	22S	37E	15				7	75	185	125
CP	22S	37E	18				1	190	190	190
CP	22S	37E	21				1	65	65	65
CP	22S	37E	24				1	60	60	60
CP	22S	37E	26				1	65	65	65
CP	22S	37E	27				2	52	54	53
CP	22S	37E	34				1	60	60	60

Record Count: 19

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 22S Range: 38E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 11/07/2005

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg

No Records found, try again

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 24S Range: 36E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic ◉ All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 11/07/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	24S	36E	04				3	155	178	165
CP	24S	36E	15				2	173	450	312
CP	24S	36E	20				1	97	97	97
CP	24S	36E	23				1	160	160	160
CP	24S	36E	33				1	53	53	53

Record Count: 8

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 24S Range: 37E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

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AVERAGE DEPTH OF WATER REPORT 11/07/2005

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	24S	37E	05				1	106	106	106
CP	24S	37E	08				1	90	90	90
CP	24S	37E	23				1	94	94	94
CP	24S	37E	24				1	100	100	100
CP	24S	37E	25				1	90	90	90
CP	24S	37E	28				1	70	70	70

Record Count: 6

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 24S Range: 38E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 11/07/2005

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg
L	24S	38E	23				1	30	30	30

Record Count: 1

APPENDIX B

Analytical Reports

Analytical Report
1/27/2006

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ C.E. Lamunyon #2 TB

Project Number: 2501

Location: Lea County, NM

Lab Order Number: 6A27001

Report Date: 01/27/06

Highlander Environmental Corp.	Project: Pogo/ C.E. Lamunyon #2 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2501	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	01/27/06 17:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1 (15-15.5)	6A27001-01	Soil	01/26/06 00:00	01/27/06 08:00
BH-1 (20-20.5)	6A27001-02	Soil	01/26/06 00:00	01/27/06 08:00

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

Highlander Environmental Corp.	Project: Pogo/ C.E. Lamunyon #2 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2501	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	01/27/06 17:03

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 (15-15.5) (6A27001-01) Soil									
Chloride	**466**	10.0	mg/kg	20	EA62712	01/27/06	01/27/06	EPA 300.0	
BH-1 (20-20.5) (6A27001-02) Soil									
Chloride	**568**	10.0	mg/kg	20	EA62712	01/27/06	01/27/06	EPA 300.0	

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

Highlander Environmental Corp.	Project: Pogo/ C.E. Lamunyon #2 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2501	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	01/27/06 17:03

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 EA62712 - Water Extraction										
Blank (EA62712-BLK1)				Prepared & Analyzed: 01/27/06						
Chloride	ND	0.500	mg/kg							
LCS (EA62712-BS1)				Prepared & Analyzed: 01/27/06						
Chloride	8.39		mg/L	10.0		83.9	80-120			
Calibration Check (EA62712-CCV1)				Prepared & Analyzed: 01/27/06						
Chloride	8.50		mg/L	10.0		85.0	80-120			
Duplicate (EA62712-DUP1)	**Source: 6A27001-01**			Prepared & Analyzed: 01/27/06						
Chloride	484	10.0	mg/kg		466			3.79	20	

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

Highlander Environmental Corp.	Project: Pogo/ C.E. Lamunyon #2 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2501	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	01/27/06 17:03

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 1/27/2006

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

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

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

PAGE: 1 OF: 1

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

PROJECT NO.: 2501 PROJECT NAME: Pogo / C.E. Lamunyon #2 TB Lea County, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
01 (A27001)	1-26-06		S		✓	BH-1 (15-15.5)	1				✓	
-02	1-26-06		S		✓	BH-1 (20-20.5')	1				✓	

ANALYSIS REQUEST (Circle or Specify Method No.)

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

RELINQUISHED BY: (Signature) Date: 1-27-06 Time: 8:00AM RECEIVED BY: (Signature) Date: 1-27-06 Time: 8:00

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

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

RECEIVING LABORATORY: ETC RECEIVED BY: (Signature)
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE: DATE: TIME:

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

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

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: -01 @ 1°C -02 @ 0°C

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

REMARKS: Need Results (over both) before 5:00 pm 1-27-06

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: 1/27/06 8:00

Order #: 60A270

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	1.0 C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	~~Not present~~
Custody Seals intact on sample bottles?	Yes	No	~~Not present~~
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

Variance Documentation:

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

Regarding:

Corrective Action Taken:

Analytical Report
2/06/2006

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ C.E. Lamunyon #2 TB

Project Number: 2501

Location: Lea Co., NM

Lab Order Number: 6B02011

Report Date: 02/06/06

Highlander Environmental Corp.	Project: Pogo/ C.E. Lamunyon #2 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2501	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/06/06 17:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1 25'-25.5'	6B02011-01	Soil	02/02/06 08:30	02/02/06 15:20

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

Highlander Environmental Corp.	Project: Pogo/ C.E. Lamunyon #2 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2501	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/06/06 17:08

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 25'-25.5' (6B02011-01) Soil									
Chloride	**187**	5.00	mg/kg	10	EB60612	02/03/06	02/06/06	EPA 300.0	

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

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB60612 - Water Extraction										
Blank (EB60612-BLK1)				Prepared: 02/03/06 Analyzed: 02/06/06						
Chloride	ND	0.500	mg/kg							
LCS (EB60612-BS1)				Prepared: 02/03/06 Analyzed: 02/06/06						
Chloride	9.04		mg/L	10.0		90.4	80-120			
Calibration Check (EB60612-CCV1)				Prepared: 02/03/06 Analyzed: 02/06/06						
Chloride	9.12		mg/L	10.0		91.2	80-120			
Duplicate (EB60612-DUP1)		**Source: 6B01012-05**		Prepared: 02/03/06 Analyzed: 02/06/06						
Chloride	602	10.0	mg/kg		575			4.59	20	

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

Highlander Environmental Corp.	Project: Pogo/ C.E. Lamunyon #2 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2501	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/06/06 17:08

Notes and Definitions

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: 2/6/2006

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

Analysis Request and Chain of Custody Record

PAGE: 1 OF: 1

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

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

CLIENT NAME: 2090 SITE MANAGER: IKE Tavarez

PROJECT NO.: 2501 PROJECT NAME: C. F. Lamunyon #2 TB Lea Co. NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
602011 -01	2-02-06	8:30	S		X	BH-1 (25' - 25.5')	1				X	

ANALYSIS REQUEST (Circle or Specify Method No.)

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

RELINQUISHED BY: (Signature)	Date: 2/2/06 Time: 1:20	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Sign) JEREMY JONES Date: 2-2-06 Time: 11:30

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

RECEIVING LABORATORY: ELT ADDRESS: CITY: Odessa STATE: TX ZIP: CONTACT: PHONE:

RECEIVED BY: (Signature) DATE: 2/2/06 TIME: 1:20

HIGHLANDER CONTACT PERSON: IKE Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: 2.0 labels/seal 402

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

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

Client: Highlander

Date/Time: 2/2/06 1:20

Order #: 602011

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	2.0 C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	(Yes)	No	Not present
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	Yes	No	Not Acclicable

Other observations:

Variance Documentation:

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

Regarding:

Corrective Action Taken:

APPENDIX C

New Mexico Oil Conservation Division
Form C-141 Original & Final

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

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

Form C-141
Originated 2/13/97

Submit 2 copies to Appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action
OPERATOR
☑ Initial Report ☐ Final Report

Name: ARCH PET INC.	Contact: GARY WELLS
Address: EUNICE NM	Telephone No.: 432-631-0134
Facility Name: C.E LAMUNYON BATT #2	Facility Type: TANK BATTERY

Surface Owner	Mineral Owner	Lease No.
GEORGE WEIR	BLM	03018

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	21	23	37E					LEA

NATURE OF RELEASE

Type of Release: OIL & S/W	Volume of Release: 100	Volume Recovered: 100
Source of Release: 90° ELL ON FLOWLINE	Date and Hour of Occurrence: 10/23/05	Date and Hour of Discovery: 7:30 AM
Was Immediate Notice Given? ☐ Yes ☑ No ☐ Not Required	If YES, To Whom? FAXED	10/25/05
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☑ No	If YES, Volume Impacting the Watercourse.	

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

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary)
HOLE IN 90° ELL ON FLOWLINE FROM SEPARATOR TO TANK BATTERY. REPLACE 90° ELL P.U. FT OFF GROUND - ALL FL STAYED INSIDE BERM AROUND BATTERY.

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary) SURFACE LAND INSIDE BERM AROUND SEPARATORS AND TREATERS. NOTIFIED ARCH - HSE AND HIGHLANDER ENVIRO. FOR PLAN OF ACTION TO CLEANUP.

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: Gary Wells	OIL CONSERVATION DIVISION
Printed Name: GARY WELLS	Approved by District Supervisor:
Title: Field Foreman	Approval Date: / Expiration Date:
Date: 10/25/04 Phone: 432 381 7648	Conditions of Approval: / Attached ☐

SITE INFORMATION

Report Type: Closure Request

General Site Information:	
Site:	C. E. Lamunyon #2 Tank Battery
Company:	Pogo Producing Company (Arch Petroleum)
Section, Township and Range	Section 21, T23S, R37 E
Unit Letter:	F
Lease Number:	3018
County:	Lea
GPS:	32° 17' 33.7", 103° 10' 10.0"
Surface Owner:	George Weir
Mineral Owner:	BLM
Directions:	Eunice New Mexico intersection of 18 and 234, go 10.7 miles south near mile marker 21,
	turn left (east) into lease (gate), go 1.0 miles down lease road and turn right (south),
	go 0.2 miles to tank battery. Tank battery on left side (east) of lease road.

Release Data:	
Date Released:	10/23/2005
Type Release:	Oil and water
Source of Contamination:	Flow line leak
Fluid Released:	100 barrels
Fluids Recovered:	100 barrels

Official Communication:			
Name:	Pat Ellis	Don Riggs	Ike Tavarez
Company:	Pogo Producing Company	Pogo Producing Company	Highlander Environmental Corp.
Address:	300 N. Marienfeld St.	5 Greenway Plaza, Suite 2700	1910 N. Big Spring
P.O. Box	Box 10340		
City:	Midland Texas, 79701-7340	Houston, Texas 77046	Midland, Texas
Phone number:	(432) 685-8100	(713) 297-5045	(432) 682- 4559
Email:	EllisP@pogoproducing.com	riggsd@pogoproducing.com	itavarez@hec-enviro.com

Ranking Criteria		
Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	10	
>100 ft.	**0**	*Average Depth >100 BS*
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:	**0**	

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

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: 300 North Marienfeld, Suite 600, Midland TX 79701	Telephone No. (432) 685-8100
Facility Name: C. E. Lamunyon Tank Battery #2	Facility Type: Tank Battery

Surface Owner George Weir	Mineral Owner BLM	Lease No. 03018

LOCATION OF RELEASE

Unit Letter	Section\	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	21	23S	37E					Lea

NATURE OF RELEASE

Type of Release Oil and water	Volume of Release 100 barrels	Volume Recovered 100 barrels
Source of Release Tank 90^0 elbow on flow-line	Date and Hour of Occurrence 10/23/05	Date and Hour of Discovery 10/25/05 7:30 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD – Faxed	
By Whom? Gary Wells	Date and Hour 10/23/05	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Hole in a 90^0 elbow on flow-line from separator to tank battery. The elbow was repaired. Fluids remained inside facility firewall. The standing fluids were pickup with a vacuum truck.

Describe Area Affected and Cleanup Action Taken.*
Highlander performed an assessment on the spill area. The surface samples (0-1') were all below the RRAL for TPH and BTEX. The chloride concentrations were elevated east of the facility. To define the chloride extents, one (1) borehole was installed east of the facility. The vertical extents were defined at 25' below surface. Based on the results and depth to groundwater, Pogo requested closure for the Site. An Assessment and Closure Report has been submitted to the NMOCD for review.

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

Signature: Patrick L. Ellis	OIL CONSERVATION DIVISION
Printed Name: PATRICK L. ELLIS	Approved by District ~~Supervisor~~ ENVIR.ENGR: J.R. Johnson
Title: EH&S Supervisor	Approval Date: 3.14.06 Expiration Date: -
E-mail Address: EllisP@pogoproducing.com	Conditions of Approval: Attached ☐
Date: 3-7-06 Phone: (432) 685-8100	

* Attach Additional Sheets If Necessary