



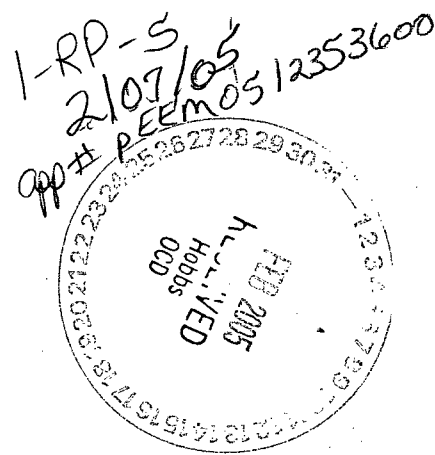
Highlander Environmental Corp.

Midland, Texas

February 2, 2005

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

HOBBS
1A-005



RE: REVISED Work Plan for the Spill at the Pogo Producing Company, C. E. Lamunyon, Well #49 Flow Line Leak, Unit Letter H, 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, which occurred at the Pogo Producing Company (Pogo) C.E. Lamunyon Well #49 flow line in Lea County, New Mexico (Site). The Site is located in Section 21, Township 23 South, Range 37 East. The State of New Mexico C-141 (Initial), Site information, contacts and ranking criteria are shown in Appendix A. The Site is shown in Figure 1. This report summarizes the field activities and proposed closure activities for the Site.

Previous Reporting

Highlander has submitted a report "Assessment Report for the Spill at the Pogo Producing Company, C. E. Lamunyon, Well #49, Flow Line Leak, Unit Letter H, Section 21, Township 23 South, Range 37 East, Lea County, New Mexico", dated August 4, 2004. As discussed below, the assessment report summarizes the activities performed from July 12, to July 15, 2004. In addition, several remedial options for the impacted sand pockets were being evaluated by Pogo Producing Company. The remedial options evaluated consisted of capping, excavation or onsite soil remediation. Once these options were evaluated, a work plan was to be submitted for your review.

Groundwater and Regulatory

During the Site inspection, no water wells, windmills, surface water or playa lakes were noted in the vicinity of the Site. The State of New Mexico Well Reports did not show any water wells in Section 21. However, water wells were shown in Section 9, 16, and 32 with an average groundwater depth of approximately 106' to 115' below surface. In addition, the U.S. Geological Survey (USGS) groundwater resource data base showed two water wells located in Section 28 and 32, with depth to water of 117' and 97', respectively. The well located in

Section 28 is located south of Section 21. The State of New Mexico Well Reports and the USGS Reports are shown in Appendix B.

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 on the regional groundwater data, the proposed RRAL for TPH is 5,000 mg/kg.

Ranking Criteria and Proposed RRAL

Ranking Score		0-9
Acceptable Soil RRAL (mg/kg)		
Benzene	Total Benzene	TPH
10	50	1,000

Background

On June 30, 2004, the spill occurred when the flow line leaked due to corrosion and age of the pipe. The spill occurred onto native soil between Well #49 and the tank battery. The spill released approximately 23 barrels of fluid which consisted of oil and produced water. On July 1, 2004, Pogo discovered and repaired the flow line leak. Approximately 10 barrels of fluid was recovered from the spill area. The spill area measured approximately 30' to 40' wide by 215' long. The spill area is shown in Figure 2.

Previous Assessment

From July 12, to July 15, 2004, Highlander supervised the excavation of the impacted soils. To remove the saturated soil impact, the area was excavated to a depth of approximately 1.0' to 2.0' below surface. Below this sand layer, a caliche formation was encountered. Approximately 1.0' of the caliche material was excavated. The excavation is shown in Figure 2. A total of 1,658 cubic yards of material was transported and disposed at Sundance Services Inc, located in Eunice, New Mexico.

Once the caliche was exposed, the bottom of the excavation showed several circular sand pockets within the caliche formation, which were impacted with hydrocarbon. Approximately 50 sand pockets were observed in the excavated area ranging from 1' to 5' in diameter. To assess some of the sand pockets, test trenches (T-1, T-2, T-3, T-4 and T-5) were installed in the pockets to define the vertical extents. In addition, two test trenches (T-6 and T-7) were installed between the sand pockets in the caliche layer to assess the caliche formation. The located of the test trenches are shown in Figure 3.



Soil samples were placed into laboratory supplied containers and properly preserved during transport. Samples were analyzed for TPH by method SW 846 8015B, selected samples for BTEX by EPA method 602/8021B, and chloride by method SW 846 9253. The soil sample results are shown in Table 1. The laboratory reports and the chain of custody documentation are included in Appendix C.

Soil Sample Results

Sand Pockets

Referring to Table 1, test trenches (T-1, T-2, T-3, T-4 and T-5) installed in the sand pockets showed hydrocarbon impact to the subsurface soils. T-1, T-2 and T-3 showed TPH levels below the RRAL at a depth of 9.0' below the excavation bottom. A slightly deeper impact was encountered in T-4 and T-5 to a depth of 10.0' to 11.0' below excavation bottom. The trenches (T-2, T-3 and T-4) selected for BTEX analysis showed levels above the RRAL in the shallow soils. However, the bottom hole samples (T-2, 11.0'), (T-3, 9.0') and (T-4, 10.0') did not exceed the RRAL for BTEX.

The chloride concentrations ranged from 85.1 mg/kg to 7,660 mg/kg in the areas of test trench (T-1, T-2, T-3, T-4 and T-5). The chloride concentrations encountered in the subsurface soils were all vertically defined. The highest chloride impact was shown in T-1 and T-4 with concentrations of 7,400 mg/kg (7.0') and 7,660 mg/kg (4.0'), respectively. However, the deeper samples chloride levels decreased with depth.

Caliche Bottom

Two trenches (T-6 and T-7) were installed in the caliche formation between the sand pockets. Referring to Table 1, the samples for TPH were all below the method detection limit. The chloride levels detected do not appear to an environmental concern.

Conclusions

The saturated soil has been removed to a depth of approximately 2' to 3' below surface. A total of 1,658 cubic yards of soil was excavated and properly disposed. The bottom of the excavated area showed circular sand pockets impacted with hydrocarbon. Approximately 50 sand pockets were observed in the bottom of the excavated area ranging from 1' to 5' in diameter. Several of the sand pockets were evaluated to define the vertical extents. The test trenches showed TPH and BTEX levels below the RRAL at depths from 9.0' to 11.0' below the excavation bottom. Samples collected from the caliche formation between the sand pockets did not show TPH levels above the method detection limit.

Work Plan

Soil Excavation and Onsite Blending

With NMOCD approval, the remediation option will consist of excavation, blending and sampling. Once the soils are below the RRAL of 5,000 mg/kg, the soil will be placed back into the excavated area. Prior to placing the soil back into the excavation, the chlorides concentration will also be evaluated. As stated, the bottom of the excavated area showed circular sand pockets impacted with hydrocarbon. Approximately 50 or more sand pockets were observed ranging from 1' to 5' in diameter. Instead of excavating each sand pocket, the entire area will be



excavated including the clean caliche found between each pocket to a depth of approximately 9 to 11' below excavation bottom. The blending of all of this material should result in TPH concentrations below the RRAL of 5,000 mg/kg.

Due to the limited area and to evaluate this remedial method, Highlander recommends the remedial activities be performed in 4 separate phases. The total area (60' x 220') will be divided into 4 areas (60' x 55' each). The first phase will involve excavating 1 area (approximately 1,300 cubic yards) and blending the soil over the remainder of the excavation to avoid hauling the soils to the well pad. The blended soils will then be sampled every 75 to 100 cubic yards for TPH, BTEX and chlorides. Once the results are evaluated, the soils below the RRAL of 5,000 mg/kg will be placed back into the excavation. Soil that exceeds the RRAL will be placed on the well pad for additional blending.

After completing this initial phase, this remedial option will be evaluated prior to starting the next phase. Once evaluated, the next phases will be completed. If this remedial option is not applicable, a work plan will be submitted for approval.

Restoration Activities

Once the remedial activities are completed, the remediated area will be graded and seeded for Site restoration.

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

Very truly yours,

Ike Tavaraz *by TMR*

Ike Tavaraz P. G.
Project Manager/Senior Geologist

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



FIGURES

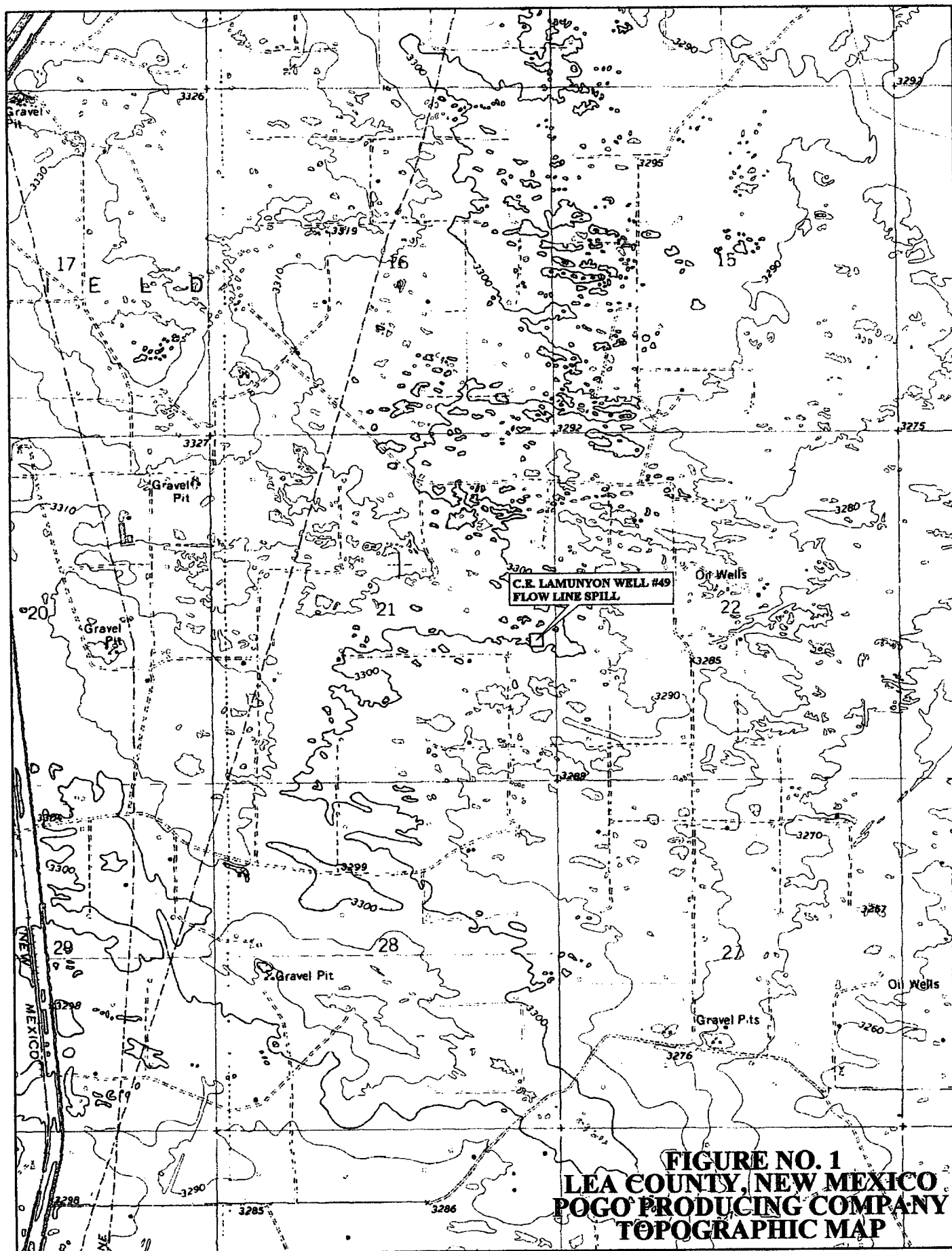
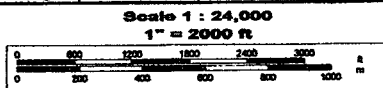
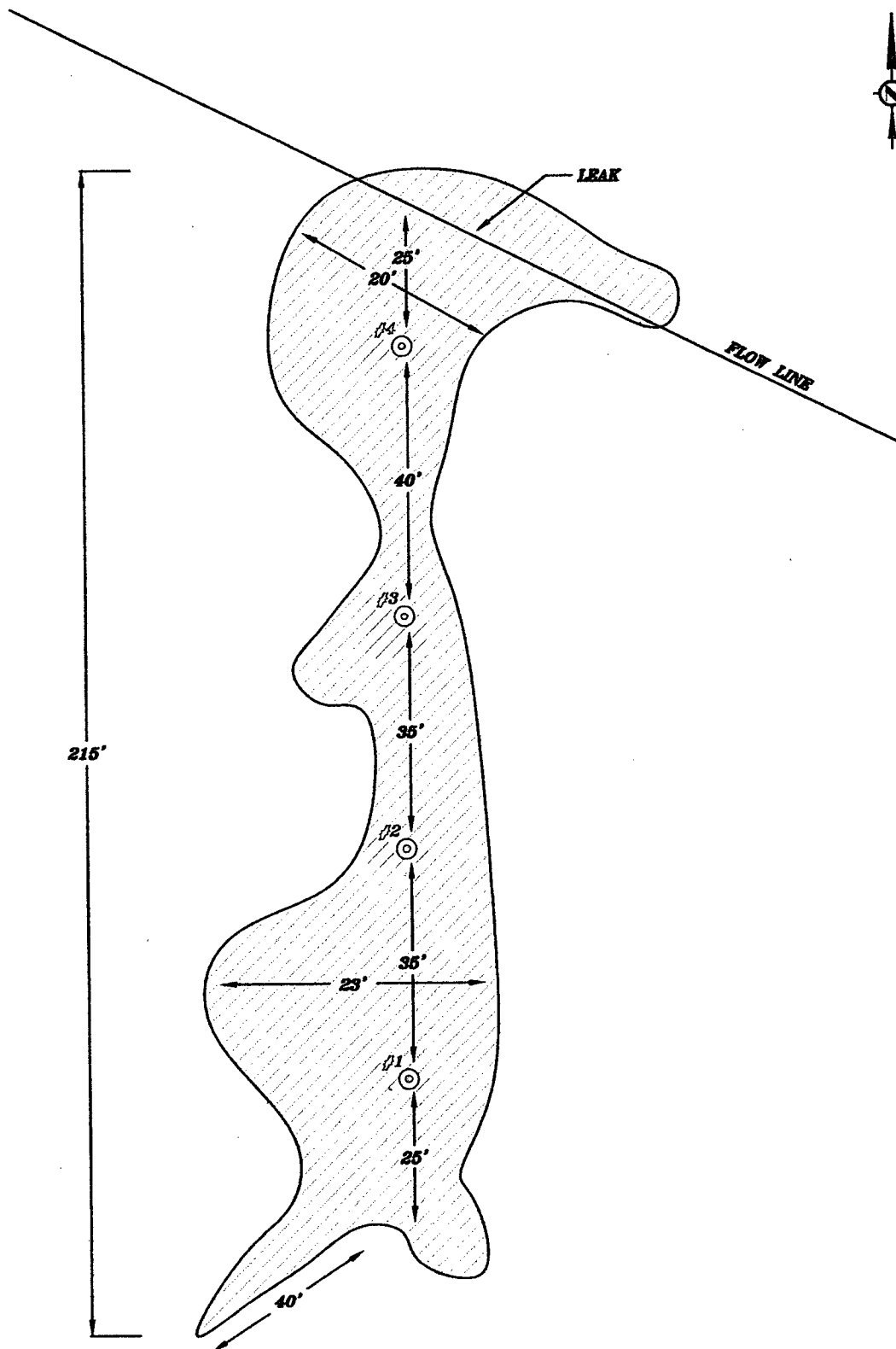


FIGURE NO. 1
LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
TOPOGRAPHIC MAP



© 2002 DeLorme. 3-D TopoQuads ©. Data copyright of content owner.
www.delorme.com





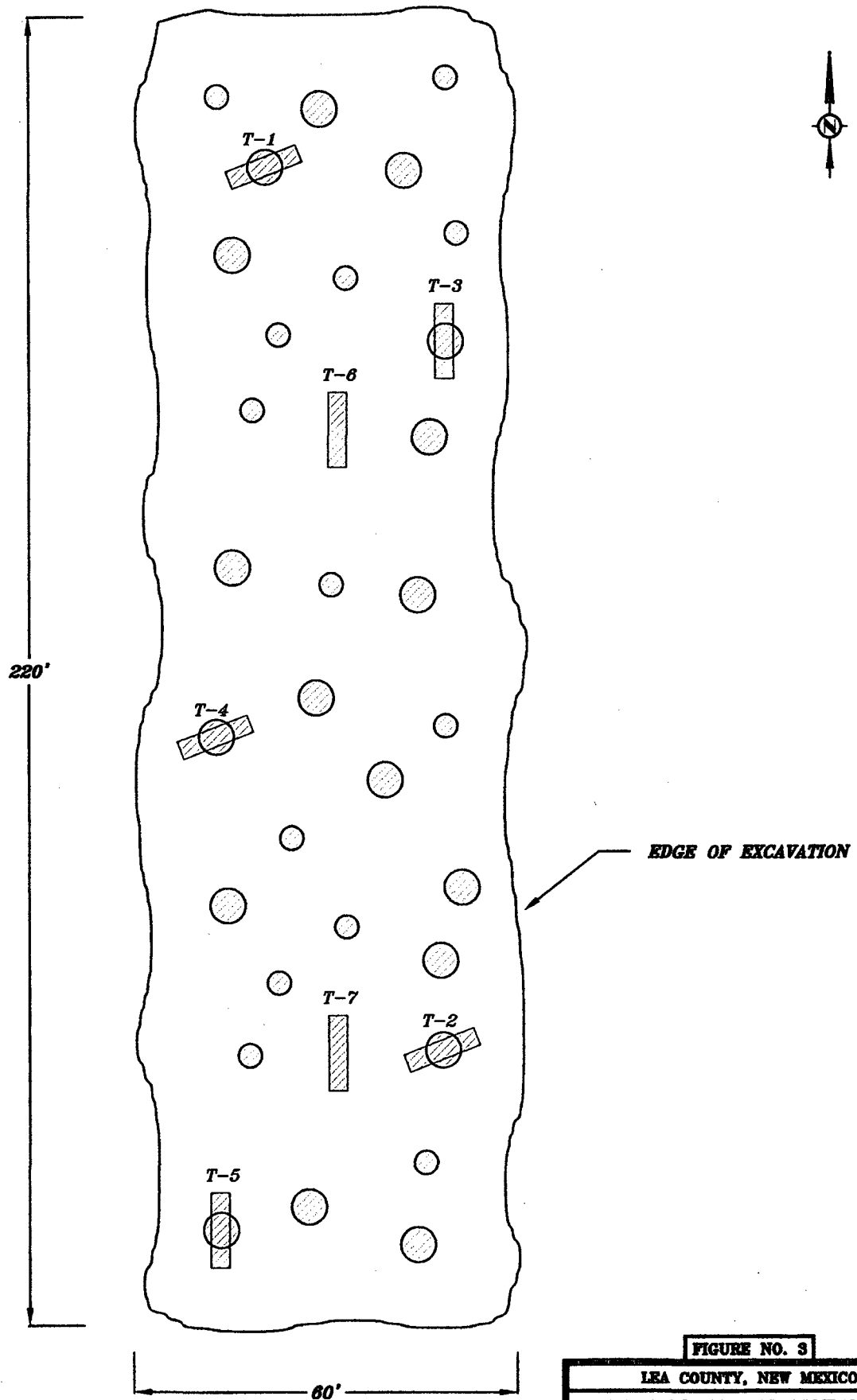
- SPILL AREA
- ⊙ AUGER HOLE LOCATION

NOT TO SCALE

DATE:
7/7/04
DRAWN BY:
JJ
FILE:
C:\P000\3201
40-100K

FIGURE NO. 2

LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
C.E. LAMUNYON WELL #49 LEAK
HIGHLANDER ENVIRONMENTAL CORP. MIDLAND, TEXAS



○ SAND POCKETS 2' - 5' DIAMETER
 ▨ TEST TRENCH

NOT TO SCALE

DATE:
7/29/04
 DESIGNED BY:
JJ
 FILE:
CA/PO20/2201
 49-LEAK ESD

FIGURE NO. 3

LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
C.E. LAMUNYON WELL #49 LEAK EXCAVATION
HIGHLANDER ENVIRONMENTAL CORP. MIDLAND, TEXAS

TABLE

Table 1
Pogo Producing Company
C.E. Lamunyon, Well #49, Flowline Leak
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					
T-1	7/14/04	7.0	2,340	5,290	7,630	-	-	-	-	7,400
T-1	7/14/04	9.0	180	554	734	-	-	-	-	6,810
T-1	7/14/04	11.0	<10	<10	<10	-	-	-	-	106
T-2	7/14/04	6.0	6,600	20,900	27,500	1.68	33.9	58.1	107.3	298
T-2	7/14/04	9.0	142	708	850	-	-	-	-	59
T-2	7/14/04	11.0	<10	<10	<10	<0.025	<0.025	<0.025	<0.025	106
T-3	7/14/04	4.0	3,310	7,590	10,900	-	-	-	-	1,490
T-3	7/14/04	6.0	9,090	20,800	29,900	6.54	87.3	103	160.3	1,810
T-3	7/14/04	9.0	<10	<10	<10	<0.025	<0.025	<0.025	<0.025	42.5
T-4	7/14/04	4.0	2,800	6,250	9,050	-	-	-	-	7,660
T-4	7/14/04	8.0	4,620	10,400	15,000	1.8	41.2	62.7	106.3	3,300
T-4	7/14/04	10.0	21.4	89.2	111	<0.025	<0.025	0.035	0.0611	85.1
T-5	7/14/04	5.0	1,780	7,860	9,640	-	-	-	-	1,060
T-5	7/14/04	7.0	1,700	6,160	7,860	-	-	-	-	596
T-5	7/14/04	9.0	-	-	-	-	-	-	-	276
T-5	7/14/04	11.0	<10	<10	<10	-	-	-	-	106
T-6	7/14/04	1.0	<10	<10	<10	-	-	-	-	21.3
T-6	7/14/04	4.0	<10	<10	<10	-	-	-	-	42.5
T-7	7/14/04	1.0	<10	<10	<10	-	-	-	-	21.3
T-7	7/14/04	3.0	<10	<10	<10	-	-	-	-	21.3

(-) Not Analyzed

APPENDIX A

**General Site Information
and
State of New Mexico
Form C-141**

SITE INFORMATION

General Site Information:

Site:	C.E. Lamunyon #49
Company:	Pogo Producing Company (Arch Petroleum)
Section, Township and Range	Section 21, T23S, R37 E
Unit Letter:	H
Lease Number:	30187
County:	Lea
GPS:	32° 17' 18.4", 103° 09' 35.3"
Surface Owner:	George Weir
Mineral Owner:	Federal, 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 1.2 miles down lease road, turn right (south) 0.5 miles, turn left (east) 0.3 miles to Well Pad (Wyne Crosby Energy Well # 4) Spill location is located aprox. 100' north of well pad

Release Data:

Date Released:	6/30/2004
Type Release:	Oil and water
Source of Contamination:	Flowline leak on ground
Fluid Released:	Estimated 23 barrels
Fluids Recovered:	10 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) 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	
>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 - (505) 393-6161
P.O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
511 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

To: LARRY JOHNSON
7-2-04

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 <u>Arch Petroleum, Inc.</u>	Contact <u>D.L. (LARRY) HAMMONS</u>	
Address <u>P.O. Box 909 Eunice, N.M. 88231</u>	Telephone No. <u>505-394-2246</u> ^{MOB.} <u>432-631-0136</u>	
Report Name <u>C.E. LAMUNYON #49</u>	Facility Type <u>Flow Line (OIL-WTR-GAS)</u>	
Surface Owner	Mineral Owner	Lease No. <u>Feed # NMLC H03018</u>

LOCATION OF RELEASE

Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County	
<u>H</u>	<u>21</u>	<u>23S</u>	<u>37E</u>	<u>2150'</u>	<u>FNL</u>	<u>550'</u>	<u>FEL</u>	<u>Lea</u>

NATURE OF RELEASE

Type of Release <u>OIL, water, GAS (14 oil - 9 wtr)</u>	Volume of Release <u>Est. 23 bbls</u>	Volume Recovered <u>10 bbls</u>
Name of Release <u>Flow Line Leak</u>	Date and Hour of Occurrence <u>6-30-04 5:00pm</u>	Date and Hour of Discovery <u>7-1-04 5:00pm</u>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <u>Buddy Hill</u>	
By Whom? <u>D.L. HAMMONS</u>	Date and Hour <u>7-1-04 7:30pm.</u>	
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. (Attach Additional Sheets If Necessary)

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

Flowline Leak - due to wear/age. Replace joints that are bad.

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

will evaluate spill & clean up accordingly.
Highlander was contacted on 7-2-04 & will evaluate clean up program.

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 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>D.L. Hammons</u>	OIL CONSERVATION DIVISION		
Printed Name: <u>D.L. HAMMONS</u>	Approved by District Supervisor:	Expiration Date:	
Title <u>Field Foreman</u>	Approval Date:	Attached <input type="checkbox"/>	
Date <u>7-2-04</u>	Phone: <u>432-631-0136</u>	Conditions of Approval:	

Attachment I Incident Report

Body Part Injured:	<input type="checkbox"/> Head, Face, Eye <input type="checkbox"/> Finger, Hand, Arm,	<input type="checkbox"/> Chest, Neck <input type="checkbox"/> Groin, Abdomen	<input type="checkbox"/> Foot, Toes, Ankle <input type="checkbox"/> Respiratory System <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Back <input type="checkbox"/> Leg
Type of Injury:	<input type="checkbox"/> Amputation <input type="checkbox"/> Fracture, Contusion <input type="checkbox"/> Occupational Illness	<input type="checkbox"/> Burn <input type="checkbox"/> Imbedded Body <input type="checkbox"/> Puncture	<input type="checkbox"/> Sprain, Strain <input type="checkbox"/> Laceration, Abrasion <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Dermatitis, Irritation <input type="checkbox"/> Inhalation
Type of Accident:	<input type="checkbox"/> Trip, Slip, Fall <input type="checkbox"/> Overexertion <input type="checkbox"/> Caught in, on, or between	<input type="checkbox"/> Exposure -vapor <input type="checkbox"/> Splash, Spray	<input type="checkbox"/> Temperature Extreme <input type="checkbox"/> Aggravate Exist. Inj. <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Contact by or with <input type="checkbox"/> Struck by or against
Type of first aid treatment conducted at the scene				

PROPERTY DAMAGE (This section must be completed only for property damage incidents)

Clearly describe how and to what extent the property was damaged.

AN AREA App. 235' long x 40' wide - WAS damaged due to a Flow Line Leak - Releasing App. 23 bbls (14 oil - 9 wtr) of fluid onto a sandy surface.

SPILL OR RELEASE INCIDENTS (This section must be completed only for spill or release incidents)

Material spilled or released	Oil & Produce water (14 oil, 9 wtr)		
Volume of the spill (estimate)	23 bbls	Nature of the damage	Surface - Land.

ALL INCIDENTS (This section must be completed for all incidents)

LIKELIHOOD TO RECUR

<input type="checkbox"/> Rare	(Probably won't recur)
<input checked="" type="checkbox"/> Occasional	(Next 1-10 years)
<input type="checkbox"/> Frequent	(Within next year)

Witnesses:

--	--	--	--

This report prepared by: (signed)	<i>D.L. Hammons</i>	Date	7-2-04
Print Name	D.L. (Larry) Hammons	Title	Field Foreman

Distribution: Pogo Health, Safety and Environmental Manager

DATE ISSUED: 08-03-01	REVISED DATE:	PAGE 11 of 12
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Attachment I Incident Report

GENERAL INFORMATION (This section must be completed for all incidents)

Date of Incident 7-1-04

Time of Incident LEAK

Location of Incident C.E. LAMUNYON #49
F.L.

Type of Incident (Check all that apply)

☐ Injury

☒ Property Damage

☐ Fire or Explosion

☐ Spill or Release

☐ Near Miss

ALL INCIDENTS (This section must be completed for all incidents)

Clearly describe how the incident occurred

Flow line leak. Due to wear-age & corrosion.

List any factors that may have contributed to the incident.

Age of Flow line.

What action was or will be taken to prevent recurrence?

Replace pipe in area of leak.

INJURY (This section must be completed for injury incidents)

Employee's Name SSN Number Job Title

Employee's Address Home Phone:

Location sent for medical treatment:

DATE ISSUED

08-03-01

REVISED DATE

PAGE

10 of 12

APPENDIX B

Well Reports & Ground Water Levels

Site: Sec 21
T23S-R37E

36E

22S 38E

22S 37E

36E

23S 37E 23S 38E

Sec 9
Sec 16
Sec 32

36E

24S 37E 24S 38E

36E

25S 37E 25S 38E

**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 07/26/2004

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

Water Resources

Data Category:
Ground WaterGeographic Area:
New Mexico

go

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 321617103102901

Save file of selected sites to local disk for future upload

USGS 321617103102901 23S.37E.28.133424

Available data for this site

Ground-water: Levels

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

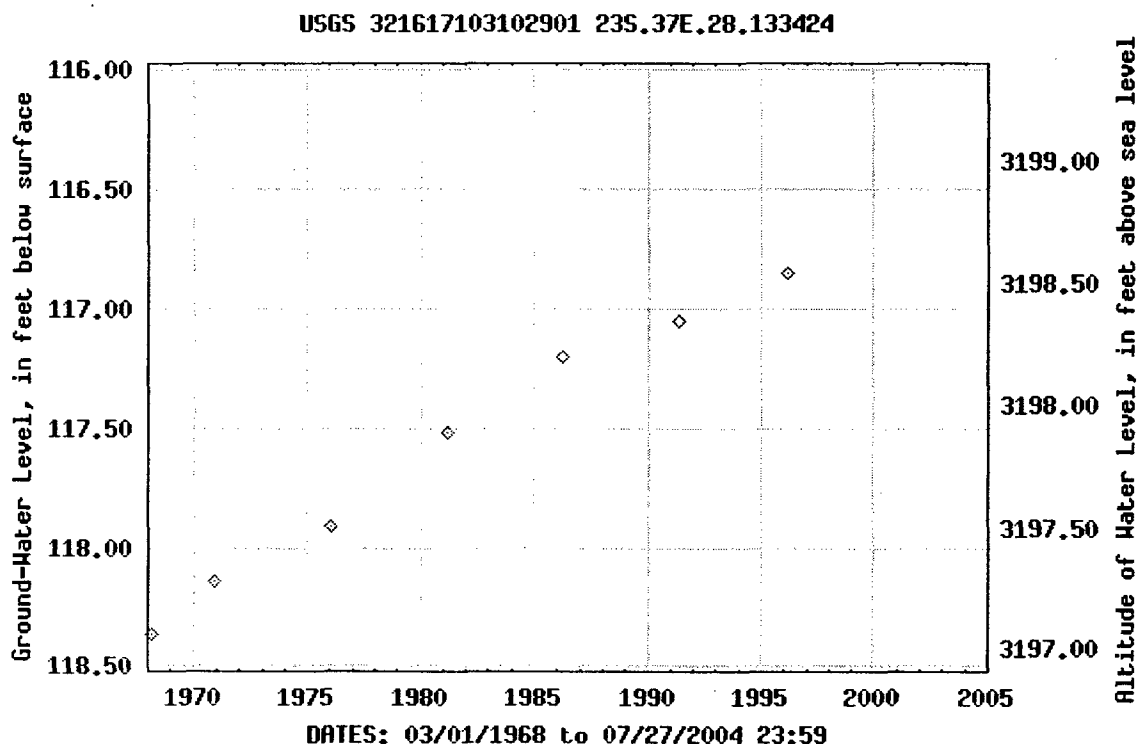
Latitude 32°16'17", Longitude 103°10'29" NAD27

Gage datum 3,315.40 feet above sea level NGVD29

The depth of the well is 150 feet below land surface.

This well is completed in ALLUVIUM,BOLSON DEPOSITS AND OTHER
SURFACE DEPOSITS (110AVMB)

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

Data Category:
Ground WaterGeographic Area:
New Mexico

go

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 321543103110802

Save file of selected sites to local disk for future upload

USGS 321543103110802 23S.37E.32.12240A

Available data for this site

Ground-water: Levels

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

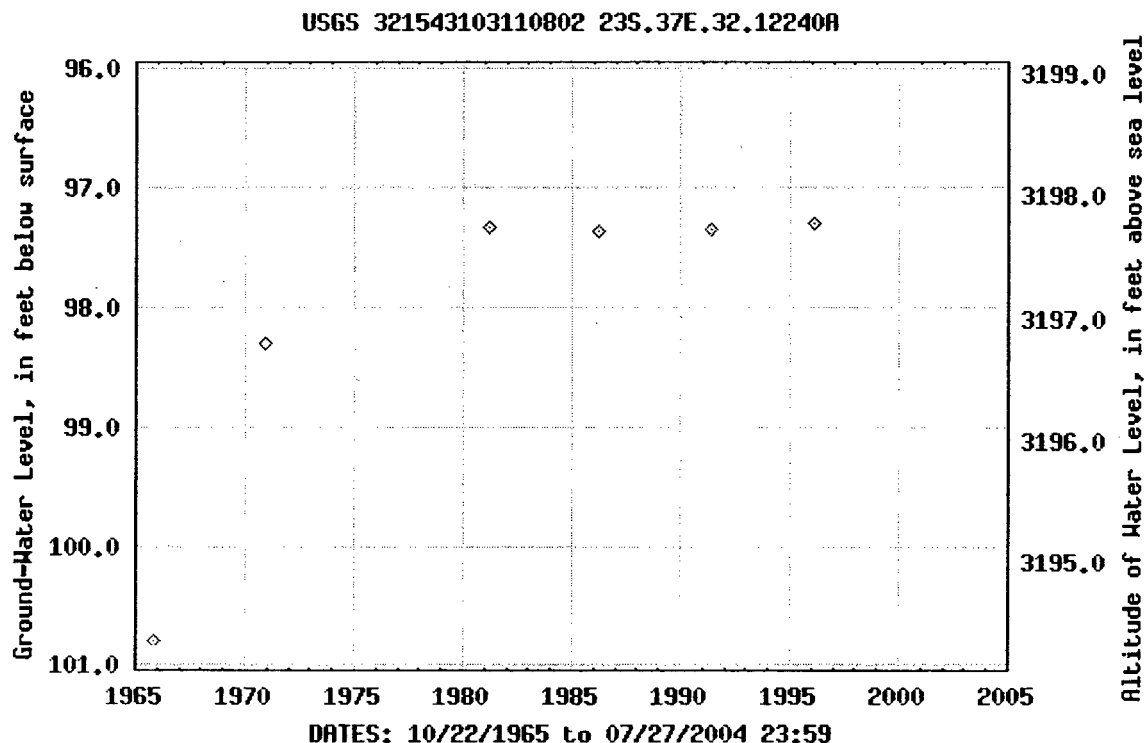
Latitude 32°15'43", Longitude 103°11'08" NAD27

Gage datum 3,295.10 feet above sea level NGVD29

The depth of the well is 220 feet below land surface.

This well is completed in ALLUVIUM, BOLSON DEPOSITS AND OTHER
SURFACE DEPOSITS (110AVMB)

Output formats

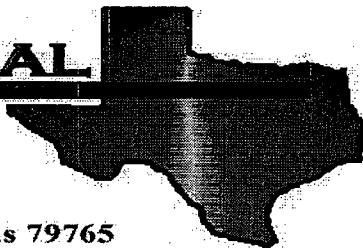
[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

APPENDIX C

Analytical Results

ENVIRONMENTAL LAB OF



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/ C. E. Lamunyen #49, Spill

Project Number: 2201

Location: Lea Co., NM

Lab Order Number: 4G16016

Report Date: 07/22/04

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
07/22/04 10:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T-1 (7.0')	4G16016-01	Soil	07/14/04 00:00	07/16/04 16:10
T-1 (9.0')	4G16016-02	Soil	07/14/04 00:00	07/16/04 16:10
T-1 (11.0')	4G16016-03	Soil	07/14/04 00:00	07/16/04 16:10
T-2 (6.0')	4G16016-04	Soil	07/14/04 00:00	07/16/04 16:10
T-2 (9.0')	4G16016-06	Soil	07/14/04 00:00	07/16/04 16:10
T-2 (11.0')	4G16016-07	Soil	07/14/04 00:00	07/16/04 16:10
T-3 (4.0')	4G16016-08	Soil	07/15/04 00:00	07/16/04 16:10
T-3 (6.0')	4G16016-09	Soil	07/15/04 00:00	07/16/04 16:10
T-3 (9.0')	4G16016-11	Soil	07/15/04 00:00	07/16/04 16:10
T-4 (4.0')	4G16016-12	Soil	07/15/04 00:00	07/16/04 16:10
T-4 (8.0')	4G16016-13	Soil	07/15/04 00:00	07/16/04 16:10
T-4 (10.0')	4G16016-14	Soil	07/15/04 00:00	07/16/04 16:10
T-5 (5.0')	4G16016-15	Soil	07/15/04 00:00	07/16/04 16:10
T-5 (7.0')	4G16016-16	Soil	07/15/04 00:00	07/16/04 16:10
T-5 (9.0')	4G16016-17	Soil	07/15/04 00:00	07/16/04 16:10
T-5 (11.0')	4G16016-18	Soil	07/15/04 00:00	07/16/04 16:10
T-6 (1.0')	4G16016-19	Soil	07/15/04 00:00	07/16/04 16:10
T-6 (4.0')	4G16016-21	Soil	07/15/04 00:00	07/16/04 16:10
T-7 (1.0')	4G16016-22	Soil	07/15/04 00:00	07/16/04 16:10
T-7 (3.0')	4G16016-23	Soil	07/15/04 00:00	07/16/04 16:10

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
07/22/04 10:57

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-1 (7.0') (4G16016-01) Soil									
Gasoline Range Organics C6-C12	2340	50.0	mg/kg dry	5	EG41904	07/19/04	07/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	5290	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	7630	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		22.4 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		19.8 %	70-130		"	"	"	"	S-06
T-1 (9.0') (4G16016-02) Soil									
Gasoline Range Organics C6-C12	180	10.0	mg/kg dry	1	EG41904	07/19/04	07/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	554	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	734	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		90.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		79.6 %	70-130		"	"	"	"	
T-1 (11.0') (4G16016-03) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EG41904	07/19/04	07/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		74.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		71.8 %	70-130		"	"	"	"	
T-2 (6.0') (4G16016-04) Soil									
Benzene	1.68	0.200	mg/kg dry	200	EG42109	07/20/04	07/20/04	EPA 8021B	
Toluene	33.9	0.200	"	"	"	"	"	"	
Ethylbenzene	58.1	0.200	"	"	"	"	"	"	
Xylene (p/m)	74.9	0.200	"	"	"	"	"	"	
Xylene (o)	32.4	0.200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		149 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		86.3 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	6600	50.0	mg/kg dry	5	EG41904	07/19/04	07/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	20900	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	27500	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		14.3 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		59.0 %	70-130		"	"	"	"	S-06

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Highlander Environmental Corp.
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Midland TX, 79705

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Project Number: 2201
Project Manager: Ike Tavarez

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Reported:
07/22/04 10:57

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-2 (9.0') (4G16016-06) Soil									
Gasoline Range Organics C6-C12	142	10.0	mg/kg dry	1	EG41904	07/19/04	07/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	708	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	850	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		93.6 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		73.8 %	70-130		"	"	"	"	
T-2 (11.0') (4G16016-07) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG42109	07/20/04	07/21/04	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		81.7 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.3 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EG41904	07/19/04	07/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		78.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.2 %	70-130		"	"	"	"	
T-3 (4.0') (4G16016-08) Soil									
Gasoline Range Organics C6-C12	3310	50.0	mg/kg dry	5	EG41904	07/19/04	07/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	7590	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	10900	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		29.2 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		25.8 %	70-130		"	"	"	"	S-06
T-3 (6.0') (4G16016-09) Soil									
Benzene	6.54	0.200	mg/kg dry	200	EG42109	07/20/04	07/20/04	EPA 8021B	
Toluene	87.3	0.200	"	"	"	"	"	"	
Ethylbenzene	103	0.200	"	"	"	"	"	"	
Xylene (p/m)	113	0.200	"	"	"	"	"	"	
Xylene (o)	47.3	0.200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		276 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		95.9 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	9090	50.0	mg/kg dry	5	EG41904	07/19/04	07/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	20800	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	29900	50.0	"	"	"	"	"	"	

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
07/22/04 10:57

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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T-3 (6.0') (4G16016-09) Soil

Surrogate: 1-Chlorooctane		17.7 %	70-130		EG41904	07/19/04	07/19/04	EPA 8015M	S-06
Surrogate: 1-Chlorooctadecane		55.6 %	70-130		"	"	"	"	S-06

T-3 (9.0') (4G16016-11) Soil

Benzene	ND	0.0250	mg/kg dry	25	EG42109	07/20/04	07/20/04	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		81.6 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.3 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		91.6 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		71.2 %	70-130		"	"	"	"	

T-4 (4.0') (4G16016-12) Soil

Gasoline Range Organics C6-C12	2800	50.0	mg/kg dry	5	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	6250	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	9050	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		29.2 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		24.0 %	70-130		"	"	"	"	S-06

T-4 (8.0') (4G16016-13) Soil

Benzene	1.80	0.200	mg/kg dry	200	EG42109	07/20/04	07/20/04	EPA 8021B	
Toluene	41.2	0.200	"	"	"	"	"	"	
Ethylbenzene	62.7	0.200	"	"	"	"	"	"	
Xylene (p/m)	75.1	0.200	"	"	"	"	"	"	
Xylene (o)	31.2	0.200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		172 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		98.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	4620	50.0	mg/kg dry	5	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	10400	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	15000	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		38.0 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		34.4 %	70-130		"	"	"	"	S-06

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Highlander Environmental Corp.
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Project Number: 2201
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
07/22/04 10:57

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-4 (10.0') (4G16016-14) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG42109	07/20/04	07/21/04	EPA 8021B	
Toluene	J [0.0222]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	0.0350	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.0611	0.0250	"	"	"	"	"	"	
Xylene (o)	J [0.0199]	0.0250	"	"	"	"	"	"	J
Surrogate: a,a,a-Trifluorotoluene		81.6 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.5 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	21.4	10.0	mg/kg dry	1	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	89.2	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	111	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		97.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		77.4 %	70-130		"	"	"	"	
T-5 (5.0') (4G16016-15) Soil									
Gasoline Range Organics C6-C12	1780	50.0	mg/kg dry	5	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	7860	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	9640	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		20.2 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		25.2 %	70-130		"	"	"	"	S-06
T-5 (9.0') (4G16016-17) Soil									
Gasoline Range Organics C6-C12	1700	50.0	mg/kg dry	5	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	6160	50.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	7860	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		22.8 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		25.4 %	70-130		"	"	"	"	S-06
T-5 (11.0') (4G16016-18) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		80.6 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		72.0 %	70-130		"	"	"	"	

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Project: Pogo/ C. E. Lamunyen #49, Spill
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Project Manager: Ike Tavarez

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Reported:
07/22/04 10:57

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-6 (1.0') (4G16016-19) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		76.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.2 %	70-130		"	"	"	"	
T-6 (4.0') (4G16016-21) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		76.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		73.6 %	70-130		"	"	"	"	
T-7 (1.0') (4G16016-22) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EG41904	07/19/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		100 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		71.8 %	70-130		"	"	"	"	
T-7 (3.0') (4G16016-23) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EG41910	07/20/04	07/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		88.6 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		72.4 %	70-130		"	"	"	"	

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Reported:
07/22/04 10:57

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-1 (7.0') (4G16016-01) Soil									
Chloride	7400	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	89.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-1 (9.0') (4G16016-02) Soil									
Chloride	6810	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	88.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-1 (11.0') (4G16016-03) Soil									
Chloride	106	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	91.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-2 (6.0') (4G16016-04) Soil									
Chloride	298	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	92.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-2 (9.0') (4G16016-06) Soil									
Chloride	59.1	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	93.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-2 (11.0') (4G16016-07) Soil									
Chloride	106	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	87.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-3 (4.0') (4G16016-08) Soil									
Chloride	1490	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	88.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-3 (6.0') (4G16016-09) Soil									
Chloride	1810	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	91.0		%	1	EG42001	07/19/04	07/19/04	% calculation	

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-3 (9.0') (4G16016-11) Soil									
Chloride	42.5	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	95.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-4 (4.0') (4G16016-12) Soil									
Chloride	7660	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	87.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-4 (8.0') (4G16016-13) Soil									
Chloride	3300	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	90.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-4 (10.0') (4G16016-14) Soil									
Chloride	85.1	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	96.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-5 (5.0') (4G16016-15) Soil									
Chloride	1060	20.0	mg/kg Wet	2	EG41907	07/19/04	07/19/04	SW 846 9253	
% Solids	86.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-5 (7.0') (4G16016-16) Soil									
Chloride	596	20.0	mg/kg Wet	2	EG42015	07/19/04	07/20/04	SW 846 9253	
T-5 (9.0') (4G16016-17) Soil									
Chloride	276	20.0	mg/kg Wet	2	EG42015	07/19/04	07/20/04	SW 846 9253	
% Solids	93.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-5 (11.0') (4G16016-18) Soil									
Chloride	106	20.0	mg/kg Wet	2	EG42015	07/19/04	07/20/04	SW 846 9253	
% Solids	95.0		%	1	EG42001	07/19/04	07/19/04	% calculation	

Environmental Lab of Texas

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Page 8 of 17

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
07/22/04 10:57

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T-6 (1.0') (4G16016-19) Soil									
Chloride	21.3	20.0	mg/kg Wet	2	EG42015	07/19/04	07/20/04	SW 846 9253	
% Solids	90.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-6 (4.0') (4G16016-21) Soil									
Chloride	42.5	20.0	mg/kg Wet	2	EG42015	07/19/04	07/20/04	SW 846 9253	
% Solids	96.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-7 (1.0') (4G16016-22) Soil									
Chloride	21.3	20.0	mg/kg Wet	2	EG42015	07/19/04	07/20/04	SW 846 9253	
% Solids	93.0		%	1	EG42001	07/19/04	07/19/04	% calculation	
T-7 (3.0') (4G16016-23) Soil									
Chloride	21.3	20.0	mg/kg Wet	2	EG42015	07/19/04	07/20/04	SW 846 9253	
% Solids	96.0		%	1	EG42001	07/19/04	07/19/04	% calculation	

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
07/22/04 10:57

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 EG41904 - Solvent Extraction (GC)

Blank (EG41904-BLK1)

Prepared & Analyzed: 07/19/04

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	42.9		mg/kg	50.0		85.8	70-130			
Surrogate: 1-Chlorooctadecane	36.7		"	50.0		73.4	70-130			

LCS (EG41904-BS1)

Prepared & Analyzed: 07/19/04

Gasoline Range Organics C6-C12	457	10.0	mg/kg wet	500		91.4	75-125			
Diesel Range Organics >C12-C35	475	10.0	"	500		95.0	75-125			
Total Hydrocarbon C6-C35	932	10.0	"	1000		93.2	75-125			
Surrogate: 1-Chlorooctane	49.4		mg/kg	50.0		98.8	70-130			
Surrogate: 1-Chlorooctadecane	35.7		"	50.0		71.4	70-130			

Calibration Check (EG41904-CCV1)

Prepared & Analyzed: 07/19/04

Gasoline Range Organics C6-C12	435		mg/kg	500		87.0	80-120			
Diesel Range Organics >C12-C35	448		"	500		89.6	80-120			
Total Hydrocarbon C6-C35	883		"	1000		88.3	80-120			
Surrogate: 1-Chlorooctane	54.9		"	50.0		110	70-130			
Surrogate: 1-Chlorooctadecane	37.5		"	50.0		75.0	70-130			

Matrix Spike (EG41904-MS1)

Source: 4G16016-03

Prepared: 07/19/04 Analyzed: 07/20/04

Gasoline Range Organics C6-C12	458	10.0	mg/kg dry	549	ND	83.4	75-125			
Diesel Range Organics >C12-C35	500	10.0	"	549	ND	91.1	75-125			
Total Hydrocarbon C6-C35	958	10.0	"	1100	ND	87.1	75-125			
Surrogate: 1-Chlorooctane	53.8		mg/kg	50.0		108	70-130			
Surrogate: 1-Chlorooctadecane	36.3		"	50.0		72.6	70-130			

Matrix Spike Dup (EG41904-MSD1)

Source: 4G16016-03

Prepared: 07/19/04 Analyzed: 07/20/04

Gasoline Range Organics C6-C12	462	10.0	mg/kg dry	549	ND	84.2	75-125	0.870	20	
Diesel Range Organics >C12-C35	523	10.0	"	549	ND	95.3	75-125	4.50	20	
Total Hydrocarbon C6-C35	985	10.0	"	1100	ND	89.5	75-125	2.78	20	
Surrogate: 1-Chlorooctane	53.2		mg/kg	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	36.3		"	50.0		72.6	70-130			

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
07/22/04 10:57

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 EG41910 - Solvent Extraction (GC)

Blank (EG41910-BLK1)

Prepared & Analyzed: 07/20/04

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	45.7		mg/kg	50.0		91.4	70-130			
Surrogate: 1-Chlorooctadecane	41.1		"	50.0		82.2	70-130			

Blank (EG41910-BLK2)

Prepared: 07/20/04 Analyzed: 07/21/04

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	43.0		mg/kg	50.0		86.0	70-130			
Surrogate: 1-Chlorooctadecane	36.4		"	50.0		72.8	70-130			

LCS (EG41910-BS1)

Prepared & Analyzed: 07/20/04

Gasoline Range Organics C6-C12	451	10.0	mg/kg wet	500		90.2	75-125			
Diesel Range Organics >C12-C35	486	10.0	"	500		97.2	75-125			
Total Hydrocarbon C6-C35	937	10.0	"	1000		93.7	75-125			
Surrogate: 1-Chlorooctane	49.5		mg/kg	50.0		99.0	70-130			
Surrogate: 1-Chlorooctadecane	37.7		"	50.0		75.4	70-130			

LCS (EG41910-BS2)

Prepared: 07/20/04 Analyzed: 07/21/04

Gasoline Range Organics C6-C12	454	10.0	mg/kg wet	500		90.8	75-125			
Diesel Range Organics >C12-C35	482	10.0	"	500		96.4	75-125			
Total Hydrocarbon C6-C35	936	10.0	"	1000		93.6	75-125			
Surrogate: 1-Chlorooctane	49.4		mg/kg	50.0		98.8	70-130			
Surrogate: 1-Chlorooctadecane	37.9		"	50.0		75.8	70-130			

Calibration Check (EG41910-CCV1)

Prepared & Analyzed: 07/20/04

Gasoline Range Organics C6-C12	424		mg/kg	500		84.8	80-120			
Diesel Range Organics >C12-C35	438		"	500		87.6	80-120			
Total Hydrocarbon C6-C35	862		"	1000		86.2	80-120			
Surrogate: 1-Chlorooctane	55.8		"	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	38.2		"	50.0		76.4	70-130			

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
07/22/04 10:57

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 EG41910 - Solvent Extraction (GC)

Calibration Check (EG41910-CCV2)

Prepared: 07/20/04 Analyzed: 07/21/04

Gasoline Range Organics C6-C12	412		mg/kg	500		82.4	80-120			
Diesel Range Organics >C12-C35	454		"	500		90.8	80-120			
Total Hydrocarbon C6-C35	866		"	1000		86.6	80-120			
Surrogate: 1-Chlorooctane	55.2		"	50.0		110	70-130			
Surrogate: 1-Chlorooctadecane	40.3		"	50.0		80.6	70-130			

Matrix Spike (EG41910-MS1)

Source: 4G16016-23

Prepared & Analyzed: 07/20/04

Gasoline Range Organics C6-C12	448	10.0	mg/kg dry	521	ND	86.0	75-125			
Diesel Range Organics >C12-C35	469	10.0	"	521	ND	90.0	75-125			
Total Hydrocarbon C6-C35	917	10.0	"	1040	ND	88.2	75-125			
Surrogate: 1-Chlorooctane	56.0		mg/kg	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	36.9		"	50.0		73.8	70-130			

Matrix Spike (EG41910-MS2)

Source: 4G16021-05

Prepared: 07/20/04 Analyzed: 07/21/04

Gasoline Range Organics C6-C12	433	10.0	mg/kg dry	515	ND	84.1	75-125			
Diesel Range Organics >C12-C35	513	10.0	"	515	8.10	98.0	75-125			
Total Hydrocarbon C6-C35	946	10.0	"	1030	ND	91.8	75-125			
Surrogate: 1-Chlorooctane	53.7		mg/kg	50.0		107	70-130			
Surrogate: 1-Chlorooctadecane	41.2		"	50.0		82.4	70-130			

Matrix Spike Dup (EG41910-MSD1)

Source: 4G16016-23

Prepared: 07/20/04 Analyzed: 07/22/04

Gasoline Range Organics C6-C12	456	10.0	mg/kg dry	521	ND	87.5	75-125	1.77	20	
Diesel Range Organics >C12-C35	487	10.0	"	521	ND	93.5	75-125	3.77	20	
Total Hydrocarbon C6-C35	943	10.0	"	1040	ND	90.7	75-125	2.80	20	
Surrogate: 1-Chlorooctane	51.6		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	41.9		"	50.0		83.8	70-130			

Matrix Spike Dup (EG41910-MSD2)

Source: 4G16021-05

Prepared: 07/20/04 Analyzed: 07/21/04

Gasoline Range Organics C6-C12	446	10.0	mg/kg dry	515	ND	86.6	75-125	2.96	20	
Diesel Range Organics >C12-C35	471	10.0	"	515	8.10	89.9	75-125	8.54	20	
Total Hydrocarbon C6-C35	917	10.0	"	1030	ND	89.0	75-125	3.11	20	
Surrogate: 1-Chlorooctane	54.6		mg/kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	37.4		"	50.0		74.8	70-130			

Environmental Lab of Texas

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
07/22/04 10:57

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 EG42109 - EPA 5030C (GC)

Blank (EG42109-BLK1)

Prepared & Analyzed: 07/20/04

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	82.2		ug/kg	100		82.2	80-120			
Surrogate: 4-Bromofluorobenzene	90.2		"	100		90.2	80-120			

LCS (EG42109-BS1)

Prepared & Analyzed: 07/20/04

Benzene	86.2		ug/kg	100		86.2	80-120			
Toluene	85.2		"	100		85.2	80-120			
Ethylbenzene	87.5		"	100		87.5	80-120			
Xylene (p/m)	176		"	200		88.0	80-120			
Xylene (o)	94.1		"	100		94.1	80-120			
Surrogate: a,a,a-Trifluorotoluene	83.7		"	100		83.7	80-120			
Surrogate: 4-Bromofluorobenzene	93.8		"	100		93.8	80-120			

Calibration Check (EG42109-CCV1)

Prepared: 07/20/04 Analyzed: 07/21/04

Benzene	82.6		ug/kg	100		82.6	80-120			
Toluene	81.1		"	100		81.1	80-120			
Ethylbenzene	80.3		"	100		80.3	80-120			
Xylene (p/m)	160		"	200		80.0	80-120			
Xylene (o)	83.9		"	100		83.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	84.4		"	100		84.4	80-120			
Surrogate: 4-Bromofluorobenzene	80.3		"	100		80.3	80-120			

Matrix Spike (EG42109-MS1)

Source: 4G20001-01

Prepared: 07/20/04 Analyzed: 07/21/04

Benzene	2150		ug/kg	2500	ND	86.0	80-120			
Toluene	2080		"	2500	30.0	82.0	80-120			
Ethylbenzene	2080		"	2500	ND	83.2	80-120			
Xylene (p/m)	4180		"	5000	40.2	82.8	80-120			
Xylene (o)	2220		"	2500	14.0	88.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	80.4		"	100		80.4	80-120			
Surrogate: 4-Bromofluorobenzene	91.2		"	100		91.2	80-120			

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
07/22/04 10:57

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 EG42109 - EPA 5030C (GC)

Matrix Spike Dup (EG42109-MSD1)

Source: 4G20001-01

Prepared: 07/20/04 Analyzed: 07/21/04

Benzene	2260		ug/kg	2500	ND	90.4	80-120	4.99	20	
Toluene	2160		"	2500	30.0	85.2	80-120	3.83	20	
Ethylbenzene	2170		"	2500	ND	86.8	80-120	4.24	20	
Xylene (p/m)	4370		"	5000	40.2	86.6	80-120	4.49	20	
Xylene (o)	2330		"	2500	14.0	92.6	80-120	4.87	20	
Surrogate: a,a,a-Trifluorotoluene	82.5		"	100		82.5	80-120			
Surrogate: 4-Bromofluorobenzene	94.7		"	100		94.7	80-120			

Highlander Environmental Corp.
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Reported:
07/22/04 10:57

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch EG41907 - Water Extraction

Blank (EG41907-BLK1) Prepared: 07/16/04 Analyzed: 07/19/04

Chloride ND 20.0 mg/kg Wet

Matrix Spike (EG41907-MS1) Source: 4G16009-01 Prepared: 07/16/04 Analyzed: 07/19/04

Chloride 574 20.0 mg/kg Wet 500 85.1 97.8 80-120

Matrix Spike Dup (EG41907-MSD1) Source: 4G16009-01 Prepared: 07/16/04 Analyzed: 07/19/04

Chloride 585 20.0 mg/kg Wet 500 85.1 100 80-120 1.90 20

Reference (EG41907-SRM1) Prepared & Analyzed: 07/19/04

Chloride 5000 mg/kg 5000 100 80-120

Batch EG42001 - General Preparation (Prep)

Blank (EG42001-BLK1) Prepared & Analyzed: 07/19/04

% Solids 100 %

Duplicate (EG42001-DUP1) Source: 4G16015-03 Prepared & Analyzed: 07/19/04

% Solids 89.0 % 89.0 0.00 20

Batch EG42015 - Water Extraction

Blank (EG42015-BLK1) Prepared: 07/19/04 Analyzed: 07/20/04

Chloride ND 20.0 mg/kg Wet

Matrix Spike (EG42015-MS1) Source: 4G16016-22 Prepared: 07/19/04 Analyzed: 07/20/04

Chloride 532 20.0 mg/kg Wet 500 21.3 102 80-120

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

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
07/22/04 10:57

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 EG42015 - Water Extraction

Matrix Spike Dup (EG42015-MSD1) **Source: 4G16016-22** Prepared: 07/19/04 Analyzed: 07/20/04

Chloride	521	20.0	mg/kg Wet	500	21.3	99.9	80-120	2.09	20	
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Reference (EG42015-SRM1) Prepared: 07/19/04 Analyzed: 07/20/04

Chloride	5000		mg/kg	5000		100	80-120			
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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Pogo/ C. E. Lamunyen #49, Spill
Project Number: 2201
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Reported:
07/22/04 10:57

Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

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

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

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

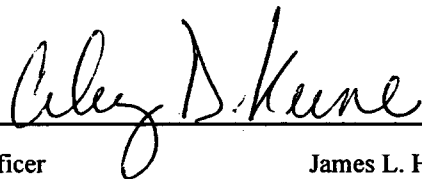
RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

07/22/04

Raland K. Tuttle, QA Officer
Celey D. Keene, Lab Director, Org. Tech Director
Jeanne Mc Murrey, Inorg. Tech Director

James L. Hawkins, Chemist/Geologist
Sara Molina, Chemist
Sandra Biezugbe, Lab Tech.

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

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559

Fax (432) 682-3946

PAGE: 2 OF: 3

ANALYSIS REQUEST (Circle or Specify Method No.)

CLIENT NAME: Pogo Producing Co. SITE MANAGER: KE Tawarce

PROJECT NO.: 2001 PROJECT NAME: C.F. Lavanigne #49, Lee City, Wn.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	Lee County, Tenn. SAMPLE IDENTIFICATION	NUMBER OF	FILTERED (Y)	HCL	HNO3	ICE	NONE	BTX 8020//	MTX 8020//	TPH 418.1	PAH 6870	ECRA Metals	TCLP Metals	TCLP Volatili	TCLP Semi V	RCI	GC-MS Vol. 6	GC-MS Semi.	PCB's 8080/	Pest. 808/8/6
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RELINQUISHED BY: (Signature) <u>[Signature]</u>	Date: <u>7-16-04</u> Time: <u>4:10</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	Date: _____ Time: _____	SAMPLED BY: (Print & Sign) <u>KE Tawarce</u>	Date: _____ Time: _____
RELINQUISHED BY: (Signature) _____	Date: _____ Time: _____	RECEIVED BY: (Signature) _____	Date: _____ Time: _____	SAMPLE SHIPPED BY: (Circle) <u>BUS</u>	AIRBILL # _____
RELINQUISHED BY: (Signature) _____	Date: _____ Time: _____	RECEIVED BY: (Signature) _____	Date: _____ Time: _____	FEDEX _____	UPS _____
RECEIVING LABORATORY: <u>Env Lab TX</u>				HAND DELIVERED _____	
ADDRESS: _____				HIGHLANDER CONTACT PERSON: <u>KE Tawarce</u>	
CITY: _____ STATE: _____ ZIP: _____				Results by: _____	
CONTACT: _____ PHONE: _____				RUSH Charges Authorized: _____	
DATE: <u>07-16-04</u> TIME: <u>1610</u>				Yes _____ No _____	

SAMPLE CONDITION WHEN RECEIVED: <u>1.5°C on ice 4oz glass</u>	MATRIX: <u>W-Water</u> <u>A-Air</u> <u>SD-Solid</u> <u>S-Soil</u> <u>SL-Sludge</u> <u>O-Other</u>	REMARKS: _____
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Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559

Fax (432) 682-3946

PAGE: 3 OF: 3

ANALYSIS REQUEST (Circle or Specify Method No.)

CLIENT NAME: Pogo Producing Co. SITE MANAGER: 1KE Tawara
PROJECT NO.: 2201 PROJECT NAME: Pogo/C.E. Lamunyan #49, Spil.
Lee City, Nm.
SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION											BTX 8020	MTBE 8080	TPH	PAH 8370	ECRA Met	TC1P Met	TC1P Vol	TC1P Sem	ECI	GC/MS Vol	GC/MS S	PCB's 80	Peel. 800	BOD, TSS	Gamma	Alpha B	PLM (as)	
						NUMBER	FILTERED	HCL	HNO3	ICE	NONE																							
4G16016																																		
-21	7/15/04					1				/					X																X			
-22	7/15/04					1				/					X																X			
-23	7/15/04					1				/					X																X			

RELINQUISHED BY: (Signature) [Signature] Date: 7-16-04 Time: 4:15 RECEIVED BY: (Signature) [Signature] Date: _____ Time: _____
RELINQUISHED BY: (Signature) _____ Date: _____ Time: _____ RECEIVED BY: (Signature) _____ Date: _____ Time: _____
RELINQUISHED BY: (Signature) _____ Date: _____ Time: _____ RECEIVED BY: (Signature) _____ Date: _____ Time: _____
RECEIVING LABORATORY: ECT RECEIVED BY: (Signature) [Signature] DATE: 07-16-04 TIME: 1610
ADDRESS: _____ CITY: _____ STATE: _____ ZIP: _____ CONTACT: _____ PHONE: _____
SAMPLED BY: (Print & Sign) 1KE Tawara Date: _____ Time: _____
SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL # _____
HAND DELIVERED UPS OTHER: _____
HIGHLANDER CONTACT PERSON: 1KE Tawara Results by: _____
RUSH Charges Authorised: Yes No

SAMPLE CONDITION WHEN RECEIVED: 15'C on ice 4oz gss MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other REMARKS:

Environmental Lab of Texas

Variance / Corrective Action Report – Sample Log-In

Client: Highlander Env.

Date/Time: 07-16-04 @ 1650

Order #: 4916016

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	<input checked="" type="checkbox"/> Yes	No	I, S C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/> 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?	<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:
