

SITE INFORMATION

Report Type: CLOSURE REPORT

General Site Information:

Site:	Plains Knight #1
Company:	Pogo Producing Company (Arch Petroleum)
Section, Township and Range	Section 23, T24S, R37E
Unit Letter:	L
Lease Number:	35033
County:	Lea
GPS:	32° 11' 59", 103° 08' 16.3"
Surface Owner:	Becky Doom
Mineral Owner:	-
Directions:	From intersection of 18 and 128 at Jal New Mexico, go 6.3 miles north on Hwy 18, turn right (east) Cooper East Rd. and go 2.5 miles to end of paved road. Take cattle guard to right, follow main lease road 1.3 miles which will curve right (south), tank battery located east of the lease road.

Release Data:

Date Released:	3/14/2000
Type Release:	Oil
Source of Contamination:	Tank overflow
Fluid Released:	7 barrels oil
Fluids Recovered:	0

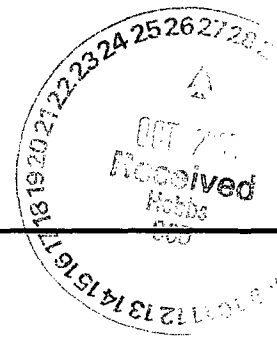
Official Communication:

Name:	Pat Ellis	Don Riggs	Ike Tavaréz
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) 692- 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	Average Depth >50 BS
>100 ft.	0	
Wellhead Protection:	Ranking Score	Site Data
Water Source <1,000 ft., Private <200 ft.	20	None
Water Source >1,000 ft., Private >200 ft.	0	
Surface Body of Water:	Ranking Score	Site Data
<200 ft.	20	None
200 ft - 1,000 ft.	10	None
>1,000 ft.	0	
Total Ranking Score:	10	

Acceptable Soil RRAL (mg/kg)		
Benzene	Total BTEX	TPH
10	50	1,000





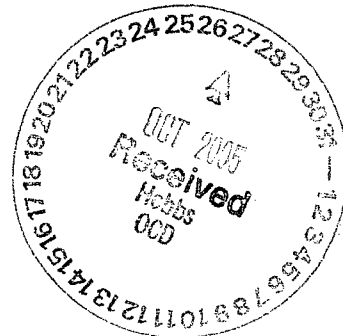
Highlander Environmental Corp.

Midland, Texas

October 14, 2005

1 RP-222
10.31.05

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



RE: Assessment and Closure Report for the Spill located at the Pogo Plains Knight #1 Tank Battery, Lea County, New Mexico, Unit L, Section 23, T-24-S, R-37-E.

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by (Arch) Pogo Producing Company to assess a spill, which occurred at the Plains Knight #1 Tank Battery in Lea County, New Mexico. The Site is located in Unit Letter L, Section 23, Township 24 South, Range 37 East. The State of New Mexico C-141 (Initial) is included in Appendix C. The Site is shown on Figure 1.

Background

On March 14, 2000, the oil storage tank at the facility ran over, impacting the surface soil around the storage tank. Approximately 7 barrels of oil were reportedly spilled and none was recovered.

On July 13, 2000, Highlander inspected the spill area and attempted to define the vertical extent of the hydrocarbon impact. The spill area measured approximately 80' x 5' and 30' x 5' inside the dike of the facility. The dike was breached, in the northeast corner of the facility, impacting areas outside the dike measuring 100' x 5' and 60' x 5'. The spill areas are shown on Figure 2. A total of five auger holes (AH-1 through AH-5) were installed at the Site to attempt to delineate the impact. The locations of the auger holes are shown in Figure 2. Deeper soil samples could not be collected due to a dense caliche layer encountered at a depth of approximately 1-2 feet below surface. The samples were analyzed for TPH by EPA 418.1 and chloride by method SW846-9252. The laboratory reports are shown in Appendix B. The results are shown in Table 1.

The TPH concentrations inside the tank battery dike ranged from 39,200 mg/kg to 47,250 mg/kg at 0-1' below surface. However, the samples taken at 1-2' decreased in all three-auger

holes (AH-1, AH-2 and AH-3) to 210 mg/kg, 10,800 mg/kg and 1,150 mg/kg, respectively. Two auger holes (AH-4 and AH-5) installed outside the dike showed elevated TPH levels from 0-1' ranging from 35,100 mg/kg to 93,500 mg/kg. Deeper samples could not be obtained, due to the shallow dense caliche layer.

All the soil samples collected from 0-1' and 1-2' exceeded the RRAL for TPH of 1,000 mg/kg, except for AH-1 at 1-2' below surface. AH-3 at 1-2' was near the RRAL with a level of 1,150 mg/kg. The chloride evaluation showed detectable levels ranging from 142 mg/kg to 328 mg/kg.

An original assessment report was submitted on August 7, 2000, and revised on January 14, 2002, which recommended working the impacted soil inside the tank battery dike. During the remediation, an attempt was to be made to collect deeper samples for confirmation in the area of AH-2. Additionally, the impacted area east of the tank battery was to be excavated and placed on plastic at the tank battery pad. Once the impacted soil was removed, confirmation soil samples were to be collected from the excavated area for TPH and BTEX. The impacted soil was to either be disposed of at an approved disposal facility or landfarmed onsite.

Groundwater and Regulatory

According to the New Mexico State Engineer Office database, there are water wells located in Sections 23, 24 and 25, Township 24 South, Range 37 East, with average depth to groundwater of 94' (Section 23), 100' (Section 24) and 90' (Section 25). The well records are shown in Appendix A.

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

Remediation and Confirmation Sampling

The impacted soils inside the facility dike and outside the east end of the dike were excavated. Excavation began on February 17-18, 2005. Due to rain, and the landowner's desire not to drive equipment into the wet pasture, the excavation east of the dike was postponed until March 21, 2005. The area was segregated into five (5) areas for confirmation sampling. Areas #1 and #2 measured 6' x 55', Area #3 measured 3' x 20', Area #4 measured 10' x 30' and Area #5 measured 6' x 30'. Excavation depths ranged from 1.5 to 3.0' below excavation bottom (BEB). The excavated areas are shown on Figure 3. Composite samples were taken and analyzed for TPH by method EPA 8015M, BTEX by method 8021B and chloride by method EPA 300.0. The laboratory reports are shown in Appendix B. The results are shown in Table 1.



Referring to Table 1, BTEX and TPH concentrations were well below the RRAL for all five areas. Chloride concentrations in Area #1, Area #3 and Area #4, were 117 mg/kg, 404 mg/kg and 428 mg/kg respectively. Based upon the chloride results, test trenches were installed in Areas #2 and #5 on April 7, 2005 to collect additional subsurface samples. Chloride concentrations in these two areas appeared to remain elevated at depths of 6'-8' below excavation bottom.

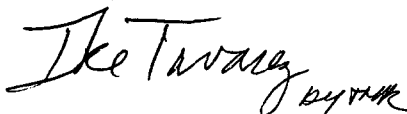
On September 9, 2005, a drilling rig was utilized in order to better profile the soils beneath Areas #2 and #5 and to collect discrete soil samples for evaluation of subsurface chloride impact. Two boreholes were installed, with BH-1 being located in Area #5 and BH-2 being located in Areas #2. Soil samples were collected at five foot increments to a total depth of 15'-16' BEB. All of the samples collected were well below 250 mg/kg, and did not show deeper chloride impact in these areas.

Conclusion

All five areas have been excavated to depths ranging from 1.5' - 3.0'. Composite samples taken and analyzed for TPH and BTEX were well below the RRAL for all five areas. Chloride concentrations in Area #1, Area #3 and Area #4, were 117 mg/kg, 404 mg/kg and 428 mg/kg respectively. Samples from boreholes placed into the soils beneath Areas #2 and #5 were well below 250 mg/kg, and did not show deeper chloride impact in these areas. Based upon the work performed to date and the results of confirmation sampling, Pogo requests closure of this site. The State of New Mexico C-141 (Final) is included in Appendix C.

If you require any additional information or have any questions or comments concerning the assessment report, please call.

Highlander Environmental Corp.,

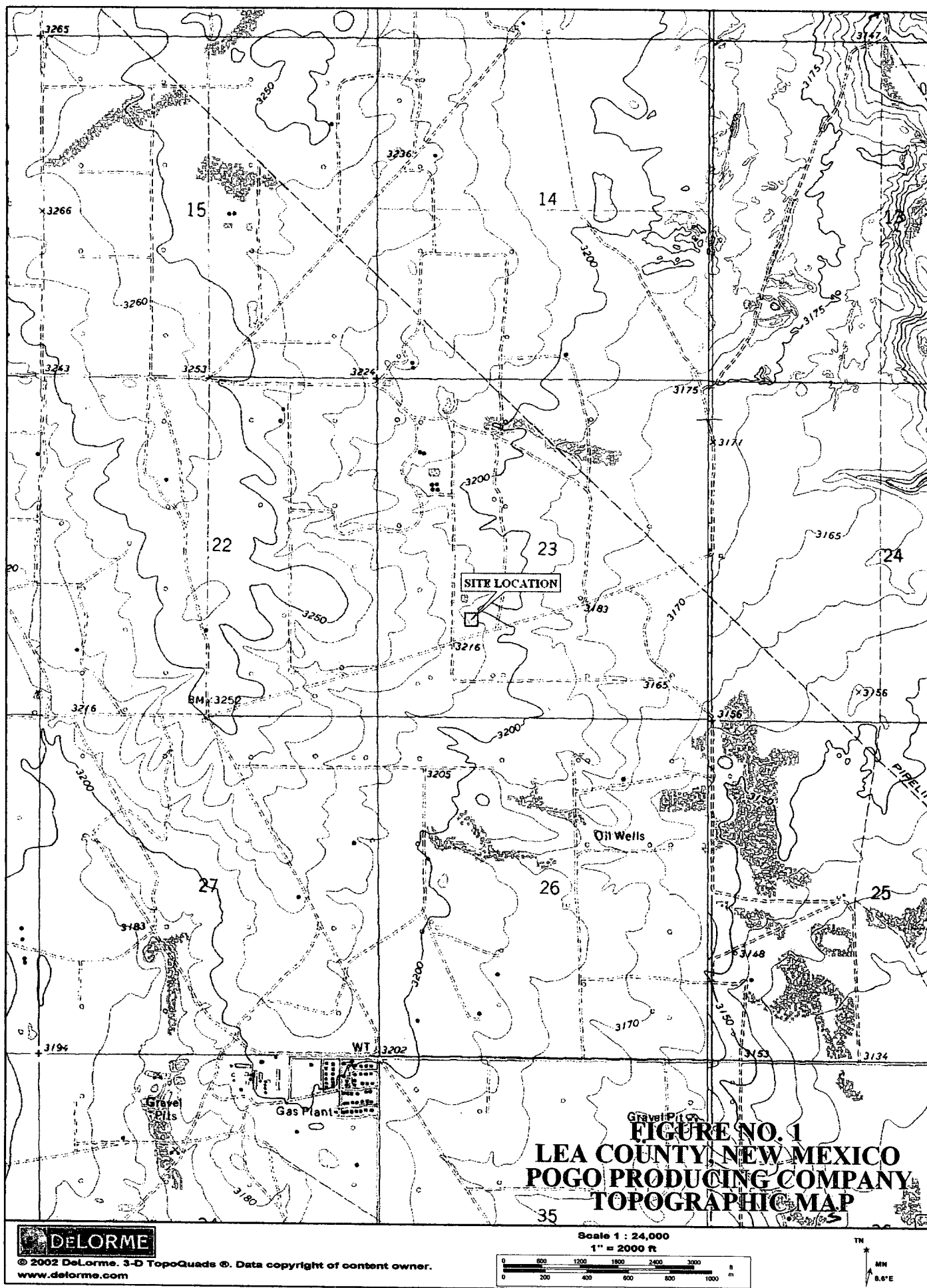


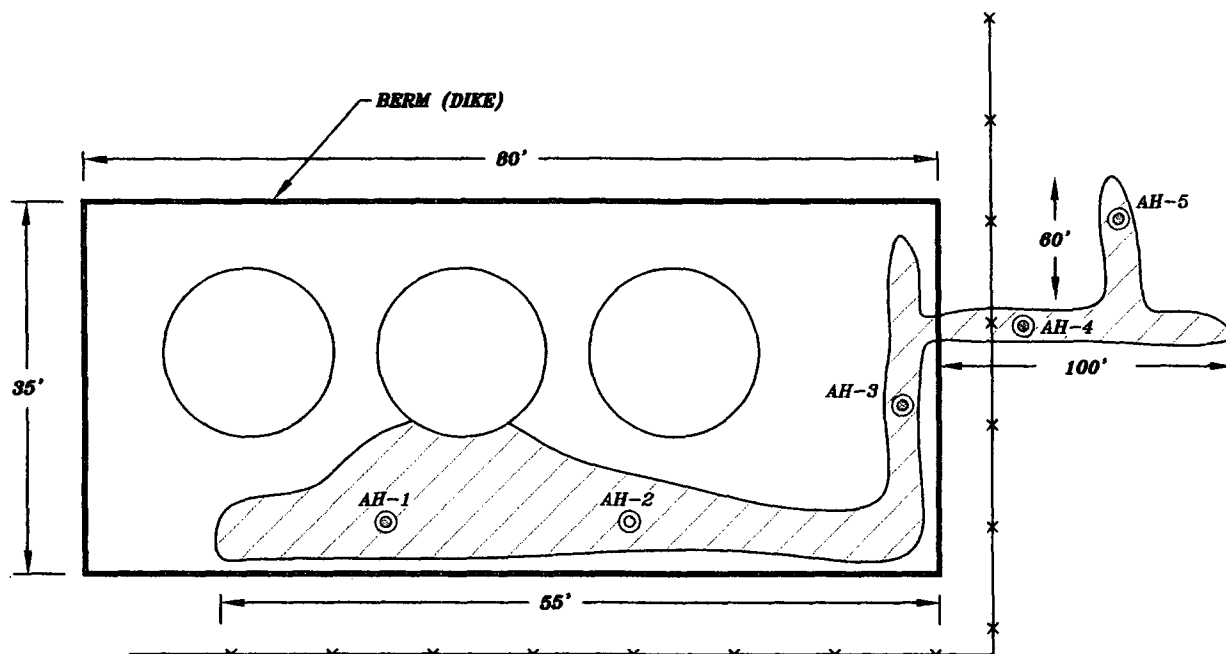
Ike Tavarez, P.G.
Project Manager/Senior Geologist

cc: Don Riggs - Pogo Producing Co.
Pat Ellis - Pogo Producing Co.



FIGURES





- ⊙ AUGER HOLE LOCATIONS
- ▨ SPILL AREA

NOT TO SCALE

DATE:
4/11/05
DWN. BY:
JJ
FILE:
C:\P000\1400\ P-402017-1

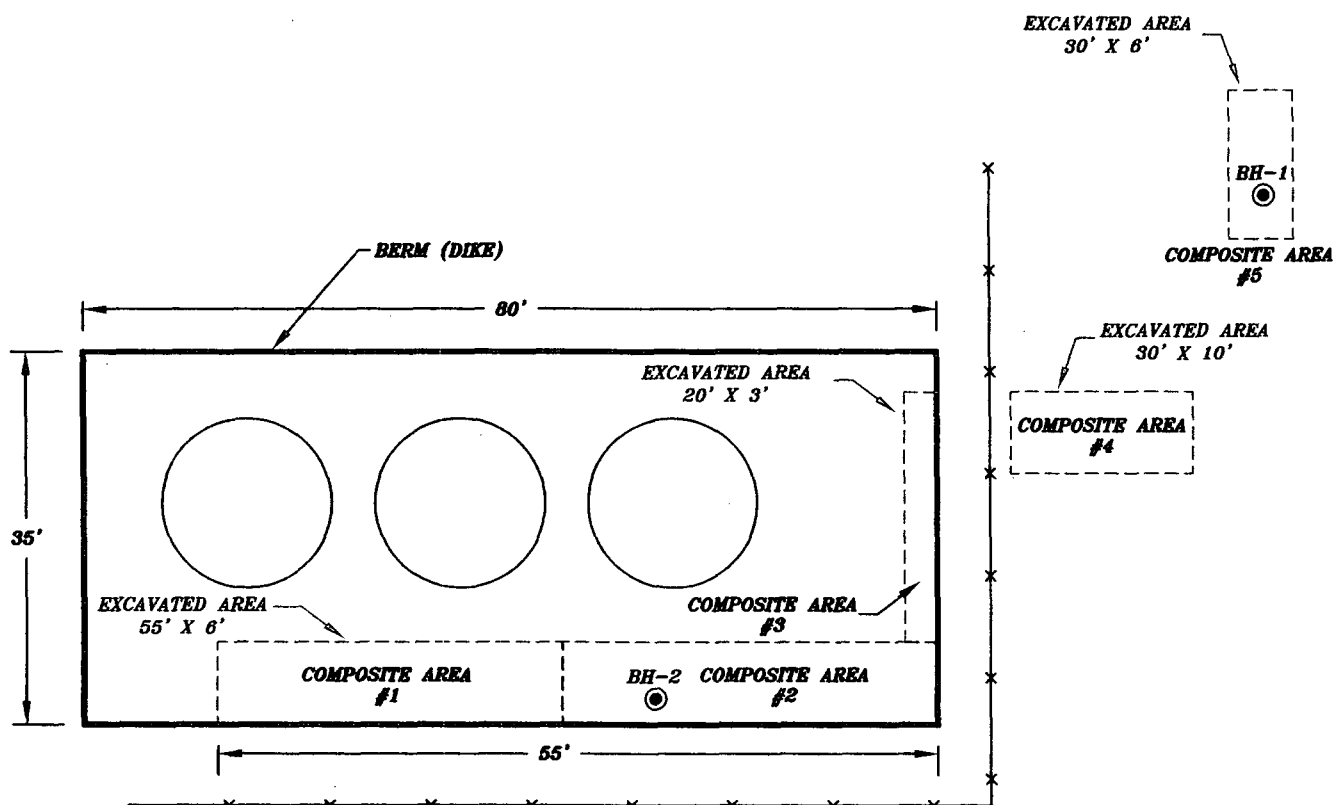
FIGURE NO. 2

LEA COUNTY, NEW MEXICO

POGO PRODUCING COMPANY

PLAINS KNIGHT #1 TB
SPILL AREA & SAMPLE LOCATIONS

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS



⊙ BOREHOLE LOCATIONS
□ EXCAVATED AREA

NOT TO SCALE

FIGURE NO. 3

LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
PLAINS KNIGHT #1 TB
EXCAVATED AREA & BOREHOLE LOCATIONS
HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE:
4/11/05
OWN. BY:
JJ
FILE:
C:\P000\1400\1
P-00001-1

TABLE

Table 1
Pogo Producing Company
Arch/Plains Knight #1 Tank Battery
Lea County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
Area #1	2/18/2005	2.0	42.2	301	343	<0.025	<0.025	0.0386	0.1247	117
Area #2	2/18/2005	2.5	<10.0	<10.0	<10.0	-	-	-	-	453
	3/22/2005	2.5 BEB	-	-	-	-	-	-	-	864
	4/7/2005	4.0 BEB	-	-	-	-	-	-	-	800
	4/7/2005	6.0 BEB	-	-	-	-	-	-	-	1180
Area #3	2/18/2005	1.5	<10.0	<10.0	<10.0	-	-	-	-	404
Area #4	3/22/2005	1.5	<10.0	15.0	15.0	<0.025	<0.025	<0.025	<0.025	428
Area #5	3/22/2005	2.0	<10.0	40.6	40.6	<0.025	<0.025	<0.025	<0.025	904
	4/7/2005	2.0 BEB	-	-	-	-	-	-	-	1570
	4/7/2005	4.0 BEB	-	-	-	-	-	-	-	2200
BH-1 (Area 5)	9/9/2005	5-6	-	-	-	-	-	-	-	14.0
	9/9/2005	10-11	-	-	-	-	-	-	-	9.31
	9/9/2005	15-16	-	-	-	-	-	-	-	9.73
BH-2 (Area 2)	9/9/2005	5-6	-	-	-	-	-	-	-	61.0
	9/9/2005	10-11	-	-	-	-	-	-	-	59.7
	9/9/2005	15-16	-	-	-	-	-	-	-	99.3

<10.0 and <0.025 - Analyte not detected at or above the reporting limit

BEB - Below Excavation Bottom

(-) Not Analyzed

APPENDIX A

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

Clear Form

WATERS Menu

Help

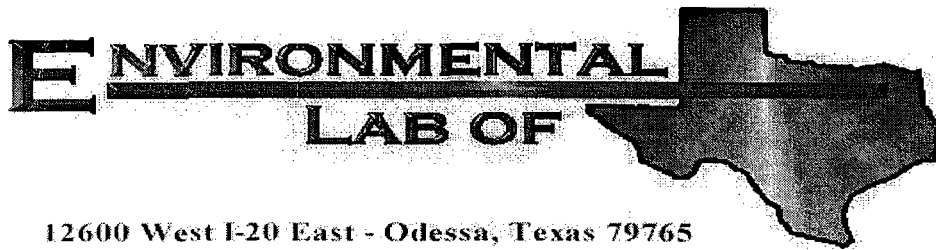
AVERAGE DEPTH OF WATER REPORT 10/24/2005

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

APPENDIX B

Analysis of Sampling
2/18/2005



12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavaréz

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ Plains Knight #1 Tank Battery

Project Number: 1469

Location: Lea County, N.M.

Lab Order Number: 5B18010

Report Date: 02/24/05

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
02/24/05 09:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Area #1 (2.0') Bottom Hole	5B18010-01	Soil	02/18/05 00:00	02/18/05 14:45
Area #2 (2.5') Bottom Hole	5B18010-02	Soil	02/18/05 00:00	02/18/05 14:45
Area #3 (2.0') Bottom Hole	5B18010-03	Soil	02/18/05 00:00	02/18/05 14:45

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
02/24/05 09:52

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Area #1 (2.0') Bottom Hole (5B18010-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EB52402	02/22/05	02/23/05	EPA 8021B	
Toluene	J [0.0193]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	0.0386	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.0762	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0485	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		81.6 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	42.2	10.0	mg/kg dry	1	EB51901	02/18/05	02/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	301	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	343	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		79.6 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		77.8 %	70-130		"	"	"	"	
Area #2 (2.5') Bottom Hole (5B18010-02) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB51901	02/18/05	02/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		92.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		79.6 %	70-130		"	"	"	"	
Area #3 (2.0') Bottom Hole (5B18010-03) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB51901	02/18/05	02/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		90.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		73.4 %	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 2 of 9

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
02/24/05 09:52

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Area #1 (2.0') Bottom Hole (5B18010-01) Soil									
Chloride	117	10.0	mg/kg	20	EB52216	02/21/05	02/21/05	EPA 300.0	
% Moisture	14.8	0.1	%	1	EB52104	02/18/05	02/21/05	% calculation	
Area #2 (2.5') Bottom Hole (5B18010-02) Soil									
Chloride	453	20.0	mg/kg	40	EB52216	02/21/05	02/21/05	EPA 300.0	
% Moisture	12.6	0.1	%	1	EB52104	02/18/05	02/21/05	% calculation	
Area #3 (2.0') Bottom Hole (5B18010-03) Soil									
Chloride	404	20.0	mg/kg	40	EB52216	02/21/05	02/21/05	EPA 300.0	
% Moisture	11.9	0.1	%	1	EB52104	02/18/05	02/21/05	% calculation	

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946
Reported:
02/24/05 09:52

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB51901 - Solvent Extraction (GC)

Blank (EB51901-BLK1)

Prepared: 02/18/05 Analyzed: 02/19/05

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	42.3		mg/kg	50.0		84.6	70-130			
Surrogate: 1-Chlorooctadecane	36.6		"	50.0		73.2	70-130			

LCS (EB51901-BS1)

Prepared: 02/18/05 Analyzed: 02/19/05

Gasoline Range Organics C6-C12	442	10.0	mg/kg wet	500		88.4	75-125			
Diesel Range Organics >C12-C35	451	10.0	"	500		90.2	75-125			
Total Hydrocarbon C6-C35	893	10.0	"	1000		89.3	75-125			
Surrogate: 1-Chlorooctane	38.7		mg/kg	50.0		77.4	70-130			
Surrogate: 1-Chlorooctadecane	35.6		"	50.0		71.2	70-130			

Calibration Check (EB51901-CCV1)

Prepared: 02/18/05 Analyzed: 02/19/05

Gasoline Range Organics C6-C12	486		mg/kg	500		97.2	80-120			
Diesel Range Organics >C12-C35	550		"	500		110	80-120			
Total Hydrocarbon C6-C35	1040		"	1000		104	80-120			
Surrogate: 1-Chlorooctane	50.7		"	50.0		101	70-130			
Surrogate: 1-Chlorooctadecane	43.9		"	50.0		87.8	70-130			

Matrix Spike (EB51901-MS1)

Source: 5B18009-03

Prepared: 02/18/05 Analyzed: 02/19/05

Gasoline Range Organics C6-C12	477	10.0	mg/kg dry	514	ND	92.8	75-125			
Diesel Range Organics >C12-C35	542	10.0	"	514	ND	105	75-125			
Total Hydrocarbon C6-C35	1020	10.0	"	1030	ND	99.0	75-125			
Surrogate: 1-Chlorooctane	48.0		mg/kg	50.0		96.0	70-130			
Surrogate: 1-Chlorooctadecane	37.9		"	50.0		75.8	70-130			

Matrix Spike Dup (EB51901-MSD1)

Source: 5B18009-03

Prepared: 02/18/05 Analyzed: 02/19/05

Gasoline Range Organics C6-C12	450	10.0	mg/kg dry	514	ND	87.5	75-125	5.83	20	
Diesel Range Organics >C12-C35	502	10.0	"	514	ND	97.7	75-125	7.66	20	
Total Hydrocarbon C6-C35	952	10.0	"	1030	ND	92.4	75-125	6.90	20	
Surrogate: 1-Chlorooctane	45.7		mg/kg	50.0		91.4	70-130			
Surrogate: 1-Chlorooctadecane	36.7		"	50.0		73.4	70-130			

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Midland TX, 79705

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Fax: (432) 682-3946

Reported:
02/24/05 09:52

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB52402 - EPA 5030C (GC)

Blank (EB52402-BLK1)

Prepared & Analyzed: 02/22/05

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	80.3		ug/kg	100		80.3	80-120			
Surrogate: 4-Bromofluorobenzene	85.6		"	100		85.6	80-120			

LCS (EB52402-BS1)

Prepared & Analyzed: 02/22/05

Benzene	104		ug/kg	100		104	80-120			
Toluene	107		"	100		107	80-120			
Ethylbenzene	106		"	100		106	80-120			
Xylene (p/m)	239		"	200		120	80-120			
Xylene (o)	116		"	100		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	98.3		"	100		98.3	80-120			
Surrogate: 4-Bromofluorobenzene	110		"	100		110	80-120			

Calibration Check (EB52402-CCV1)

Prepared: 02/22/05 Analyzed: 02/23/05

Benzene	101		ug/kg	100		101	80-120			
Toluene	104		"	100		104	80-120			
Ethylbenzene	105		"	100		105	80-120			
Xylene (p/m)	238		"	200		119	80-120			
Xylene (o)	118		"	100		118	80-120			
Surrogate: a,a,a-Trifluorotoluene	102		"	100		102	80-120			
Surrogate: 4-Bromofluorobenzene	116		"	100		116	80-120			

Matrix Spike (EB52402-MS1)

Source: SB21006-01

Prepared: 02/22/05 Analyzed: 02/23/05

Benzene	2510		ug/kg	2500	54.0	98.2	80-120			
Toluene	2640		"	2500	48.1	104	80-120			
Ethylbenzene	2760		"	2500	132	105	80-120			
Xylene (p/m)	6180		"	5000	324	117	80-120			
Xylene (o)	3130		"	2500	222	116	80-120			
Surrogate: a,a,a-Trifluorotoluene	96.8		"	100		96.8	80-120			
Surrogate: 4-Bromofluorobenzene	112		"	100		112	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 5 of 9

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
02/24/05 09:52

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB52402 - EPA 5030C (GC)

Matrix Spike Dup (EB52402-MSD1) **Source: 5B21006-01** Prepared: 02/22/05 Analyzed: 02/23/05

Benzene	2550		ug/kg	2500	54.0	99.8	80-120	1.62	20	
Toluene	2690		"	2500	48.1	106	80-120	1.90	20	
Ethylbenzene	2880		"	2500	132	110	80-120	4.65	20	
Xylene (p/m)	6250		"	5000	324	119	80-120	1.69	20	
Xylene (o)	3100		"	2500	222	115	80-120	0.866	20	
Surrogate: a,a,a-Trifluorotoluene	101		"	100		101	80-120			
Surrogate: 4-Bromofluorobenzene	119		"	100		119	80-120			

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
02/24/05 09:52

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB52104 - General Preparation (Prep)

Blank (EB52104-BLK1) Prepared: 02/18/05 Analyzed: 02/21/05

% Moisture ND 0.1 %

Duplicate (EB52104-DUP1) Source: 5B17011-01 Prepared: 02/18/05 Analyzed: 02/21/05

% Moisture 4.2 0.1 % 4.3 2.35 20

Batch EB52216 - Water Extraction

Blank (EB52216-BLK1) Prepared & Analyzed: 02/21/05

Chloride ND 0.500 mg/kg

Blank (EB52216-BLK2) Prepared & Analyzed: 02/21/05

Chloride ND 0.500 mg/kg

LCS (EB52216-BS1) Prepared & Analyzed: 02/21/05

Chloride 8.46 mg/L 10.0 84.6 80-120

LCS (EB52216-BS2) Prepared & Analyzed: 02/21/05

Chloride 8.21 mg/L 10.0 82.1 80-120

Calibration Check (EB52216-CCV1) Prepared & Analyzed: 02/21/05

Chloride 8.44 mg/L 10.0 84.4 80-120

Calibration Check (EB52216-CCV2) Prepared & Analyzed: 02/21/05

Chloride 8.16 mg/L 10.0 81.6 80-120

Duplicate (EB52216-DUP1) Source: 5B18004-01 Prepared & Analyzed: 02/21/05

Chloride 23.3 5.00 mg/kg 22.5 3.49 20

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
02/24/05 09:52

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB52216 - Water Extraction

Duplicate (EB52216-DUP2)

Source: 5B21002-03

Prepared & Analyzed: 02/21/05

Chloride	240	20.0	mg/kg		223			7.34	20	
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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
02/24/05 09:52

Notes and Definitions

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:

2-24-05

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

Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
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

Variance / Corrective Action Report – Sample Log-In

Client: Highlander

Date/Time: 2/18/05 2:45

Order #: SB18010

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	5.0	C
Shipping container/cooler in good condition?	Yes	No	n/a	
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?	<u>Yes</u>	No		
Sample Instructions complete on Chain of Custody?	<u>Yes</u>	No		
Chain of Custody signed when relinquished and received?	<u>Yes</u>	No		
Chain of custody agrees with sample label(s)	<u>Yes</u>	No		
Container labels legible and intact?	<u>Yes</u>	No		
Sample Matrix and properties same as on chain of custody?	<u>Yes</u>	No		
Samples in proper container/bottle?	<u>Yes</u>	No		
Samples properly preserved?	<u>Yes</u>	No		
Sample bottles intact?	<u>Yes</u>	No		
Preservations documented on Chain of Custody?	<u>Yes</u>	No		
Containers documented on Chain of Custody?	<u>Yes</u>	No		
Sufficient sample amount for indicated test?	<u>Yes</u>	No		
All samples received within sufficient hold time?	<u>Yes</u>	No		
VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Other observations:

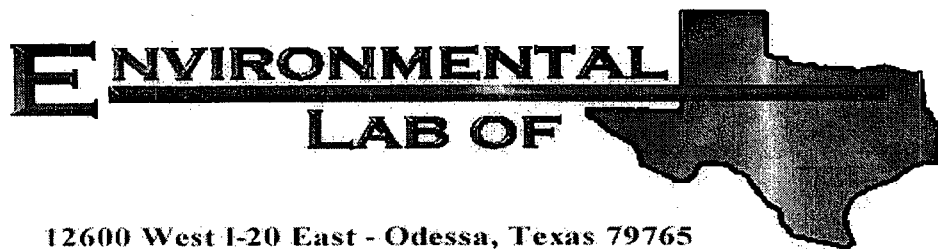
Variance Documentation:

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

Corrective Action Taken:

Analysis of Sampling

3/22/2005



12600 West I-20 East - Odessa, Texas 79765

Analytical Report.

Prepared for:

Ike Tavaréz

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ Plains Knight #1 Tank Battery

Project Number: 1469

Location: Lea County, NM

Lab Order Number: 5C23016

Report Date: 03/28/05

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
03/28/05 11:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Area #2 (2.5') BEB	5C23016-01	Soil	03/22/05 00:00	03/23/05 13:55
Area #4 (1.5') Bottom Hole	5C23016-02	Soil	03/22/05 00:00	03/23/05 13:55
Area #5 (2.0') Bottom Hole	5C23016-03	Soil	03/22/05 00:00	03/23/05 13:55

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
03/28/05 11:40

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Area #4 (1.5') Bottom Hole (5C23016-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EC52401	03/23/05	03/23/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		92.3 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.5 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EC52312	03/23/05	03/25/05	EPA 8015M	
Diesel Range Organics >C12-C35	15.0	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	15.0	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		76.6 %	67.6-140		"	"	"	"	
Surrogate: 1-Chlorooctadecane		90.6 %	70-130		"	"	"	"	
Area #5 (2.0') Bottom Hole (5C23016-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EC52401	03/23/05	03/23/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		88.3 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EC52312	03/23/05	03/25/05	EPA 8015M	
Diesel Range Organics >C12-C35	40.6	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	40.6	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		73.8 %	67.6-140		"	"	"	"	
Surrogate: 1-Chlorooctadecane		86.6 %	70-130		"	"	"	"	

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
03/28/05 11:40

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Area #2 (2.5') BEB (5C23016-01) Soil									
Chloride	864	25.0	mg/kg	50	EC52801	03/25/05	03/25/05	EPA 300.0	
Area #4 (1.5') Bottom Hole (5C23016-02) Soil									
Chloride	428	20.0	mg/kg	40	EC52801	03/25/05	03/25/05	EPA 300.0	
% Moisture	12.9	0.1	%	1	EC52408	03/23/05	03/24/05	% calculation	
Area #5 (2.0') Bottom Hole (5C23016-03) Soil									
Chloride	904	25.0	mg/kg	50	EC52801	03/25/05	03/25/05	EPA 300.0	
% Moisture	11.7	0.1	%	1	EC52408	03/23/05	03/25/05	% calculation	

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
03/28/05 11:40

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC52312 - Solvent Extraction (GC)

Blank (EC52312-BLK1)

Prepared: 03/23/05 Analyzed: 03/24/05

Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	36.7		mg/kg	50.0		73.4	67.6-140			
Surrogate: 1-Chlorooctadecane	39.0		"	50.0		78.0	70-130			

LCS (EC52312-BS1)

Prepared: 03/23/05 Analyzed: 03/24/05

Gasoline Range Organics C6-C12	485	10.0	mg/kg wet	500		97.0	76.3-104			
Diesel Range Organics >C12-C35	479	10.0	"	500		95.8	76.1-118			
Total Hydrocarbon C6-C35	964	10.0	"	1000		96.4	81.8-105			
Surrogate: 1-Chlorooctane	39.9		mg/kg	50.0		79.8	67.6-140			
Surrogate: 1-Chlorooctadecane	39.9		"	50.0		79.8	70-130			

Calibration Check (EC52312-CCV1)

Prepared: 03/23/05 Analyzed: 03/24/05

Gasoline Range Organics C6-C12	464		mg/kg	500		92.8	80-120			
Diesel Range Organics >C12-C35	495		"	500		99.0	80-120			
Total Hydrocarbon C6-C35	959		"	1000		95.9	80-120			
Surrogate: 1-Chlorooctane	45.9		"	50.0		91.8	67.6-140			
Surrogate: 1-Chlorooctadecane	40.0		"	50.0		80.0	70-130			

Matrix Spike (EC52312-MS1)

Source: 5C23010-01

Prepared: 03/23/05 Analyzed: 03/24/05

Gasoline Range Organics C6-C12	577	10.0	mg/kg dry	583	6.88	97.8	75.9-114			
Diesel Range Organics >C12-C35	644	10.0	"	583	29.6	105	85.3-122			
Total Hydrocarbon C6-C35	1220	10.0	"	1170	29.6	102	84.4-115			
Surrogate: 1-Chlorooctane	58.4		mg/kg	50.0		117	67.6-140			
Surrogate: 1-Chlorooctadecane	50.3		"	50.0		101	70-130			

Matrix Spike Dup (EC52312-MSD1)

Source: 5C23010-01

Prepared: 03/23/05 Analyzed: 03/24/05

Gasoline Range Organics C6-C12	548	10.0	mg/kg dry	583	6.88	92.8	75.9-114	5.16	10.4	
Diesel Range Organics >C12-C35	648	10.0	"	583	29.6	106	85.3-122	0.619	10.4	
Total Hydrocarbon C6-C35	1200	10.0	"	1170	29.6	100	84.4-115	1.65	7.6	
Surrogate: 1-Chlorooctane	45.9		mg/kg	50.0		91.8	67.6-140			
Surrogate: 1-Chlorooctadecane	48.2		"	50.0		96.4	70-130			

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
03/28/05 11:40

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC52401 - EPA 5030C (GC)

Blank (EC52401-BLK1)

Prepared & Analyzed: 03/23/05

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	96.2		ug/kg	100		96.2	80-120			
Surrogate: 4-Bromofluorobenzene	98.5		"	100		98.5	80-120			

LCS (EC52401-BS1)

Prepared & Analyzed: 03/23/05

Benzene	105		ug/kg	100		105	80-120			
Toluene	117		"	100		117	80-120			
Ethylbenzene	117		"	100		117	80-120			
Xylene (p/m)	227		"	200		114	80-120			
Xylene (o)	120		"	100		120	80-120			
Surrogate: a,a,a-Trifluorotoluene	117		"	100		117	80-120			
Surrogate: 4-Bromofluorobenzene	115		"	100		115	80-120			

Calibration Check (EC52401-CCV1)

Prepared & Analyzed: 03/23/05

Benzene	100		ug/kg	100		100	80-120			
Toluene	108		"	100		108	80-120			
Ethylbenzene	95.8		"	100		95.8	80-120			
Xylene (p/m)	205		"	200		102	80-120			
Xylene (o)	99.9		"	100		99.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	107		"	100		107	80-120			
Surrogate: 4-Bromofluorobenzene	82.7		"	100		82.7	80-120			

Matrix Spike (EC52401-MS1)

Source: 5C23016-03

Prepared & Analyzed: 03/23/05

Benzene	106		ug/kg	100	ND	106	80-120			
Toluene	118		"	100	ND	118	80-120			
Ethylbenzene	115		"	100	ND	115	80-120			
Xylene (p/m)	240		"	200	ND	120	80-120			
Xylene (o)	119		"	100	ND	119	80-120			
Surrogate: a,a,a-Trifluorotoluene	115		"	100		115	80-120			
Surrogate: 4-Bromofluorobenzene	110		"	100		110	80-120			

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
03/28/05 11:40

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC52401 - EPA 5030C (GC)

Matrix Spike Dup (EC52401-MSD1)

Source: 5C23016-03

Prepared & Analyzed: 03/23/05

Benzene	99.4		ug/kg	100	ND	99.4	80-120	6.43	20	
Toluene	110		"	100	ND	110	80-120	7.02	20	
Ethylbenzene	102		"	100	ND	102	80-120	12.0	20	
Xylene (p/m)	225		"	200	ND	112	80-120	6.90	20	
Xylene (o)	107		"	100	ND	107	80-120	10.6	20	
Surrogate: a,a,a-Trifluorotoluene	108		"	100		108	80-120			
Surrogate: 4-Bromofluorobenzene	104		"	100		104	80-120			

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
03/28/05 11:40

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EC52408 - General Preparation (Prep)

Blank (EC52408-BLK1) Prepared: 03/23/05 Analyzed: 03/24/05

% Moisture ND 0.1 %

Duplicate (EC52408-DUP1) Source: 5C22009-01 Prepared: 03/23/05 Analyzed: 03/24/05

% Moisture 2.9 0.1 % 3.0 3.39 20

Batch EC52801 - Water Extraction

Blank (EC52801-BLK1) Prepared & Analyzed: 03/25/05

Chloride ND 0.500 mg/kg

LCS (EC52801-BS1) Prepared & Analyzed: 03/25/05

Chloride 10.5 mg/L 10.0 105 80-120

Calibration Check (EC52801-CCV1) Prepared & Analyzed: 03/25/05

Chloride 10.5 mg/L 10.0 105 80-120

Duplicate (EC52801-DUP1) Source: 5C22007-02 Prepared & Analyzed: 03/25/05

Chloride 44700 2500 mg/kg 44800 0.223 20

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
03/28/05 11:40

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:

3-28-05

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

Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sandra Sanchez, Lab Tech.

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

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

Client: Highlander Env.

Date/Time: 3/23/05 2:00

Order #: SC23014

Initials: CR

Sample Receipt Checklist

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

Other observations:

Variance Documentation:

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

Corrective Action Taken:

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 Tavaroz

PROJECT NO.:

1469

PROJECT NAME:

P060/Plains Knight #1 Tank Battery

LAB I.D. NUMBER

DATE

TIME

MATRIX

COMP.

GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

PRESERVATIVE METHOD

HCL

HNO3

ICE

NONE

MTBE 8080/808

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. 8240/8260/824

GC-MS Semi. Vol. 8270/825

PCB's 8080/808

Pest. 808/808

BOD, TSS, pH, TDS, Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

PAGE:

OF:

ANALYSIS REQUEST

(Circle or Specify Method No.)

RELINQUISHED BY: (Signature)

Date:

Time:

RELINQUISHED BY: (Signature)

Date:

Time:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVING LABORATORY:

ADDRESS:

CITY:

STATE:

ZIP:

CONTACT:

PHONE:

RECEIVED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

DATE: 03-23-05

TIME: 1355

SAMPLED BY: (Print & Sign)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

FEDEX

BUS

AIRBILL #

HAND DELIVERED

UPS

OTHER:

HIGHLANDER CONTACT PERSON:

Ike Tavaroz

Results by:

RUSH Charges

Authorized:

Yes

No

SAMPLE CONDITION WHEN RECEIVED:

4.0°C 40zgbss on ice

MATRIX:

W-Water

A-Air

SD-Solid

S-Salt

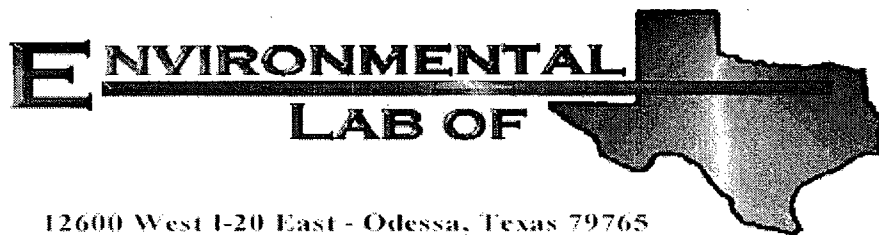
SL-Sludge

O-Other

REMARKS:

Analysis of Sampling

4/7/2005



12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavaréz

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ Plains Knight #1 Tank Battery

Project Number: 1469

Location: Lea County, NM

Lab Order Number: 5D11010

Report Date: 04/15/05

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
04/15/05 07:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Area #2 (4.0') BEB	5D11010-01	Soil	04/07/05 15:45	04/11/05 14:50
Area #2 (6.0') BEB	5D11010-02	Soil	04/07/05 15:50	04/11/05 14:50
Area #5 (2.0') BEB	5D11010-04	Soil	04/07/05 14:40	04/11/05 14:50
Area #5 (4.0') BEB	5D11010-05	Soil	04/07/05 14:45	04/11/05 14:50

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
04/15/05 07:44

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Area #2 (4.0') BEB (5D11010-01) Soil									
Chloride	800	25.0	mg/kg	50	ED51409	04/14/05	04/14/05	EPA 300.0	
Area #2 (6.0') BEB (5D11010-02) Soil									
Chloride	1180	50.0	mg/kg	100	ED51409	04/14/05	04/14/05	EPA 300.0	
Area #5 (2.0') BEB (5D11010-04) Soil									
Chloride	1570	50.0	mg/kg	100	ED51409	04/14/05	04/14/05	EPA 300.0	
Area #5 (4.0') BEB (5D11010-05) Soil									
Chloride	2220	50.0	mg/kg	100	ED51409	04/14/05	04/14/05	EPA 300.0	

Environmental Lab of Texas

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Page 2 of 4

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
04/15/05 07:44

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 ED51409 - Water Extraction

Blank (ED51409-BLK1)

Prepared & Analyzed: 04/14/05

Chloride	ND	0.500	mg/kg							
----------	----	-------	-------	--	--	--	--	--	--	--

LCS (ED51409-BS1)

Prepared & Analyzed: 04/14/05

Chloride	10.9		mg/L	10.0		109	80-120			
----------	------	--	------	------	--	-----	--------	--	--	--

Calibration Check (ED51409-CCV1)

Prepared & Analyzed: 04/14/05

Chloride	10.3		mg/L	10.0		103	80-120			
----------	------	--	------	------	--	-----	--------	--	--	--

Duplicate (ED51409-DUP1)

Source: SD11012-01

Prepared & Analyzed: 04/14/05

Chloride	23.2	5.00	mg/kg		20.0			14.8	20	
----------	------	------	-------	--	------	--	--	------	----	--

Environmental Lab of Texas

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Page 3 of 4

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946
Reported:
04/15/05 07:44

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:

4/15/2005

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

Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
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.

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Environmental Lab of Texas

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Page 4 of 4

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

Client: Highlander Env.

Date/Time: 04-11-05 @ 1450

Order #: 5 D11010

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	3.5	C
Shipping container/cooler in good condition?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Custody Seals intact on shipping container/cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not present	
Custody Seals intact on sample bottles?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not present	
Chain of custody present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sample Instructions complete on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Chain of Custody signed when relinquished and received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Chain of custody agrees with sample label(s)	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Container labels legible and intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Samples in proper container/bottle?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Samples properly preserved?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sample bottles intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sufficient sample amount for indicated test?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable	

Other observations:

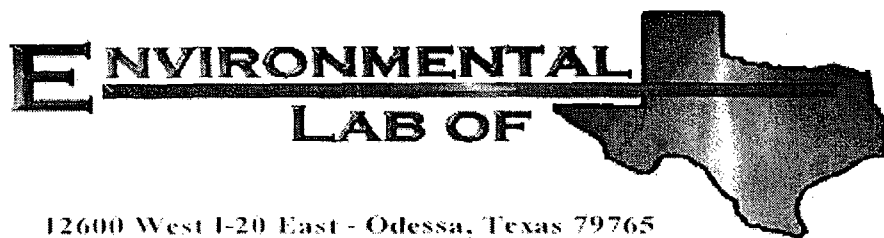
Variance Documentation:

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

Regarding: _____

Corrective Action Taken:

Analysis of Sampling
9/09/2005



12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavaréz

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ Plains Knight #1 Tank Battery

Project Number: 1469

Location: Lea Co., NM

Lab Order Number: 5113013

Report Date: 09/15/05

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
09/15/05 17:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1 (5.0'-6.0')	5113013-01	Soil	09/09/05 00:00	09/13/05 16:00
BH-1 (10.0'-11.0')	5113013-02	Soil	09/09/05 00:00	09/13/05 16:00
BH-1 (15.0'-16.0')	5113013-03	Soil	09/09/05 00:00	09/13/05 16:00
BH-2 (5.0'-6.0')	5113013-04	Soil	09/09/05 00:00	09/13/05 16:00
BH-2 (10.0'-11.0')	5113013-05	Soil	09/09/05 00:00	09/13/05 16:00
BH-2 (15.0'-16.0')	5113013-06	Soil	09/09/05 00:00	09/13/05 16:00

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
09/15/05 17:11

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 (5.0'-6.0') (5113013-01) Soil									
Chloride	14.0	5.00	mg/kg	10	E151507	09/14/05	09/14/05	EPA 300.0	
BH-1 (10.0'-11.0') (5113013-02) Soil									
Chloride	9.31	5.00	mg/kg	10	E151507	09/14/05	09/14/05	EPA 300.0	
BH-1 (15.0'-16.0') (5113013-03) Soil									
Chloride	9.73	5.00	mg/kg	10	E151507	09/14/05	09/14/05	EPA 300.0	
BH-2 (5.0'-6.0') (5113013-04) Soil									
Chloride	61.0	5.00	mg/kg	10	E151507	09/14/05	09/14/05	EPA 300.0	
BH-2 (10.0'-11.0') (5113013-05) Soil									
Chloride	59.7	5.00	mg/kg	10	E151507	09/14/05	09/14/05	EPA 300.0	
BH-2 (15.0'-16.0') (5113013-06) Soil									
Chloride	99.3	5.00	mg/kg	10	E151507	09/14/05	09/14/05	EPA 300.0	

Environmental Lab of Texas

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Page 2 of 4

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
09/15/05 17:11

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 EI51507 - Water Extraction

Blank (EI51507-BLK1)

Prepared & Analyzed: 09/14/05

Chloride	ND	0.500	mg/kg							
----------	----	-------	-------	--	--	--	--	--	--	--

LCS (EI51507-BS1)

Prepared & Analyzed: 09/14/05

Chloride	8.62		mg/L	10.0		86.2	80-120			
----------	------	--	------	------	--	------	--------	--	--	--

Calibration Check (EI51507-CCV1)

Prepared & Analyzed: 09/14/05

Chloride	9.06		mg/L	10.0		90.6	80-120			
----------	------	--	------	------	--	------	--------	--	--	--

Duplicate (EI51507-DUP1)

Source: 5109001-01

Prepared & Analyzed: 09/14/05

Chloride	801	10.0	mg/kg		796			0.626	20	
----------	-----	------	-------	--	-----	--	--	-------	----	--

Environmental Lab of Texas

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Page 3 of 4

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

Project: Pogo/ Plains Knight #1 Tank Battery
Project Number: 1469
Project Manager: Ike Tavarez

Fax: (432) 682-3946
Reported:
09/15/05 17:11

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:

9/15/2005

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.

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Environmental Lab of Texas

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Page 4 of 4

Environmental Lab of Texas

Variance / Corrective Action Report – Sample Log-In

Client: Highlander

Date/Time: 9/13/05 11:00

Order #: 5I13013

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	3.0 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:



APPENDIX C

District I - (505) 393-6161
P.O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 746-1283
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 Pot INC	Contact GARY WEILS
Address EUNICE NM.	Telephone No. 505-394-2246
Facility Name PLAINS KNIGHT #1	Facility Type BATTERY

Surface Owner Ricky Sog Doom	Mineral Owner	Lease No. 35033
--	---------------	---------------------------

LOCATION OF RELEASE

Unit Letter L	Section 23	Township 24S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County LEA
-------------------------	----------------------	------------------------	---------------------	---------------	------------------	---------------	----------------	----------------------

NATURE OF RELEASE

Type of Release OIL	Volume of Release 7	Volume Recovered 0
Source of Release RAN STORAGE TANK OVER	Date and Hour of Occurrence 3-14-15-00	Date and Hour of Discovery 3/14 10:00 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? GARY WINK	
By Whom? GARY WEILS	Date and Hour 3/14/00 1:14 PM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impinging the Watercourse.	

If a Watercourse was Impinged, Describe Pollu (Attach Additional Sheets if Necessary)

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

LEFT EQUALIZER VALVE ON TANK CLOSED - OPEN VALVE

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

50' X 3' WIDE AREA IN FRONT OF TANK - ALL OIL SPREAD FRESH DIRT

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC marked as "Final Report" does not relieve the operator of liability should these operations have failed to adequately investigate and immediately containment that pose a threat to ground water, surface water, human health or the environment. In addition, NMOC 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 [Signature]	OIL CONSERVATION DIVISION	
Printed Name GARY WEILS	Approved by District Supervisor	
Title FIELD SERVICE MAN	Approval Date	Expiration Date
Date 3/14/00	Phone 915-631-0134	Conditions of Approval: Attached <input type="checkbox"/>

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: Plains Knight #1	Facility Type: Tank Battery

Surface Owner: <u>Becky Doom</u>	Mineral Owner	Lease No. 35033
----------------------------------	---------------	-----------------

LOCATION OF RELEASE

Unit Letter L	Section\ 23	Township 24S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
------------------	----------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

NATURE OF RELEASE

Type of Release Oil	Volume of Release 7 barrels	Volume Recovered 0 barrels
Source of Release Tank (overflow)	Date and Hour of Occurrence 3/14/00	Date and Hour of Discovery 3/14/00 10:00 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Gary Wink, NMOCD	
By Whom? Gary Wells	Date and Hour 3/14/00 1:14 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*


Describe Cause of Problem and Remedial Action Taken.*

Oil tank overflow – left equalizer valve on tank closed. To stop overflow, the valve was opened.

Describe Area Affected and Cleanup Action Taken.*

Released 7 barrels of oil and none was recovered. Oil was contained south of the firewall and breached on the northeast end of the tank battery. At the tank battery, the soil impact measured approximately 55' x 4'. The impacted area off-site measured approximately 100' x 60'. The spill area was assessed and excavated to remove soil exceeding the RRAL. In addition, boreholes were installed to define the chloride extents. The final confirmation samples showed TPH and BTEX levels below the RRAL. 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: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Ike Tavarez (AGENT for Pogo)	Approved by District Supervisor:		
Title: Senior Geologist	Approval Date:	Expiration Date:	
E-mail Address: itavarez@hec-enviro.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 10/24/05	Phone: (432) 425-3878		

* Attach Additional Sheets If Necessary